

City of De Pere  
Wisconsin

cc: Blaug Rossberg LMD  
Walter Nied U.S.EPA

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

RECEIVED  
SEP 01 1993  
LMD SOLID WASTE  
9-1-93

August 31, 1993

Kenneth Bro  
Wis. Dept. of Health  
P.O. Box 309  
Madison, WI 53701

Enclosed are the test results from the City of De Pere's Front and Grant Street wells for the second half of 1993. If you have any questions or concerns, please contact me at 414-339-4063.

Sincerely,

*Allen Baeten*  
Allen Baeten, Superintendent  
De Pere Water Department

cc: Gus Glaser  
Terry Koehn  
David Linnear  
Gary Edelstien

3150 North Brookfield Road  
 Brookfield, Wisconsin 53045  
 telephone (414) 783-6111  
 FAX (414) 783-5752



WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B3647

City of DePere  
 925 South 6th Street  
 DePere, WI 54115

Attn: Mr. Al Baeten

DATE: August 23, 1993  
 PURCHASE ORDER:  
 SEI NO: WL6656  
 DATE COLLECTED: 08/09/93  
 DATE RECEIVED: 08/10/93

Matrix: Drinking Water

Units: ug/l (ppb)

<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>6656-1</u> <u>Grant St.</u>	<u>6656-2</u> <u>Front St.</u>
Chromium		<2	--
Zinc		20	--
Cyanides, Total		<10	--
Specific Conductance, umhos/cm		562	--
Benzene		--	<1
Toluene		--	<1
Ethylbenzene		--	<1
Xylenes		--	<1

*Gary E. Barry*  
 \_\_\_\_\_  
 Gary E. Barry  
 Projects Coordinator

FROM:

Mike Bardon, SW/3

TO:

Terry Koehn LMD

SUBJECT-MESSAGE

Better Brite - DePue Municipal Well Information.

For your use please note the attached & following.

- a) Table of water usage by month (7-90 thru 6-91)
- b) Map showing Municipal Well Locations
- c) Copy of memo from R Stoll (12-2-88) - Summary of Potential Impacts to Badnach Aquifer . . . .
- d) Portion of Report on Invest. of DePue Water System from J. Schedgich 4-29-88
- e) Current pumping rates as of 8-4-92 from A. Baeten (8-7-92)
 

#1 Front St - 690gpm	#4 Merrill St - 800gpm
#2 Grant St - 430gpm	#5 Enterprise Dr - 620gpm
#3 Ninth St - 1175gpm	#6 Scheuring Rd - 660gpm

Hope This Helps.

SIGNED

Koehn

DATE

8-7-92

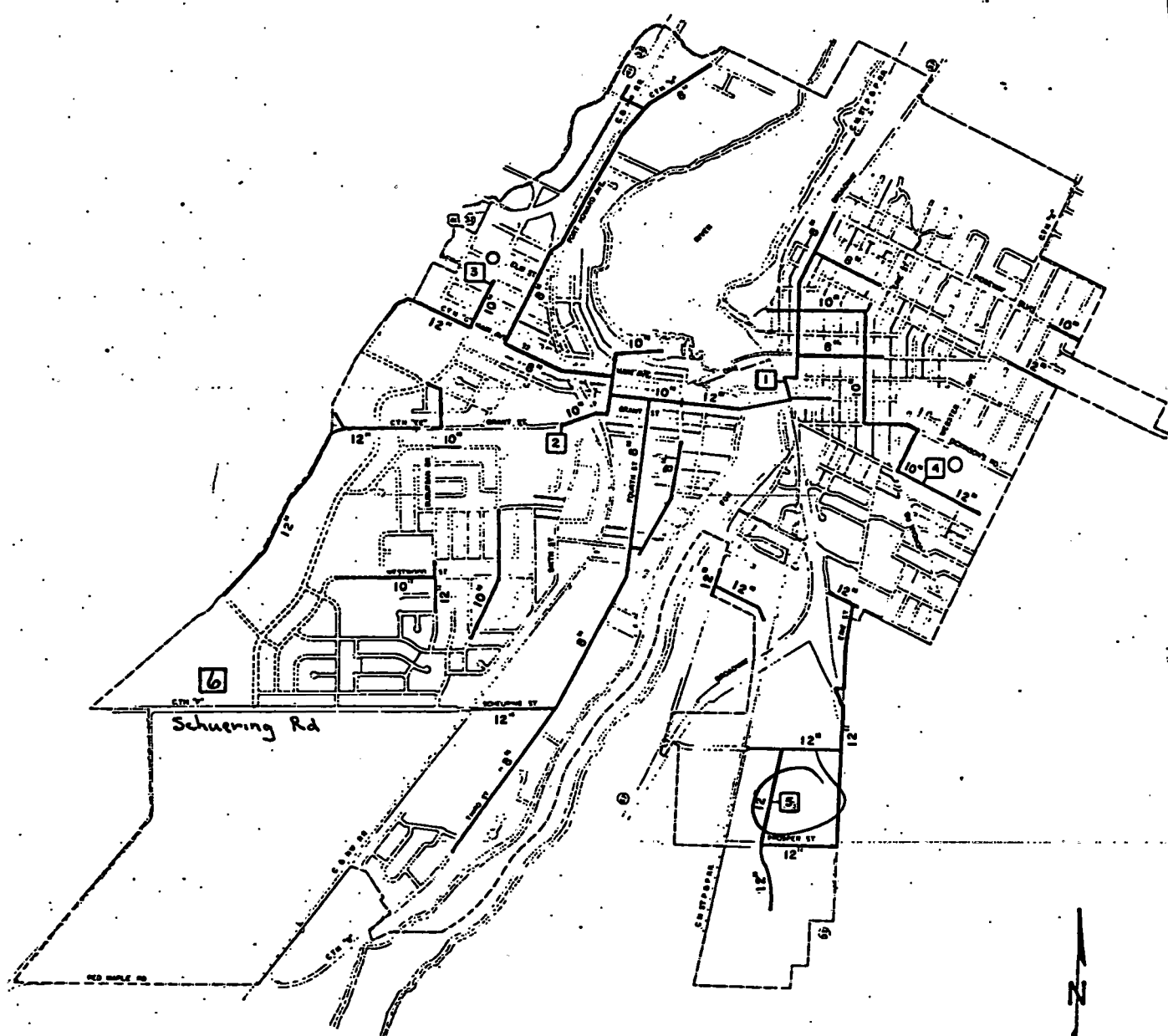
REPLY

cc: G. Edelstein with AH.

City of DePere  
Municipal Well Pumpage

Values Presented in 1000 Gallon Units

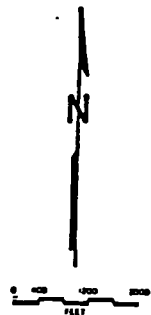
Month	Year	Grant St.	Scheuring Rd.	Ninth St.	Front St.	Merril St.	Enterprise Dr.	Total For Month
June	1991	17006	21125	Down	17507	10257	12672	78567
May	1991	9425	18939	1407	14891	8467	6177	59306
April	1991	5266	14719	7402	6231	14008	5494	53120
March	1991	5628	15763	7992	4689	14797	6069	54938
Feb.	1991	5168	14548	9478	Down	14498	7634	51326
Jan.	1991	6103	14536	8290	5825	11184	7765	53703
Dec.	1990	6087	11470	5973	16636	5641	4781	50588
Nov.	1990	5367	13704	5865	12560	7007	4583	49086
Oct.	1990	5671	15172	7310	11435	7124	8259	54971
Sept.	1990	5370	14110	5671	15294	2968	6372	49785
Aug.	1990	5872	14170	7128	16002	7825	2745	53742
July	1990	6134	14204	4554	20698	Down	10439	56029
<b>Total</b>		<b>83097</b>	<b>182460</b>	<b>71070</b>	<b>141768</b>	<b>103776</b>	<b>82990</b>	<b>665161</b>
<b>Average/Month</b>		<b>6925</b>	<b>15205</b>	<b>5923</b>	<b>11814</b>	<b>8648</b>	<b>6916</b>	
				<b>Overall Average/Month</b>		<b>110860</b>		
<b>% of Total</b>		<b>12.5</b>	<b>27.4</b>	<b>10.7</b>	<b>21.3</b>	<b>15.6</b>	<b>12.5</b>	



**LEGEND**

- WELL LOCATION & NO.
- ELEVATED STORAGE TANK OR STANDPIPE
- 12" WATERMAIN LOCATION & SIZE

**DE PERE**



## CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: December 2, 1988

File Ref: 3300

To: Bob Barnum

From: Rick Stoll

R.C. Stoll

Subject: Summary of the Potential Impacts to the Bedrock Aquifer from the Better Brite Chrome and Zinc Shops - De Pere, WI 1988

The following is an analysis of the available De Pere Municipal Well #2 information as it pertains to the Better Brite Chrome and Zinc plating plants. This information suggests that eventual contamination to this well is quite likely and is supported by the following sources (summarized below and attached).

1) De Pere Municipal Well #2 Construction Log (1955) -

Static water level	120'
Cased to	180'
Total depth	765'

2) 'A Three-Dimensional Model of Flow to the Sandstone Aquifer in Northeastern Wisconsin with Discussion of Contamination Potential'-- Daniel T. Feinstein Thesis (1986) -

Downward leakage occurs within the Green Bay/De Pere cone of depression.

Downward leakage within the shallow groundwater basin is the dominant source of water to wells in the lower Fox basin.

The groundwater supply for the entire lower Fox Valley depends largely on the leakage through the shallow groundwater basin encompassed by the model.

Some high recharge areas communicate with the sandstone aquifer (Fig. 29).

Zones of high contamination potential to the sandstone aquifer exist just west of Brown County and in the vicinity of De Pere (Fig. 30).

3) Report on Soil Borings, Monitoring Wells Installation, and Groundwater Sampling at Better Brite Zinc and Chrome Plating Sites, De Pere, WI-- STS Project No. 15054-XH (1987) -

14-88

**Better Brite Chrome groundwater samples:**

Shallow well #B-105B (18.8' deep) in unconsolidated contained 62,000 ppb chrome.

Deep well #B-103 (63' total depth) in dolomite bedrock contained 660 ppb chrome.

Top of bedrock is at about 36 feet.

Sandstone is estimated to be approximately 150 feet below the top of the dolomite.

**Better Brite Zinc groundwater samples:**

Shallow well #W-2A (20.1' deep) in unconsolidated contained 310,000 ppb chrome.

Deeper well #W-2 (30.1' deep) screened at top of dolomite bedrock contained 2300 ppb chrome.

This report states that there is a downward vertical gradient in the silty clay at the site and it appears to be significant. All six monitoring wells at the zinc site exceeded the enforcement standard for chromium (50 ppb) in groundwater.

The zinc shop is located about 300' from the De Pere Municipal Well #2. The chrome shop is located about 2,100' from the same well. The dolomite is about 150' thick and directly overlies one of the sandstone formations that the municipal well draws from. The existence or degree of fractures in the dolomite is unknown.

- 4) As the attached map and well logs indicate (Appendix, 1-20 and A-I), many private wells actively draw water from the dolomite aquifer and within 5 miles of the Better Brite shops. Most casing depths average between 60-100 feet and terminate in the upper dolomite. The private wells within the De Pere municipal service area are now presumed to be abandoned, but were only cased to about 60 feet (top of dolomite) and produced between 4-15 gpm from the open dolomite. This information gives evidence that the dolomite is a producible, usable aquifer that should be protected from the further contamination which is emanating from the Better Brite shops. If not protected, a further spread of contamination within this aquifer will be quite likely.

Recommendation #1

Routine sampling of the municipal well #2 for metals is highly recommended.

Justification

The cone of depression for the municipal well encompasses both the Better Brite zinc and chrome shops. The recharge rate to the underlying sandstone

aquifer as predicted by the Feinstein model is between 2.01 to 4.0 inches/year. This same model assigns a medium level contamination potential to the sandstone aquifer in the De Pere area. It further suggests permeabilities which indicate flow from the water table to the sandstone aquifer could take between 420-836 years. However, at the Better Brite chrome shop approximately 1/7-1/3 of this distance has already been traveled by chromium contaminants in less than twenty years. This suggests that certain conditions at this location allow the downward movement of the chromium at a much more rapid rate than what the model predicts. Considering these two factors only suggests that about 60-140 years from now is the maximum time it would take before the sandstone aquifer is impacted by chromium contamination.

#### Recommendation #2

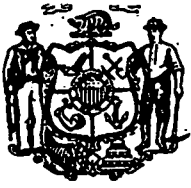
The bedrock monitoring wells at the Better Brite chrome site be properly abandoned within one year of this date.

#### Justification

Ten years have elapsed since the discovery of chromium contamination at the Better Brite chrome shop. Since discovery, many monitoring wells have been placed at the site, but only minimal cleanup has actually occurred. In May 1987, three monitoring wells were placed into the dolomite bedrock to evaluate it. These wells were specifically designed to eliminate the possibility of bedrock contamination by the wells themselves. A part of that construction required the use of neat cement grout as a seal. Neat cement is not completely compatible with chromic acid, and thus the life expectancy of the bedrock wells is limited. Since it does not appear that site cleanup will take place soon, it is not wise to leave these wells in place longer than is absolutely necessary.

cc: Doug Rossberg  
Jim Schedgick  
WS/2





State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Lake Michigan District Headquarters  
1125 N. Military Avenue  
P. O. Box 10448  
Green Bay, WI 54307-0448

*Carroll D. Besadny*  
*Secretary*

April 29, 1988

File Ref: 3300  
405045300

Mr. Allen Baeten, Superintendent  
DePere Water Department  
925 So. Sixth Street  
DePere, WI 54115

Dear Mr. Baeten:

Attached is a report on the investigation of the DePere water system conducted on March 8, 1988. The report describes the physical facilities, evaluates water quality and concludes with recommendations concerning conditions observed.

On the basis of this investigation, it is concluded that the operation and maintenance of the DePere system is excellent. However, to improve the water system and protect the health and welfare of the consumer, the DePere Water Department is urged to implement the recommendations in this report. The Department is requesting a written response to the Conclusions/Recommendations section of the attached report by June 15, 1988.

Sincerely,

A handwritten signature in cursive script that reads "Jim Schedgick".

Jim Schedgick  
Water Supply Engineer

JS:lvp

Attach.

cc: Public Water Supply Section, Madison - WS/2  
Robert P. Barnum - LMD

Report on the Investigation of the  
Public Water Supply System at  
DePere, Wisconsin

The following report describes in detail an investigation of the public water supply at DePere, Wisconsin made on March 8, 1988. This study was part of a series of routine investigations of such systems within the state.

General Description and History of the Water System

The water system is owned by the City and was initially installed in 1885. It originally consisted of two wells on each side of the river, which have since been abandoned. The present system consists of well #1 - drilled in 1949, well #2 - drilled in 1955, well #3 - drilled in 1959, well #3 - drilled in 1965, well #5 - drilled in 1970, and a well #6 - drilled in 1979. The waterworks has one, 500,000 gallon and two, 250,000 gallon elevated storage reservoirs. There is one, 160,000 gallon and four, 250,000 gallon ground storage reservoirs. The combined pumping capacity for the system is 6,566,400 gallons per day.

Well #1 Well #1 is located on Front Street, has a total depth of 812 feet and is grouted from the 199.5 foot level to the surface. The well pump has a capacity of 780 gpm and discharges into a 160,000 gallon ground storage reservoir from which two, 780 gpm booster pumps discharge into the distribution system. The well construction, pumping equipment and piping all meet present day standards. The air line for measuring water depth in the well is broken. This should be repaired the next time the well pump is pulled for servicing. The specific capacity of the well when pumped at 780 gpm is 6.90 gpm per foot of draw down.

Well #2 Well #2 is located on Grant Street, has a total depth of 760 feet and is grouted from the 180 foot level to the surface. The well was reconstructed in 1960 with a 10 inch liner and cemented in place from the 464 foot level to the 415 foot level. The well pump has a capacity of 460 gpm and discharges directly into the distribution system. The well construction and pumping equipment are adequate and meet present day standards. The specific capacity of the well when pumped at 460 gpm is 4.42 gpm per foot of draw down.

Well #3 Well #3 is located on Ninth Street, has a depth of 795 feet and is grouted from the 459 foot level to the surface. The well has a capacity of 1200 gpm and discharges to an adjacent ground storage reservoir. Two booster pumps each rated at 940 gpm pump water from the reservoir directly into the distribution system. The well pumping equipment and piping are all adequate and meet present day construction requirements. This well has a specific capacity of 6.49 gpm per foot of draw down.

Well #4 Well #4 is located on Merrill Street, has a depth of 845 feet and is grouted from the 259 feet 8 inch level to the surface. The well pump has a capacity of 790 gpm and discharges into an adjacent ground storage reservoir. Two booster pump each rated at 330 gpm pump water from the reservoir directly into the distribution system.

The well vent should be reconstructed to terminate in a complete U-bend with a fine mesh screen. The specific capacity of the well is 6.32 gpm per foot of draw down.

Well #5 Well #5 is located on Enterprise Drive, has a total depth of 875 feet and is grouted from the 265 foot level to the surface. The well pump has a capacity of 760 gpm and discharges into an adjacent ground storage reservoir. Two booster pumps each rated at 700 gpm pump water from the reservoir into the distribution system. The well construction, pumping equipment and piping are all adequate and meet present day construction requirements. The well has a specific capacity of 4.97 gpm per foot of draw down.

Well #6 Well #6 is located on Scheuring Road, has a depth of 787 feet and grouted from the 500 foot to 250 foot level and also from the 184 foot level to the surface. The well pump has a capacity of 760 gpm and discharges into an adjacent reservoir. Two Allis Chalmers centrifugal booster pumps each rate at 590 gpm pump water from the reservoir directly into the distribution system. The well construction, pumping equipment and piping are all adequate and meet present day standards. However, the well needs a new seal between the pump base and the concrete foundation. This well has a specific capacity of 10.41 gpm per foot of draw down.

#### Chemical Addition

Chlorine Chlorine gas is added to the water at each of the wells for disinfection. The facility uses Advance Control units, with a capacity of 0 to 10 lbs., at wells 2, 3, 4, 5 & 6 and 0 to 20 lbs. at well #1. Each well has a properly equipped chlorine room with gas masks and chlorine indicators.

Any future improvements to pumphouse #1 should include updating the chlorine room in accordance with NR 111 of the Wisconsin Administrative Code.

Sodium Hexametaphosphate Sodium Hexametaphosphate solution is added at each well to sequester iron and prevent scale formation in the distribution system. A Precision pump with a rated capacity of 0 to 60 gallons per day is used at wells #1, 2, 3 4 & 5 to deliver polyphosphate to the water supply. At well #6, a Wallace & Tiernan pump having a capacity of 44 gallon per day is in use. The polyphosphate solution is stored in approved plastic drums with overlapping covers. The entire polyphosphate handling systems are in excellent condition and well maintained.

Storage Storage is provided by five ground storage reservoirs having a total capacity of 1,160,000 gallons and three elevated reservoirs having a total capacity of 1,000,000 gallons. All the ground storage reservoirs are constructed as required and are in good condition. When any of the ground storage reservoirs are taken out of service and drained, the waterworks should notify this Department so we can assist with inspection of the interior.

The facility has two 250,000 gallon steel legged towers that are inspected every three years and are in good condition. However, the tower on 9th Street needs a locking gate in accordance with NR 111 of the Wisconsin Administrative Code, to keep unauthorized individuals from having access to the water supplies.

In 1986, a 500,000 gallon pedestal spheroid reservoir was constructed on Matthew Drive. It is 134.5 feet high and is equipped with an eight inch screened overflow pipe, screened vent pipe at the top, a storm sewer discharge pipe for drainage and a locking door slightly above ground level.

Distribution System

The distribution system consists of approximately 78.61 miles of mains. The sizes, materials and lengths are tabulated below:

6" Ductile Iron	6 feet
12" " "	326 feet
16" " "	1,447 feet
2" Cast Iron	1,455 feet
4" " "	16,643 feet
6" " "	183,514 feet
8" " "	83,081 feet
10" " "	37,728 feet
12" " "	49,985 feet
6" Asbestos Cement	4,596 feet
1½" PVC	180 feet
6" "	1,829 feet
8" "	8,966 feet
10" "	5,054 feet
12" "	6,918 feet
¾" Copper	41 feet
1" Copper	619 feet
1½" to 2" Galvanized	3,791 feet
¾" to 1" Galvanized	8,906 feet

Hydrant flow tests indicate that the system can provide adequate fire flows. However, water mains less than 6 inches in diameter (approximately 7.7% of the system) generally do not provide adequate fire flows. The City should consider eventual replacement of these mains.

The waterworks pump 106,967,000 gallons during 1986 that was unaccounted for. This amounts to 18.62% of the total pumpage and is a considerable loss in revenue. The City should try to determine when and/or where these losses are occurring and then take steps to eliminate them.

Water Quality The chemical quality of the water at all the wells is relatively good except to the iron concentration which ranges from .28 to 1.1 ppm. Results of the Langelier Index indicate the water is stable with a value of -.03.

Radium The DePere water supply exceeds the drinking water standard for radium. The standard is 5 picocuries per liter and the yearly rolling average for DePere is 7.4 picocuries per liter. Below is a tabulation of radium data starting in January 1986.

Rolling Radium Averages - DePere

Date	pci/l	Rolling Average
Jan. 24, 1986	4.6	
May 15, 1986	4.0	
Sept. 12, 1986	4.0	
Dec. 22, 1986	5.8	4.6
Mar. 16, 1987	7.1	5.2
June 26, 1987	8.6	6.4
Sept. 24, 1987	7.4	7.2
Dec. 29, 1987	6.4	7.4

On September 16, 1987, the Department sent the City a "Notice of Violation" (NOV) of the radium standards. A proposed compliance schedule was enclosed and the City notified the Department on October 13, 1987, that a final reply to the NOV and compliance schedule were forthcoming on or about October 27, 1987. As of the date of this report, the Department has not received a final reply as promised.

In accordance with State and Federal law, the DePere Water Department is required to notify all water customers of the radium levels on a calendar quarterly basis. This public noticing is being carried out quarterly.

Lead Lead in drinking water has become a national concern because it is harmful to human health. A new Federal law requires that by June 19, 1988, all municipalities must issue to each customer a specifically worded written public notice on lead in drinking water. The City of DePere has elected to notify its customers by publishing the lead notice in the Green Bay Press Gazette.

Records and Sampling The City is required to submit at least 17 bacteriological water samples per month from the distribution system to the State Laboratory of Hygiene for analysis. An examination of this record for the past 12 months is as follows:

March 1987 - 18	Sept. 1987 - 18
April 1987 - 18	Oct. 1987 - 17
May 1987 - 18	Nov. 1987 - 18
June 1987 - 17	Dec. 1987 - 18
July 1987 - 18	Jan. 1988 - 18
Aug. 1987 - 19	Feb. 1988 - 18

Also, the City is required to submit quarterly raw water samples from each of its wells to assure a safe supply prior to chlorination. This has been occurring.

From this record, it is apparent, that the Water Department has met these sampling requirements. You should be commended for this. Only through the proper submission of bacteriological samples can a safe water supply be assured to the public.

The monthly operating reports submitted by the Water Department are properly filled out and submitted in a timely manner. The Department uses the reports to determine if operational consistency is being maintained and if proper chemical dosages are being administered.

Cross-Connections Reportedly, no known cross-connections exist and the Water Department has a cross-connection inspection program in place. A record of cross-connection inspections is being kept current and is available for annual review by the Department.

#### Conclusions and Recommendations

Based on the investigation and a review of records available, it is concluded that the DePere public water supply is excellently operated and maintained. However, to improve the water system, the City is urged to implement the following recommendations:

- 1) The air line at well #1 should be repaired the next time the well pump is pulled for service.
- 2) At well #4, the well vent should terminate in a fall U-bend with a fine mesh screen attached to the end of the vent opening.
- 3) At well #6, a new seal is needed between the pump base and the concrete foundation.
- 4) A locking gate should be installed on the 9th Street water tower to prevent unauthorized access.
- 5) Any future improvements to well #1 should include updating the chlorine room in accordance with the construction requirements of NR 111 of the Wisconsin Administrative Code.
- 6) The Department is requesting a final reply to the "Notice of Violation" (NOV) sent to the City on September 16, 1987.

Respectfully Submitted,

*Jim Schedgick*

Jim Schedgick  
Water Supply Engineer

Approved this *29th* day of April, 1988

*Robert P. Barnum*  
Robert P. Barnum, P.E.  
Water Supply Unit Supervisor  
Environmental Protection Section

cc: Public Water Supply, WS/2 - Madison  
Robert P. Barnum - LMD

Waterworks DePere  
Well No. 1

Reviewer Jim Schedgik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 750 GPM @ 150' Ft.Hd.  
Actual 780 GPM @ 128' Ft.Hd.  
Pump Setting 412' Lubrication Water Prelube Water  
Motor HP 100 Backspin Protection Ratchet  
Aux. Power Continental Fuel gasoline Freq. of Oper. 1 x monthly

Comments:

Pump Station:

Description BRICK & Concrete Floor: Dist. Above Ground ≈ 4' below grade  
Door Open Out yes Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 7' Discharge To Sanitary Sewer  
Flooding None Dist. to San. Sewer 2.5 feet

Comments:

Piping and Valves:

Air Relief None U-Bend — Screen — Hgt. Above Floor —  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent Screened

High Lift Pump(s): 2

Make Fairbanks + Morse Type Vertical Turbine Discharges To distribution system  
Capacity: Design 750 GPM @ 150' Ft.Hd.  
Actual 780 GPM @ 128' Ft.Hd.

Works De Pere Reviewer Jim Schlegel

Date March 8, 1988

Well Number 1 Location FRONT STREET

Date Constructed 1949 Total Depth 312'

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? No Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available:  
DRIFT 0' to 29' Sandstone 185'-312'  
Limestone 29'-185'

Casing and screen Depth & Diameter:  
Inner 12" to 199 1/2' Grout Depth 199 1/2'  
12" LINER FROM 232'-466'  
Outer 20" to 29' Screen Length \_\_\_\_\_  
Open Drillhole Length 312'

Means for Measuring Water Level altitude gauge Airline Length 412' (line is cut)

Static Water Level 187' Pumping Water Level 300' @ 280 gpm

Specific Capacity 6.9027 gpm/ft.

Pump Base Description concrete Well Seal good

Well Vent yes U-Bend yes Screen yes Height Above Floor 1/2'

Gravel Refill Pipes N/A Capped N/A Height Above Floor \_\_\_\_\_

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_



Works De Pere

Reviewer Jim Schudzik

Date March 8, 1988

Well Number 2

Location GRANT STREET

Date Constructed 1955

Total Depth 760 feet

Aquifer Type:

Sandstone

Limestone

Glacial Drift

Other

Is a SGS well log available? Yes

Well Const. Report

Geologic Data if known and if no log is available:

Casing and screen Depth & Diameter:

Inner 12" to 180' and 12" from 319' to 430' Grout Depth 180'

Outer 18" to 24'

Screen Length       

Open Drillhole Length 760'

Means for Measuring Water Level altitude gauge

Airline Length 320 feet

Static Water Level 160

Pumping Water Level 264 @ 460 gpc

Specific Capacity 4.4231 gpm/ft.

Pump Base Description 8" concrete

Well Seal good

Well Vent yes U-Bend yes

Screen yes Height Above Floor 20"

Gravel Refill Pipes        Capped       

Height Above Floor       

Chemical Quality good

P&A Data       

Comments:

Waterworks DePere Reviewer Jim Schedgik  
Well No. 2 Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical turbine Discharges To distribution syst.  
Capacity: Design 650 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 460 GPM @ 148 Ft.Hd.  
Pump Setting 370 Lubrication water Prelube water  
Motor HP 100 Backspin Protection ratchet  
Aux. Power None Fuel \_\_\_\_\_ Freq. of Oper. \_\_\_\_\_

Comments:

Pump Station:

Description Brick + Concrete Block Floor: Dist. Above Ground 6 inches  
Door Open Out In Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 8 feet Discharge To sanitary sewer  
Flooding None Dist. to San. Sewer 100 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend yes Screen yes Hgt. Above Floor 3 feet  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent yes - screened

High Lift Pump(s):

Make \_\_\_\_\_ Type \_\_\_\_\_ Discharges To \_\_\_\_\_  
Capacity: Design \_\_\_\_\_ GPM @ \_\_\_\_\_ Ft.Hd.  
Actual \_\_\_\_\_ GPM @ \_\_\_\_\_ Ft.Hd.

Waterworks DePere  
Well No. 3

Reviewer Jim Schedgik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 1000 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 1200 GPM @ 0 Ft.Hd.  
Pump Setting 420 Lubrication water Prelube water  
Motor HP 150 Backspin Protection ratchet  
Aux. Power Ford Fuel natural gas Freq. of Oper. 1 x Weekly

Comments:

Pump Station:

Description Brick and tile Floor: Dist. Above Ground 6 inches  
Door Open Out yes Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 6 feet Discharge To sanitary sewer  
Flooding none Dist. to San. Sewer 100 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend no Screen yes Hgt. Above Floor 5 feet  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent yes

High Lift Pump(s): 2

Make Layne Type Vertical Turbine Discharges To distribution system  
Capacity: Design 1000 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 940 GPM @ 128 Ft.Hd.

Works De Pere Reviewer Jim Schudlich

Date March 8, 1988

Well Number 3 Location 9th STREET

Date Constructed 1959 Total Depth 795 feet

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? YES Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available: Unknown

Casing and screen Depth & Diameter:

Inner 12" to 459' Grout Depth 459'  
Outer 18" to 175' Screen Length \_\_\_\_\_  
Open Drillhole Length 795'

Means for Measuring Water Level altitude gauge Airline Length 420'

Static Water Level 164 Pumping Water Level 349 @ 1200 gpm

Specific Capacity 6.4865 gpm/ft.

Pump Base Description Concrete - 8" Well Seal good

Well Vent yes U-Bend yes Screen yes Height Above Floor 18"

Gravel Refill Pipes \_\_\_\_\_ Capped \_\_\_\_\_ Height Above Floor \_\_\_\_\_

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

Waterworks De Pere

Reviewer Jim Schedgik

Well No. 4

Date March 8, 1988

Well Pump:

Make Layne Type Vertical Turbine Discharges To Reservoir

Capacity: Design 1000 GPM @ 320 Ft.Hd.

Actual 790 GPM @ 128 Ft.Hd.

Pump Setting 440 feet Lubrication Water Prelube Water

Motor HP 150 Backspin Protection Time delay

Aux. Power International Hamilton Fuel natural gas Freq. of Oper. 1x Weekly

Comments:

Pump Station:

Description Brick & Concrete block Floor: Dist. Above Ground 6"

Door Open Out yes Roof Hatch yes Heater yes

Floor Drain yes Dist. From Well 4' Discharge To Sanitary sewer

Flooding None Dist. to San. Sewer 30 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend No Screen yes Hgt. Above Floor 5 feet

Check Valve yes Meter yes Shutoff Valve yes

Sampling Tap yes Pressure Gauge yes

Water Level Measurement altitude gauge Well Vent yes

High Lift Pump(s): 2

Make Layne Type Vertical Turbine Discharges To distribution system

Capacity: Design 1000 GPM @ 121 Ft.Hd.

Actual 880 GPM @ 128 Ft.Hd.

Works De Pere Reviewer Jim Schudgik

Date March 8, 1988

Well Number 4 Location Merrill Street

Date Constructed 1965 Total Depth 845 feet

Aquifer Type: Sandstone  Limestone

Glacial Drift  Other

Is a SGS well log available? yes Well Const. Report

Geologic Data if known and if no log is available: unknown

Casing and screen Depth & Diameter:

Inner 20" to 259'-8" Grout Depth 259'-8"

Outer 26" to 96'-3" Screen Length           

Open Drillhole Length 845 feet

Means for Measuring Water Level altitude gauge Airline Length 440

Static Water Level 223 Pumping Water Level 348 @ 790 gpm

Specific Capacity 6.3200 gpm/ft.

Pump Base Description concrete - 12" above floor Well Seal good

Well Vent yes U-Bend no Screen yes Height Above Floor 2'

Gravel Refill Pipes            Capped            Height Above Floor           

Chemical Quality good

P&A Data           

Comments:

Waterworks DePere  
Well No. 5

Reviewer Jim Schedgrik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 1200 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 76.0 GPM @ 128 Ft.Hd.  
Pump Setting 400 feet Lubrication water Prelube water  
Motor HP 150 Backspin Protection Time delay  
Aux. Power Intermittent Fuel natural gas Freq. of Oper. 1 X Weekly  
Harvester

Comments:

Pump Station:

Description Brick and Concrete Block Floor: Dist. Above Ground 6"  
Door Open Out yes Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 6 feet Discharge To Sanitary sewer  
Flooding None Dist. to San. Sewer 100 feet

Comments:

Piping and Valves:

Air Relief None U-Bend \_\_\_\_\_ Screen \_\_\_\_\_ Hgt. Above Floor \_\_\_\_\_  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement METEK Well Vent yes - screened  
MEASURES - static, pumping levels and water temperature

High Lift Pump(s): 2

Make LAYNE Type Vertical turbine Discharges To distribution system  
Capacity: Design 800 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 700 GPM @ 128 Ft.Hd.

Waterworks De Pere Reviewer Jim Schudgick

Date March 8, 1988

Well Number 5 Location ENTERPRISE DRIVE

Date Constructed 1970 Total Depth 875 feet

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? yes Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available: unknown  
\_\_\_\_\_  
\_\_\_\_\_

Casing and screen Depth & Diameter:

Inner 20" to 265' Grout Depth 265'  
Outer 24" to 105' Screen Length \_\_\_\_\_  
Open Drillhole Length 875

Means for Measuring Water Level altitude gauge Airline Length 400 feet

Static Water Level 181 Pumping Water Level 334 @ 260 gpc

Specific Capacity 4.9673 gpm/ft.

Pump Base Description 8" concrete Well Seal good

Well Vent yes U-Bend yes Screen yes Height Above Floor 18"

Gravel Refill Pipes — Capped — Height Above Floor —

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_



Waterworks DePere  
Well No. 6

Reviewer Jim Schlegel  
Date March 8, 1988

Well Pump:

Make Layne Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 700 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 760 GPM @ 148' Ft.Hd.  
Pump Setting 350 Lubrication Water Prelube Water  
Motor HP 100 Backspin Protection ratchet  
Aux. Power \_\_\_\_\_ Fuel \_\_\_\_\_ Freq. of Oper. \_\_\_\_\_

Comments:

Pump Station:

Description Brick + Concrete Block Floor: Dist. Above Ground 6"  
Door Open Out In Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 7 feet Discharge To sanitary sewer  
Flooding none Dist. to San. Sewer 150 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend yes Screen yes Hgt. Above Floor 2'  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent. yes

High Lift Pump(s): 2

Make Allis Chalmers Type Centrifugal Discharges To distribution system  
Capacity: Design 600 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 590 GPM @ 148 Ft.Hd.

Works De Pere Reviewer Jim Schudgick

Date March 8, 1988

Well Number 6 Location Schearing Road

Date Constructed Nov. 1979 Total Depth 787 feet

Aquifer Type: Sandstone  Limestone   
Glacial Drift  Other

Is a SGS well log available? yes Well Const. Report yes

Geologic Data if known and if no log is available: yes  
Drift 0 to 88' Sandstone 178' to 787'  
Dolomite 88' to 178'

Casing and screen Depth & Diameter:  
Inner 20" to 187'; 16" 250' to 500' Grout Depth 0' to 184'  
Outer 24" to 98' Screen Length \_\_\_\_\_  
Open Drillhole Length 787 feet

Means for Measuring Water Level altitude gauge Airline Length 350 feet

Static Water Level 13.5 feet Pumping Water Level 208 @ 760 gpc

Specific Capacity 10:4110 gpm/ft.

Pump Base Description Concrete 24" Well Seal none

Well Vent yes U-Bend yes Screen yes Height Above Floor 3'

Gravel Refill Pipes \_\_\_\_\_ Capped \_\_\_\_\_ Height Above Floor \_\_\_\_\_

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

# City of De Pere

Wisconsin

3-2-93  
cc: D. Rossberg LMD  
W. Nied EPA

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

RECEIVED  
MAR 02 1993  
LMD SOLID WASTE

March 1, 1993

Kenneth Bro  
Wis. Dept. of Health  
P.O. Box 309  
Madison, WI 53701

Enclosed are the test results from the City of De Pere's Front and Grant Street wells for the first half of 1993. If you have any questions or concerns, please contact me at 414-339-4063.

Sincerely,

*Allen Baeten*

Allen Baeten, Superintendent  
De Pere Water Dept.

cc: Gus Glaser  
Terry Koehn  
David Linnear  
Gary Edelstien



3150 North Brookfield Road  
 Brookfield, Wisconsin 53045  
 telephone (414) 783-6111  
 FAX (414) 783-5752

WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B1589

City of DePere Water Department  
 925 South 6th Street  
 DePere, WI 54115  
  
 Attn: Mr. Al Baeten

DATE: February 24, 1993  
 PURCHASE ORDER:  
 SEI NO: WL4213  
 DATE COLLECTED: 02/03/93  
 DATE RECEIVED: 02/04/93

Matrix: Drinking Water

Units: ug/l (ppb)

<u>Analyte</u>	SEI ID	4213-1	4213-2
	<u>Sample ID</u>	Grant St. <u>Well</u>	Front St. <u>Well</u>
Chromium		<2	--
Zinc		<60	--
Cyanides, Total		<10	--
Specific Conductivity, umhos/cm		640	--
Benzene		--	<1
Toluene		--	<1
Xylenes		--	<1

*Gary E. Barry*  
 \_\_\_\_\_  
 Gary E. Barry  
 Projects Coordinator



Carroll D. Besadny  
Secretary

Lake Michigan District Headquarters  
1125 N. Military Avenue  
P.O. Box 10448  
Green Bay, WI 54307-0448  
TELEPHONE # (414)492-5869  
TELEFAX # (414)492-5913

February 3, 1993

File Ref: WID-560010118  
Brown Co.  
SFND

Mr. Allen Baeten - Water Department Superintendent  
City of De Pere  
925 South Sixth Street  
De Pere, WI 54115-1199

Re: Grant Street Municipal Well - De Pere, Wisconsin

Dear Mr. Baeten:

On January 21, 1993 I forwarded copies of analytical results from a sample collected at the Grant Street Municipal Well to your attention. Thanks to the efforts of EPA's Remedial Project Manager an error was found in the reported data. The laboratory indicated a detection of 6. mg/l zinc in the sample. Actually the analysis result was 6. ug/l (not mg/l). This value does not exceed the NR-140 or the NR-109 Enforcement Standards for zinc (5. mg/l). In fact, the correct value closely matches the zinc concentrations normally observed at the well. I apologize for not noting the laboratory's reporting error. Your February sampling of the well for metals, should confirm the corrected value. A copy of the corrected laboratory report is attached for your records.

Should you have any questions regarding the above, please call me.

Sincerely,

Terry Koehn  
State Project Manager

cc:	D. Rossberg	LMD-SW	w/o att.
	G. Edelstein	SW/3	with att.
	K. Bro	WDOH	with att.
	G. Glaser	LMD-WS	with att.
	R. Kalny	City of De Pere	w/o att.
	D. Benner	City of De Pere	w/o att.
	D. Linnear	U.S. EPA Region V	w/o att.
	D. Cozza	U.S. EPA Region V	with att.
	W. Nied	U.S. EPA Region V	w/o att.
	R. Karnauskas	Simon-Hydro Search	with att.



**Robert E. Lee & Associates, Inc.**  
Engineering, Surveying, Laboratory Services

2-2-93

corrected report

Wisconsin Certification No: 405043870

2825 S. Webster Ave.  
P.O. Box 2100  
Green Bay, WI 54306-2100  
414336-6338  
FAX 414336-9141

REPORT DATE====> 12/03/92

JOB NUMBER====> 1013000

CUSTOMER=====> 001699

Riedel Environmental  
515 Lande Street  
De Pere, WI 54115

(414) 337-9641

CONTACT=====> Kevin Neal

PROJECT=====> Better Brite

RECEIVED=====> 11/20/92

SAMPLED=====> 11/20/92

COMMENTS:

ATTEST



ROBERT E. LEE & ASSOCIATES, INC.  
 LABORATORY SERVICES  
 P.O. BOX 2100, 2825 S. WEBSTER AVE.  
 GREEN BAY, WI 54306-2100  
 TEL NO: (414) 336-6338  
 FAX NO: (414) 336-9141  
 Wisconsin Certification No: 405043870

Client: Riedel Environmental  
 Date Received: 11/20/92  
 Date of Samples: 11/20/92  
 Report Date: 12/03/92  
 Client Project: Better Brite  
 Client Project Number: Better Brite  
 REL Job Number: 1013000 Batch: 1

THE FOLLOWING DATA HAS BEEN REVIEWED AND MEETS THE QA/QC REQUIREMENTS FOR BLANKS, STANDARDS, DUPLICATE ANALYSES AND SPIKED SAMPLES.

TEST PARAMETER	CHROMIUM	VOLATILE ORGANICS LIQUIDS		ZINC
MDL	0.4 ug/l	Attached ug/l		2 ug/l
WDR NUMBER	00122	84085		00275
ANALYZED BY	J. Jung	L. He		E. Weid
ANALYTICAL METHOD EXTRACTED/DIGESTED	6010 [1]	8021 [1]		6010 [1]

SAMPLE NAME	RESULT ug/l	DATE ANALYZED	RESULT ug/l	DATE ANALYZED	RESULT ug/l	DATE ANALYZED	RESULT	DATE ANALYZED
GW-3	ND	12/02/92	Attached	12/01/92	6	12/02/92		

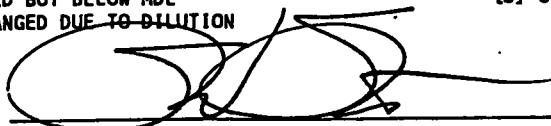
COMMENTS:

ND = COMPOUND NOT DETECTED  
 MDL = METHOD DETECTION LIMIT WITH NO DILUTION  
 D = DETECTED BUT BELOW MDL  
 \* = MDL CHANGED DUE TO DILUTION

ANALYTICAL METHODS

[1] TEST METHODS FOR EVALUATING SOLID WASTE, SW-846  
 [2] METHODS OF CHEMICAL ANALYSIS OF WATER AND WASTES  
 [3] STANDARD METHODS, FOR THE EXAMINATION OF WATER & WASTES, 16th Ed.

ATTEST





*Carroll D. Besadny*  
Secretary

*Lake Michigan District Headquarters*  
1125 N. Military Avenue  
P.O. Box 10448  
Green Bay, WI 54307-0448  
TELEPHONE # (414)492-5869  
TELEFAX # (414)492-5913

January 21, 1993

File Ref: WID-560010118

Brown Co.  
SFND

Mr. Allen Baeten  
Water Department Superintendent  
City of De Pere  
925 South Sixth Street  
De Pere, WI 54115-1199

**Re: Grant Street Municipal Well  
De Pere, Wisconsin**

Dear Mr. Baeten:

On November 20, 1992 the U.S. EPA sampled the Grant Street municipal well as part of their current remedial activities. A copy of the analytical results are attached. The sample was analyzed by Robert E. Lee & Associates, Inc. for chromium, zinc and volatile organic compounds (VOCs). According to the laboratory the sample was not analyzed as a drinking water sample but as a general groundwater sample.

Chromium was not detected (ND) in the sample. The laboratory's method detection limit (MDL) for chromium was 0.4 ug/l. Zinc was detected in the sample at a concentration of 6. mg/l. The MDL for zinc was 2. mg/l. This result exceeded the NR-140 Public Welfare Enforcement Standard (5. mg/l) and the NR-109 Secondary Standard (5. mg/l) for zinc. Methylene chloride was also detected in the sample at a concentration of 1.4 ug/l. However, the MDL for this compound was 1.5 ug/l. Additionally, this compound was detected in the method blank at a concentration of 1.9 ug/l. This was the only VOC detected in the sample and it did not exceed the NR-140 Public Health Preventative Action Limit for methylene chloride (15. ug/l)

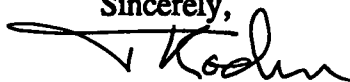
As we discussed your next sampling of the well for selected metals, including both zinc and chromium, is scheduled for early February 1993. This scheduled sampling should be acceptable as a check sample for the zinc detected in the November 1992 EPA sample. The VOC detection may be associated with lab contamination and not of any significant concern. However, as we discussed, your recent required VOC sampling should provide an acceptable check sample.



Please contact Mr. Gus Glaser from WDNR Water Supply to confirm if the above comments regarding the check samples are acceptable. Mr. Glaser can be contacted at (414)492-5890.

Should you have any questions regarding the above, please call me.

Sincerely,



Terry Koehn  
State Project Manager

cc:	D. Rossberg	LMD-SW	w/o att.
	G. Edelstein	SW/3	with att.
	K. Bro	WDOH	with att.
	G. Glaser	LMD-WS	with att.
	R. Kalny	City of De Pere	w/o att.
	D. Benner	City of De Pere	w/o att.
	D. Linnear	U.S. EPA Region V	w/o att.
	D. Cozza	U.S. EPA Region V	with att.
	W. Nied	U.S. EPA Region V	w/o att.
	R. Karnauskas	Simon-Hydro Search	with att.



**Robert E. Lee & Associates, Inc.**  
Engineering, Surveying, Laboratory Services

Wisconsin Certification No: 405043870

2825 S. Webster Ave.  
P.O. Box 2100  
Green Bay, WI 54306-2100  
414/336-6338  
FAX 414/336-9141

REPORT DATE====> 12/03/92

JOB NUMBER====> 1013000

CUSTOMER=====> 001699

Riedel Environmental  
515 Lande Street  
De Pere, WI 54115

(414) 337-9641

CONTACT=====> Kevin Neal

PROJECT=====> Better Brite

RECEIVED=====> 11/20/92

SAMPLED=====> 11/20/92

COMMENTS:

ATTEST: 

ROBERT E. LEE & ASSOCIATES  
 LABORATORY SERVICES  
 BOX 2100 2825 S. WEBSTER AVE.  
 GREEN BAY, WI 54306-2100  
 TEL NO: (414) 336-6338  
 FAX NO: (414) 336-9141  
 Wisconsin Certification No: 405043870

Client: Riedel Environmental  
 Date Received: 11/20/92  
 Date of Samples: 11/20/92  
 Report Date: 12/03/92  
 Client Project: Better Brite  
 Client Project Number: Better Brite  
 REL Job Number: 1013000 Batch: 1

THE FOLLOWING DATA HAS BEEN REVIEWED AND MEETS THE QA/QC REQUIREMENTS  
 FOR BLANKS, STANDARDS, DUPLICATE ANALYSES AND SPIKED SAMPLES.

TEST PARAMETER	CHROMIUM	VOLATILE ORGANICS LIQUIDS		ZINC
MDL	0.4 ug/l	Attached ug/l		2 mg/l
WDNR NUMBER	00122	L. He		E. Weid
ANALYZED BY	J. Jung	8021 [2]		6010 [2]
ANALYTICAL METHOD	6010 [2]			
EXTRACTED/DIGESTED				

SAMPLE NAME	RESULT ug/l	DATE ANALYZED	RESULT ug/l	DATE ANALYZED	RESULT mg/l	DATE ANALYZED	RESULT	DATE ANALYZED
GW-3	ND	12/02/92	Attached	12/01/92	6	12/02/92		

COMMENTS:

ND = COMPOUND NOT DETECTED  
 MDL = METHOD DETECTION LIMIT WITH NO DILUTION  
 D = DETECTED BUT BELOW MDL  
 \* = MDL CHANGED DUE TO DILUTION

ANALYTICAL METHODS

[1] TEST METHODS FOR EVALUATING SOLID WASTE, SW-846  
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ATTEST



ROBERT E LEE & ASSOCIATES, INC.  
 LABORATORY SERVICES  
 2825 S. WEBSTER AVE. P.O. BOX 2100  
 GREEN BAY, WIS 54306  
 TELEPHONE NUMBER: (414) 336 - 6338  
 WISCONSIN CERTIFICATION NUMBER: 405043870

METHOD 8021. VOLATILE ORGANIC COMPOUNDS IN  
 WATER BY PURGE AND TRAP CAPILLARY COLUMN  
 GAS CHROMATOGRAPHY WITH PHOTOIONIZATION  
 AND ELECTROLYTIC CONDUCTIVITY DETECTORS IN  
 SERIES.

CLIENT: RIEDEL ENVIRONMENTAL  
 DATE SAMPLED: 11/20/92  
 DATE ANALYZED: 12/01/92  
 REPORT DATE: 12/02/92 LH  
 ANALYZED BY: LH

PROJECT: BETTER BRITE  
 PROJECT NUMBER: NA  
 REL JOB NUMBER: 1013000  
 SAMPLE: GW-3

ANALYTE	MDL UG/L	RESULT UG/L
BENZENE	0.6	ND
BROMOBENZENE	4.0	ND
BROMOCHLOROMETHANE	2.6	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	2.2	ND
BROMOMETHANE	2.8	ND
n-BUTYLBENZENE	5.6	ND
sec-BUTYLBENZENE	3.8	ND
tert-BUTYLBENZENE	5.8	ND
CARBON TETRACHLORIDE	1.3	ND
CHLOROBENZENE	3.7	ND
CHLOROETHANE	2.8	ND
CHLOROFORM	1.7	ND
CHLOROMETHANE	2.9	ND
2-CHLOROTOLUENE	2.9	ND
4-CHLOROTOLUENE	3.7	ND
DIBROMOCHLOROMETHANE	1.2	ND
1,2-DIBROMO-3-CHLOROPROPANE	2.8	ND
1,2-DIBROMOETHANE (EDB)	2.4	ND
1,2-DICHLOROETHANE	2.9	ND
1,3-DICHLOROETHANE	3.5	ND
1,4-DICHLOROETHANE	3.2	ND
DICHLORODIFLUOROMETHANE	2.7	ND
1,1-DICHLOROETHANE	1.7	ND
1,2-DICHLOROETHANE	2.2	ND
1,1-DICHLOROETHENE	1.9	ND
cis-1,2-DICHLOROETHENE	2.0	ND
trans-1,2-DICHLOROETHENE	2.4	ND
1,2-DICHLOROPROPANE	3.7	ND

ANALYTE	MDL UG/L	RESULT UG/L
1,3-DICHLOROPROPANE	3.3	ND
2,2-DICHLOROPROPANE	2.2	ND
1,1-DICHLOROPROPENE	1.9	ND
cis-1,3-DICHLOROPROPENE	1.9	ND
trans-1,3-DICHLOROPROPENE	1.9	ND
ETHYLBENZENE	2.0	ND
HEXACHLOROBUTADIENE	1.7	ND
ISOPROPYLBENZENE	3.6	ND
p-ISOPROPYLTOLUENE	3.6	ND
METHYLENE CHLORIDE	1.5	1.4 D
METHYL-TERT-BUTYL-ETHER	1.3	ND
NAPHTHALENE	4.7	ND
n-PROPYLBENZENE	3.4	ND
STYRENE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	4.5	ND
1,1,1,2,2-TETRACHLOROETHANE	2.4	ND
TETRACHLOROETHENE	1.8	ND
TOLUENE	3.1	ND
1,2,3-TRICHLOROETHANE	3.5	ND
1,2,4-TRICHLOROETHANE	1.3	ND
1,1,1-TRICHLOROETHANE	1.4	ND
1,1,2-TRICHLOROETHANE	3.1	ND
TRICHLOROETHENE	3.1	ND
TRICHLOROFLUOROMETHANE	1.5	ND
1,2,3-TRICHLOROPROPANE	3.0	ND
1,2,4-TRIMETHYLBENZENE	3.5	ND
1,3,5-TRIMETHYLBENZENE	3.5	ND
VINYL CHLORIDE	2.3	ND
m,p-XYLENE	1.5	ND
o-XYLENE	1.0	ND

\* 2-BROMO-1-CHLOROPROPANE SURROGATE RECOVERY (%)..... 98  
 \* 1,4-DICHLOROBUTANE SURROGATE RECOVERY (%)..... 105

ND = COMPOUND NOT DETECTED  
 MDL = METHOD DETECTION LIMIT

D = COMPOUND DETECTED BUT BELOW MDL  
 \* SURROGATE STANDARD PERCENT RECOVERY

ATTEST

# ROBERT E. LEE & ASSOCIATES, INC.

CLIENT: Riedel Environmental  
PROJECT: Better Brite  
REL JOB NUMBER: 1013000

## NARRATIVE

This set consisted of 1 liquid sample. The sample was collected and received on November 20, 1992.

The sample was analyzed for volatile organic compounds on December 1, 1992 following SW-846 Method 8021. This sample was first analyzed on November 24, 1992.

The following is a summary of the Quality Control results accompanying this sample and a description of any problems encountered during analysis:

1. The method blank contained 1.9 ug/L of methylene chloride.
2. The duplicate was within laboratory limits except bromomethane, chloroethane, and trichlorofluoromethane.
3. The surrogates were within laboratory limits.
4. The matrix spike was within laboratory limits except chloromethane, 1,2-dibromo-3-chloropropane, dichlorofluoromethane, 1,1,2,2-tetrachloroethane, and vinyl chloride.
5. The initial calibration curve was within quality control limits for all analytes. A four-point curve was used for dichlorodifluoromethane.
6. The check standard met the quality control criteria for all detected analyte except methylene chloride.



Sheldon Stone  
Laboratory Manager  
12/02/92 lh

**ROBERT E. LEE & ASSOCIATES**  
**LABORATORY SERVICES**  
 2825 S. WEBSTER AVE. P.O. BOX 2100  
 GREEN BAY, WIS 54306  
 TELEPHONE NUMBER: (414) 336 - 6338  
 WISCONSIN CERTIFICATION NUMBER: 405043670

**CLIENT: RIEDEL ENVIRONMENTAL**  
**DATE RECEIVED: 11/20/92**  
**DATE OF SAMPLE: 11/20/92**  
**REPORT DATE: 12/04/93**  
**PROJECT NAME: BETTER BRITE PLATING**  
**REL JOB NUMBER: 1013000**

**RESULTS OF ANALYSIS**  
**QA/QC REPORT**

SAMPLE NAME	RESULT (MG/L)	
	CHROMIUM	ZINC
GW-3	<0.004	0.006
GW-3 DUPLICATE	<0.004	0.005
GW-3 SPIKE	0.106	0.519
PERCENT RECOVERY	106	103
PERCENT RSD	0.0	18.1
CHECK STANDARD	0.998	1.005
CHECK STANDARD DUPE	0.980	1.014
PERCENT RECOVERY	98.9	101
PERCENT RSD	1.80	0.89

ATTEST \_\_\_\_\_



CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME				NO. OF CONTAINERS	TOTAL CHAIN OF CUSTODY PLASTIC VOLS - 3 40ML VIALS				REMARKS
RIEDEL		BETTER BRITE PLATING									
SAMPLERS: (Signature) Full P. Ramsey		ECOLOGY & ENVIRONMENT, INC.									
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION						
GW3	11/20/92	1010		X	MUNI-WELL- GROUNDWATER SAMPLE - 3	4	1	3	1 LITER PLASTIC - PRESERVED WITH NITRIC ACID		
									3-40ML VIALS - PRESERVED WITH HCl		
					SEND RESULTS TO:						
					KEVIN NEH						
					RIEDEL ENVIRONMENTAL SERVICES						
					U.S. EPA - BETTER BRITE PLATING						
					515 CANOE STREET						
					DE PERE, WI 54115						
					PHONE - (414) 337-9641 - FAX - (414) 337-9650						
Relinquished by: (Signature) Full P. Ramsey		Date / Time 11/20/92 1300		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature) J. Zimmerman		Date / Time 11/20/92 1300		Remarks DELIVERED TO: ROBERT E. LEL AND ASSOCIATES ATTN: SHELTON STONE 2825 SOUTH WEBSTER GREEN BAY, WI 54306 (414) 336-6338			

QA LEVEL II  
 TURNAROUND - 10 WORKING DAYS

**Robert E. Lee & Associates**  
 Engineering, Surveying, Laboratory Services

2825 S. Webster Ave.  
 P.O. Box 2100  
 Green Bay, WI 54906-2100  
 414-336-6338  
 FAX 414-336-8141

**FACSIMILE COVER SHEET**

**TO:** Terry Kane  
**COMPANY:** WDNR  
**FAX PHONE NO.:** 492-5859  
**FROM:** Julie Graw  
**DATE:** 1/21/93  
**PROJECT NO.:** Better Route / Riedel  
**NUMBER OF PAGES:** 2 (Including this sheet)

**COMMENTS:**

In case of transmission problems, please call (414) 336-6338.

This Fax Machine Number is (414) 336-9141.



ROBERT E. LEE & ASSOCIATES  
 LABORATORY SERVICES  
 2825 S. WEBSTER AVE. P.O. BOX 2100  
 GREEN BAY, WIS 54306  
 TELEPHONE NUMBER: (414) 336 - 6338  
 WISCONSIN CERTIFICATION NUMBER: 405043870

CLIENT: RIEDEL ENVIRONMENTAL  
 DATE RECEIVED: 11/20/92  
 DATE OF SAMPLE: 11/20/92  
 REPORT DATE: 12/04/92  
 PROJECT NAME: BETTER BRITE PLATING  
 REL JOB NUMBER: 1013000

## RESULTS OF ANALYSIS QA/QC REPORT

SAMPLE NAME	RESULT (MG/L)	
	CHROMIUM	ZINC
GW-3 GW-3 DUPLICATE GW-3 SPIKE		0.006 0.005 0.519
PERCENT RECOVERY PERCENT RSD		103 18.1
CHECK STANDARD CHECK STANDARD DUPE		1.005 1.014
PERCENT RECOVERY PERCENT RSD		101 0.89

ATTEST \_\_\_\_\_



9-11-92

# City of De Pere

Wisconsin

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

RECEIVED

SEP 11 1992

LMD SOLID WASTE

September 10, 1992

Kenneth Bro  
Wis. Division of Health  
P.O. Box 309  
Madison, WI 53701-0309

These are the sample results we are required to take at our Grant and Front Street wells. If you have any questions on these test results, please contact me at 414-339-4063.

Sincerely,

*Allen Baeten*

Allen Baeten, Superintendent  
De Pere Water Department

cc: David Linnear  
Gary Edelstein  
Mark Schuelke  
Terry Koehn

3150 North Brookfield Road  
 Brookfield, Wisconsin 53045  
 telephone (414) 783-6111  
 FAX (414) 783-5752



WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B0277

City of DePere Water Department  
 925 South 6th Street  
 DePere, WI 54115  
  
 Attn: Mr. Al Baeten


DATE: September 2, 1992  
 PURCHASE ORDER:  
 SEI NO: WL2196  
 DATE COLLECTED: 08/05/92  
 DATE RECEIVED: 08/06/92

Matrix: Drinking Water

Units: ug/l (ppb)

<u>Parameter</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>2196-1</u> <u>Grant S. Well</u>
Chromium		<2
Zinc		21
Cyanides, Total		<10
Specific Conductivity, umhos/cm		377

<u>Parameter</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>2196-2</u> <u>Front St. Well</u>
EPA Method 8020		
Benzene		<1
Toluene		<1
Ethylbenzene		<1
Xylenes		<1

  
 Rosemary L. Dineen  
 Laboratory Director

K 6-1-92

→ TERRY KOEHN -  
LMD

Here's a printout of  
sampling and results  
for DePere #2.

You'll have to sift through  
the printouts because  
it's in a weird order.

You'll want samples from  
well # B1-184 - not  
from the distribution system  
(that would be all wells  
mixed together.)

If you have any  
questions - call me at  
x5891.

Liz Heinen  
WS

MEET YOU IN THE

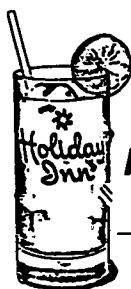
# Woodshed Lounge

**HAPPY HOUR**

**3:00 - 7:00 p.m.**

**Sept. - Mid-May**

*Have a drink with us!*



**CHILDREN'S  
SPECIAL  
\$1.50  
MENU**

## THE TIMBERS RESTAURANT

**HOURS: 6:30 p.m.-2:00 p.m.  
5:00 p.m.-Close**

**ENJOY  
BREAKFAST ANYTIME!**

**DAILY...**

**CHEF'S CHOICE OF  
SOUP & SALAD**

**CHOOSE FROM OUR  
DELICIOUS LUNCHEON  
ENTREES...HOT OR COLD!**

**FRIDAY FISH FRY  
(Includes Soup & Salad Bar)**

**SATURDAY PRIME RIB BUFFET  
All-You-Care-To-Eat  
5:00-9:00 P.M.**

**SUNDAY BREAKFAST BUFFET  
Includes your favorite  
breakfast items!  
8:00-11:00 A.M.**

**Childrens Prices &  
Senior Discount Available**



Dist: Lake Michigan District (4)  
Type: MC - Municipal Community

22-MAY-92

CHILTON WATERWORKS - CHILTON - Calumet County (8)  
40802223

PARAMETER	SAMPLE RESULT	UNITS	LAB SEQ NO	SAMPLE DATE	SAMP TYPE	WELL #	COLLECTOR	SAMPLING LOCATION
1027 CADMIUM TOTAL	0	UG/L	IC053066	11/26/91	D	BF256	SCHEDGICK	
1027 CADMIUM TOTAL	0	UG/L	IC052545	11/25/91	D	BF254	SCHEDGICK	
1027 CADMIUM TOTAL	0	UG/L	IA043171	11/09/89	D		VAUGHN	
1027 CADMIUM TOTAL	0	UG/L	10000674	02/28/85	D			COMMERCIAL BANK-CHILTON DOWNST
1027 CADMIUM TOTAL	0	UG/L	10000503	01/15/81	D			STATE BANK OF CHILTON (FOUNTAIN)
1027 CADMIUM TOTAL	.25	UG/L	10000346	10/01/76	D			TAP-US POST OFFICE
1034 CHROMIUM TOTAL	0	UG/L	IC053066	11/26/91	D	BF256	SCHEDGICK	
1034 CHROMIUM TOTAL	0	UG/L	IC052545	11/25/91	D	BF254	SCHEDGICK	
1034 CHROMIUM TOTAL	0	UG/L	IA043171	11/09/89	D		VAUGHN	
1034 CHROMIUM TOTAL	7	UG/L	10000674	02/28/85	D			COMMERCIAL BANK-CHILTON DOWNST
1034 CHROMIUM TOTAL	0	UG/L	10000503	01/15/81	D			STATE BANK OF CHILTON (FOUNTAIN)
1034 CHROMIUM TOTAL	0	UG/L	10000346	10/01/76	D			TAP-US POST OFFICE
1051 LEAD TOTAL	0	UG/L	IC053066	11/26/91	D	BF256	SCHEDGICK	
1051 LEAD TOTAL	0	UG/L	IC052545	11/25/91	D	BF254	SCHEDGICK	
1051 LEAD TOTAL	0	UG/L	IA043171	11/09/89	D		VAUGHN	
1051 LEAD TOTAL	0	UG/L	10000674	02/28/85	D			COMMERCIAL BANK-CHILTON DOWNST
1051 LEAD TOTAL	0	UG/L	10000578	02/20/85	I			ROBERT DORN (2 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000579	02/20/85	I			ROBERT DORN (2 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000580	02/20/85	I			ROBERT DORN (2 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000581	02/20/85	I			ROBERT DORN (2 YEAR OLD) KITCHEN
1051 LEAD TOTAL	3	UG/L	10000582	02/20/85	I			RON GRUETT (1 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000583	02/20/85	I			RON GRUETT (1 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000584	02/20/85	I			RON GRUETT (1 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000585	02/20/85	I			RON GRUETT (1 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000586	02/20/85	I			TIM SCHWARTZ (3 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000587	02/20/85	I			TIM SCHWARTZ (3 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000588	02/20/85	I			TIM SCHWARTZ (3 YEAR OLD) KITCHEN
1051 LEAD TOTAL	0	UG/L	10000589	02/20/85	I			TIM SCHWARTZ (3 YEAR OLD) KITCHEN
1051 LEAD TOTAL	32	UG/L	10000503	01/15/81	D			STATE BANK OF CHILTON (FOUNTAIN)
1051 LEAD TOTAL	7	UG/L	10000346	10/01/76	D			TAP-US POST OFFICE

DEPERE WATER DEPARTMENT - DEPERE - Brown County (5)  
40504530

PARAMETER	SAMPLE RESULT	UNITS	LAB SEQ NO	SAMPLE DATE	SAMP TYPE	WELL #	COLLECTOR	SAMPLING LOCATION
1027 CADMIUM TOTAL	0	UG/L	18048448	12/14/87	D		HEIMKE	CITY HALL 1ST FLOOR LADIES ROOM
1027 CADMIUM TOTAL	0	UG/L	10000287	10/02/86	W	BF184		GRANT ST WELL SAMPLE TAP
1027 CADMIUM TOTAL	0	UG/L	10000603	03/14/83	D			1155 SCHEURING RD LUNCH ROOM C
1027 CADMIUM TOTAL	0	UG/L	10000524	01/05/81	D			1133 FAY CT. SCHUELKE RES.
1027 CADMIUM TOTAL	0	UG/L	10000683	10/11/76	D			MARS RESTAURANT
1034 CHROMIUM TOTAL	0	UG/L	19057030	01/19/89	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19052647	01/04/89	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19051127	12/22/88	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19047959	12/08/88	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19044595	11/23/88	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19041553	11/10/88	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19037884	10/27/88	D	BF184	APFEL	

Dist: Lake Michigan District (4)  
Type: MC - Municipal Community

22-MAY-92

DEPERE WATER DEPARTMENT - DEPERE - Brown County (5)  
40504530

PARAMETER	SAMPLE RESULT	UNITS	LAB SEQ NO	SAMPLE DATE	SAMP TYPE	WELL #	COLLECTOR	SAMPLING LOCATION
1034 CHROMIUM TOTAL	0	UG/L	19032088	10/06/88	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19028043	09/22/88	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19023248	09/08/88	D	BF184	SCHEDGICK	
1034 CHROMIUM TOTAL	0	UG/L	19019345	08/25/88	D	BF184	SCHEDGICK	
1034 CHROMIUM TOTAL	0	UG/L	19015190	08/11/88	D	BF184	APFEL	
1034 CHROMIUM TOTAL	0	UG/L	19005043	07/12/88			ERDMANN	
1034 CHROMIUM TOTAL	0	UG/L	18056326	01/21/88	I		ERDMANN	
1034 CHROMIUM TOTAL	0	UG/L	18048448	12/14/87	D		HEIMKE	CITY HALL 1ST FLOOR LADIES ROO
1034 CHROMIUM TOTAL	0	UG/L	10000326	01/21/87	I			GRANT STREET WELL SAMPLE TAP
1034 CHROMIUM TOTAL	0	UG/L	10000287	10/02/86	W	BF184		GRANT ST WELL SAMPLE TAP
1034 CHROMIUM TOTAL	0	UG/L	10000603	03/14/83	D			1155 SCHEURING RD LUNCH ROOM C
1034 CHROMIUM TOTAL	0	UG/L	10000524	01/05/81	D			1133 FAY CT. SCHUELKE RES.
1034 CHROMIUM TOTAL	0	UG/L	10000683	10/11/76	D			MARS RESTAURANT
1051 LEAD TOTAL	0	UG/L	19005043	07/12/88			ERDMANN	
1051 LEAD TOTAL	0	UG/L	18048448	12/14/87	D		HEIMKE	CITY HALL 1ST FLOOR LADIES ROO
1051 LEAD TOTAL	0	UG/L	10000287	10/02/86	W	BF184		GRANT ST WELL SAMPLE TAP
1051 LEAD TOTAL	0	UG/L	10000603	03/14/83	D			1155 SCHEURING RD LUNCH ROOM C
1051 LEAD TOTAL	0	UG/L	10000524	01/05/81	D			1133 FAY CT. SCHUELKE RES.
1051 LEAD TOTAL	0	UG/L	10000683	10/11/76	D			MARS RESTAURANT

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18939

lab type: 0 - ORGANIC

sample date: 24-FEB-88  
report date: 02-MAR-88time: 1002  
cert lab id: 113133790

lab seqno: 08003209

where taken: W - WELL  
well number: 8F184why taken: M - MISC  
collector: JIM SCHEDGICK

sample type: W - RAW

loc addr: DEPERE WATER DEPT., FRONT STREET, 925 6TH ST., DEPERE, W  
loc desc: WELL SAMPLE TAPlast changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
32101 BROMODICHLOROMETHANE	GCMS ND < LL	0	UG/L	77443 1,2,3-TRICHLOROPROPANE	GCMS ND < LL	0	UG/L
32102 CARBON TETRACHLORIDE	GCMS ND < LL	0	UG/L	77562 1,1,1,2 TETRACHLOROETHANE	GCMS ND < LL	0	UG/L
32104 BROMOFORM	GCMS ND < LL	0	UG/L	77596 DIBROMOMETHANE	GCMS ND < LL	0	UG/L
32105 DIBROMOCHLOROMETHANE	GCMS ND < LL	0	UG/L	77651 ETHYLENE DIBROMIDE (EDB)	GCMS ND < LL	0	UG/L
32106 CHLOROFORM	GCMS ND < LL	0	UG/L	81551 XYLENE TOTAL	GCMS ND < LL	0	UG/L
34235 BENZENE DISS	GCMS ND < LL	0	UG/L	81555 BROMOBENZENE	GCMS ND < LL	0	UG/L
34301 CHLOROBENZENE	GCMS ND < LL	0	UG/L	81595 METHYL ETHYL KETONE	GCMS ND < LL	0	UG/L
34311 CHLOROETHANE	GCMS ND < LL	0	UG/L	81607 TETRAHYDROFURAN	GCMS ND < LL	0	UG/L
34371 ETHYL BENZENE	GCMS ND < LL	0	UG/L	81611 TRICHLOROTRIFLUOROETHANE	GCMS ND < LL	0	UG/L
34413 BROMOMETHANE	GCMS ND < LL	0	UG/L				
34423 DICHLOROMETHANE	GCMS ND < LL	0	UG/L				
34475 TETRACHLOROETHYLENE	GCMS ND < LL	0	UG/L				
34481 TOLUENE DISS	GCMS ND < LL	0	UG/L				
34488 TRICHLOROFLUOROMETHANE	GCMS ND < LL	0	UG/L				
34496 1,1-DICHLOROETHANE	GCMS ND < LL	0	UG/L				
34501 1,1-DICHLOROETHYLENE	GCMS ND < LL	0	UG/L				
34506 1,1,1-TRICHLOROETHANE	GCMS ND < LL	0	UG/L				
34511 1,1,2-TRICHLOROETHANE	GCMS ND < LL	0	UG/L				
34516 1,1,2,2 TETRACHLOROETHANE	GCMS ND < LL	0	UG/L				
34531 1,2-DICHLOROETHANE	GCMS ND < LL	0	UG/L				
34536 1,2-DICHLOROBENZENE (O-)	GCMS ND < LL	0	UG/L				
34546 1,2-DICHLOROETHYLENE, TRA	GCMS ND < LL	0	UG/L				
34551 1,2,4-TRICHLOROBENZENE	GCMS ND < LL	0	UG/L				
34566 1,3-DICHLOROBENZENE (M-)	GCMS ND < LL	0	UG/L				
34571 1,2-DICHLOROBENZENE (P-)	GCMS ND < LL	0	UG/L				
34576 2-CHLOROETHYL VINYL ETHER	GCMS ND < LL	0	UG/L				
34699 1,3-DICHLOROPROPENE TRANS	GCMS ND < LL	0	UG/L				
34704 1,3-DICHLOROPROPENE CIS	GCMS ND < LL	0	UG/L				
38760 1,2-DIBROMO-3-CHLOROPROPA	GCMS ND < LL	0	UG/L				
39175 VINYL CHLORIDE	GCMS ND < LL	0	UG/L				
39180 TRICHLOROETHYLENE	GCMS ND < LL	0	UG/L				
77041 CARBON DISULFIDE	GCMS ND < LL	0	UG/L				
77093 1,2-DICHLOROETHYLENE CIS	GCMS ND < LL	0	UG/L				
77128 STYRENE	GCMS ND < LL	0	UG/L				
77161 1,2-DICHLOROPROPENE TRANS	GCMS ND < LL	0	UG/L				
77168 1,1-DICHLOROPROPENE	GCMS ND < LL	0	UG/L				
77170 2,2-DICHLOROPROPANE	GCMS ND < LL	0	UG/L				
77173 1,3-DICHLOROPROPANE	GCMS ND < LL	0	UG/L				
77275 O-CHLOROTOLUENE	GCMS ND < LL	0	UG/L				
77277 P-CHLOROTOLUENE	GCMS ND < LL	0	UG/L				



Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530

name: DEPERE WATER DEPARTMENT

sample id: 55298

lab type: 0 - ORGANIC

sample date: 27-AUG-84

time: 800

lab seqno: 05000818

report date: 04-SEP-84

cert lab id: 113133790

where taken: W - WELL  
well number: 8F184why taken: S - SDWA  
collector: KINCAID

sample type: D - COMPOSITE

loc addr:

loc desc: SAMPLE TAP, GRANT ST., DE PERE WATER DEPT.

last changed by: N582M01S

on: 05-NOV-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
34210 ACROLEIN	NON-DETECT	0	UG/L	39180 TRICHLOROETHYLENE	NON-DETECT	0	UG/L
34215 ACRYLONITRILE	NON-DETECT	0	UG/L	34488 TRICHLOROFLUOROMETHANE	NON-DETECT	0	UG/L
34235 BENZENE DISS	NON-DETECT	0	UG/L	81611 TRICHLOROTRIFLUOROETHANE	NON-DETECT	0	UG/L
81555 BROMOBENZENE	NON-DETECT	0	UG/L	39175 VINYL CHLORIDE	NON-DETECT	0	UG/L
32101 BROMODICHLOROMETHANE	NON-DETECT	0	UG/L	81551 XYLENE TOTAL	NON-DETECT	0	UG/L
32104 BROMOFORM	NON-DETECT	0	UG/L				
34413 BROMOMETHANE	NON-DETECT	0	UG/L				
77189 BUTYL ACETATE	NON-DETECT	0	UG/L				
77041 CARBON DISULFIDE	NON-DETECT	0	UG/L				
32102 CARBON TETRACHLORIDE	NON-DETECT	0	UG/L				
34301 CHLOROENZENE	NON-DETECT	0	UG/L				
34311 CHLOROETHANE	NON-DETECT	0	UG/L				
34576 2-CHLOROETHYL VINYL ETHER	NON-DETECT	0	UG/L				
32106 CHLOROFORM	NON-DETECT	0	UG/L				
77275 O-CHLOROTOLUENE	NON-DETECT	0	UG/L				
77277 P-CHLOROTOLUENE	NON-DETECT	0	UG/L				
32105 DIBROMOCHLOROMETHANE	NON-DETECT	0	UG/L				
38760 1,2-DIBROMO-3-CHLOROPROPA	NON-DETECT	0	UG/L				
34536 1,2-DICHLOROBENZENE (O-)	NON-DETECT	0	UG/L				
34566 1,3-DICHLOROBENZENE (M-)	NON-DETECT	0	UG/L				
34571 1,2-DICHLOROBENZENE (P-)	NON-DETECT	0	UG/L				
34496 1,1-DICHLOROETHANE	NON-DETECT	0	UG/L				
34531 1,2-DICHLOROETHANE	NON-DETECT	0	UG/L				
34501 1,1-DICHLOROETHYLENE	NON-DETECT	0	UG/L				
34546 1,2-DICHLOROETHYLENE, TRA	NON-DETECT	0	UG/L				
81575 DICHLOROIODOMETHANE	NON-DETECT	0	UG/L				
34541 1,2-DICHLOROPROPANE	NON-DETECT	0	UG/L				
34704 1,3-DICHLOROPROPENE CIS	NON-DETECT	0	UG/L				
34699 1,3-DICHLOROPROPENE TRANS	NON-DETECT	0	UG/L				
34371 ETHYL BENZENE	NON-DETECT	0	UG/L				
77223 ISOPROPYLBENZENE	NON-DETECT	0	UG/L				
81595 METHYL ETHYL KETONE	NON-DETECT	0	UG/L				
77128 STYRENE	NON-DETECT	0	UG/L				
77562 1,1,1,2 TETRACHLOROETHANE	NON-DETECT	0	UG/L				
34516 1,1,2,2 TETRACHLOROETHANE	NON-DETECT	0	UG/L				
34475 TETRACHLOROETHYLENE	NON-DETECT	0	UG/L				
81607 TETRAHYDROFURAN	NON-DETECT	0	UG/L				
34481 TOLUENE DISS	NON-DETECT	0	UG/L				
34506 1,1,1-TRICHLOROETHANE	NON-DETECT	0	UG/L				
34511 1,1,2-TRICHLOROETHANE	NON-DETECT	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530

name: DEPERE WATER DEPARTMENT

sample id: 18951

lab type: I - INORGANIC

sample date: 19-JAN-89  
report date: 15-FEB-89time: 1000  
cert lab id: 113133790

lab seqno: 19057030

where taken: W - WELL  
well number: BF184why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT. GRANT STREET PUMP SAMPLING TAP  
loc desc:last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	560	UMOHS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT sample id: 18950

lab type: I - INORGANIC

sample date: 04-JAN-89 time: 1024 lab seqno: I9052647  
 report date: 30-JAN-89 cert lab id: 113133790

where taken: W - WELL why taken: S - SDWA sample type: D - COMPOSITE  
 well number: ~~BF184~~ collector: APFEL

loc addr: DEPERE WATER DEPT. GRANT STREET PUMP TAP last changed by: INIT LOAD  
 loc desc: on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
10 WATER TEMP	FIELD	11.3	CENT				
95 CONDUCTIVITY AT 25C	NORMAL	565	UMOHS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18949

lab type: I - INORGANIC

sample date: 22-DEC-88  
report date: 30-JAN-89

time: 924  
cert lab id: 113133790

lab seqno: 19051127

where taken: H - WELL  
well number: ~~BF184~~

why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: GRANT STREET DEPERE PUMP TAP  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	355	UMOHS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18948

lab type: I - INORGANIC

sample date: 08-DEC-88  
report date: 03-JAN-89

time: 924  
cert lab id: 113133790

lab seqno: 19047959

where taken: W - WELL  
well number: BF18

why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT GRANT STREET PUMP TAP  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	565	MG/L				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18947

lab type: I - INORGANIC

sample date: 23-NOV-88  
report date: 03-JAN-89

time: 945  
cert lab id: 113133790

lab seqno: 19044595

where taken: W - WELL  
well number: BF184

why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT. GRANT STREET PUMP TAP  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	554	MG/L				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18946

lab type: I - INORGANIC

sample date: 10-NOV-88  
report date: 07-DEC-88

time: 930  
cert lab id: 113133790

lab seqno: 19041553

where taken: W - WELL  
well number: BF184

why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT GRANT STREET PUMP TAP  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	560	UMHOS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18945

lab type: I - INORGANIC

sample date: 27-OCT-88  
report date: 02-DEC-88

time: 946  
cert lab id: 113133790

lab seqno: 19037884

where taken: W - WELL  
well number: 28184

why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: PUMP TAP GRANT STREET DEPERE WATER DEPT  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	560	UMHOS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				



Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18944

lab type: I - INORGANIC

sample date: 06-OCT-88  
report date: 04-NOV-88

time: 1047  
cert lab id: 113133790

lab seqno: I9032088

where taken: W - WELL  
well number: BF184

why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT GRANT STREETPUMP TAP  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	550	UMHOS/C
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L

Parameter	Result Code	Result	Unit
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Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530

name: DEPERE WATER DEPARTMENT

sample id: 18943

lab type: I - INORGANIC

sample date: 22-SEP-88

time: 920

lab seqno: 19028043

report date: 19-OCT-88

cert lab id: 113133790

where taken: W - WELL  
well number: 184why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT GRANT STREET OFF PUMP TAP 925 SIXTH ST

last changed by: INIT LOAD

loc desc:

on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	550	UMHOS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18942

lab type: I - INORGANIC

sample date: 08-SEP-88  
report date: 28-SEP-88

time: 925  
cert lab id: 113133790

lab seqno: 19023248

where taken: W - WELL  
well number: BF184

why taken: S - SDWA  
collector: SCHEDGICK

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT GRANT STREET OFF PUMP TAP  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	530	UMHOS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18941

lab type: I - INORGANIC

sample date: 25-AUG-88  
report date: 28-NOV-88

time: 936  
cert lab id: 113133790

lab seqno: 19019345

where taken: W - WELL  
well number: 38F18

why taken: S - SDWA  
collector: SCHEDGICK

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT GRANT STREET OFF PUMP TAP 925 SIXTH ST  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	560	UMHOS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18940

lab type: I - INORGANIC

sample date: 11-AUG-88  
report date: 13-SEP-88

time: 918  
cert lab id: 113133790

lab seqno: 19015190

where taken: W - WELL  
well number: DE104

why taken: S - SDWA  
collector: APFEL

sample type: D - COMPOSITE

loc addr: DEPERE WATER DEPT GRANT STREET WELL 2 DEPERE PUMP TAP  
loc desc:

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
95 CONDUCTIVITY AT 25C	NORMAL	520	UMHOS/C				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				

Chem/Rad Samples between 10/01/1976 and 05/22/1992

22-MAY-92

pws id: 40504530 name: DEPERE WATER DEPARTMENT

sample id: 18938

lab type: I - INORGANIC

sample date: 02-OCT-86  
report date: 24-NOV-86

time: 1430  
cert lab id: 113133790

lab seqno: 10000287

where taken: W - WELL  
well number: BF184

why taken: M - MISC  
collector:

sample type: W - RAW

loc addr:  
loc desc: GRANT ST WELL SAMPLE TAP

last changed by: INIT LOAD  
on: 12-JUN-90

Parameter	Result Code	Result	Unit	Parameter	Result Code	Result	Unit
1027 CADMIUM TOTAL	TRADITIONAL <	0	UG/L				
1034 CHROMIUM TOTAL	TRADITIONAL <	0	UG/L				
1051 LEAD TOTAL	TRADITIONAL <	0	UG/L				
1092 ZINC TOTAL	TRADITIONAL <	0	UG/L				

**CORRESPONDENCE MEMORANDUM**

**STATE OF WISCONSIN**

**DATE:** March 13, 1992

**TO:** Al Baeten - City of De Pere

**FROM:** Terry Koehn - WDNR/LMB



**SUBJECT:** Grant Street Well Analytical Results

For sending copies of the analytical results on the Grant Street Well, please note the following addresses:

David Linnear  
U.S. EPA Region V, HSRW-6J  
77 West Jackson Blvd  
Chicago, Illinois 60604

Gary Edelstein SW/3  
Wis. Dept. of Natural Resources  
P.O. Box 7921  
Madison, WI 53707



**SOLID AND HAZARDOUS WASTE PROGRAM**

**E.R.R.P.**

*Environmental Repair and Remediation Program*

**L.U.S.T.**

*Leaking Underground Storage Tanks*

**HAZARDOUS WASTE**



**RECYCLING**

**SOLID WASTE**

**SUPERFUND**

Date: 3-13-92

Please Deliver the Following Pages:

To: Name: Al Baerlein

Bureau/Agency: City of DePue

Fax Number: 339-4071

From: Name: Terry Koehn WPNR

Phone Number: 492-5869

Pages to Follow (excluding cover sheet): 1.

Comments/Message: Addresses

**Wisconsin Department of Natural Resources  
Lake Michigan District Headquarters  
1125 N. Military Avenue  
P.O. Box 10448  
Green Bay, WI 54307-0448  
TELEPHONE # (414) 492-5916  
TELEFAX # (414) 492-5859**





MODE = TRANSMISSION

START=MAR-13 09:52

END=MAR-13 09:53

NO.	COM	SPEED DIALSTATION NAME/ TELEPHONE NO.	PAGES	PRG.NO.	PROGRAM NAME
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001	OK	93394071	002		
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-LMD/SOLID WASTE -

\*\*\*\*\* - \*\*\*\*\*

*JANE D  
OUT*  

---

*JR*



TC 2-28-92  
State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny  
Secretary

Lake Michigan District Headquarters  
Box 10448, 1126 N. Military Avenue  
Green Bay, Wisconsin 54307-0448  
MAIN# 414-492-6886/FAX# 414-492-6913

February 28, 1992

File Ref: 3300

Mr. Allen Baeten  
DePere Water Department  
925 South Sixth Street  
DePere, WI 54115

Dear Mr. Baeten:

This letter is in response to your correspondence dated February 24, 1992, regarding analytical results from the February 10, 1992, water sample collected from the Grant Street municipal well. In reviewing the submitted results, it was noted that chromium was detected at 0.02 mg/l (20 ug/l). As you are aware, this detection does not exceed the NR 109 maximum contaminant level (MCL) for chromium which is 50 ug/l. However, it does indicate that the well may be showing initial signs of being impacted from the Better Brite zinc shop. Before conclusions are drawn, the Department is requesting additional samples be collected to verify the initial results.

The city is being requested to collect water samples from the Grant Street well and have them analyzed for chromium, zinc, cyanide, lead, cadmium, nickel and specific conductivity. In addition to these, another sample must also be collected for volatile organic chemicals and analyzed for both the regulated and unregulated chemicals. These analyses must be performed by a Safe Drinking Water Act certified laboratory using approved methods for drinking water. A list of certified laboratories is attached for your reference. These samples must be collected no later than March 13, 1992. Further sampling requirements at this well will be determined after reviewing the results of these samples.

Please direct these results and all future analytical results from this well to my attention with copies sent to Kenneth Bro (Wisconsin Department of Health), Terry Koehn (Wisconsin Department of Natural Resources - Green Bay) Gary Edelstein (Wisconsin Department of Natural Resources - Bureau of Solid Waste, Madison) and David Linnear (U.S. E.P.A.).

Thank you for your attention in this matter. If you have any questions, please call me at 414-492-5895.

Sincerely,

Mark A. Schuelke  
Water Supply Engineer

cc: Public Water Supply - WS/2  
Kenneth Bro - WDOH  
(Terry Koehn - LMH)

2-25-91

# City of De Pere

Wisconsin

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

February 24, 1992

Kenneth Bro  
Wis. Division of Health  
P.O. Box 309  
Madison, WI 53701-0309

These are the sample test results we are required to take at our Grant and Front Street wells. If you have any questions on these test results please contact me at 414-339-4063.

Sincerely,

*Allen Baeten*

Allen Baeten, Superintendent  
De Pere Water Department

cc: Steven J. Faryan  
Terry K. Koehn

*Safe Drinking Water Act*

3150 North Brookfield Road  
Brookfield, Wisconsin 53045  
telephone (414) 783-6111  
FAX (414) 783-5752



ANALYTICAL REPORT

REPORT NUMBER: B8312

City of DePere Water Department  
925 South 6th Street  
DePere, WI 54115

Attn: Mr. Al Baeten

DATE: February 19, 1992  
PURCHASE ORDER:  
SEI NO: WL0104  
DATE COLLECTED: 02/10/92  
DATE RECEIVED: 02/11/92

Matrix: Water

Units: mg/l (ppb) ICP

Parameter	SEI ID Sample ID	0104-2 Grant Street Well
Chromium		0.02
Zinc		<0.02
Conductivity, umhos/cm		499
Cyanides, Total		<0.01

20 ppb Def Limit Apr  
for ICP  
(Def Limit)

Units: ug/l (ppb)

Parameter	SEI ID Sample ID	0104-1 Front Street Well
Benzene		<0.5
Toluene		<0.5
Ethylbenzene		<0.5
Xylenes		<0.5

\* Call to Swanson Lab  
confirmed this is in units of ppm (mg/L)  
Roehn 2-25-92  
Gary Barry - Swanson  
Definite Detection

FROM: Robert Karmaszkas  
Hydr Search, Inc

TO: Terry Kohn  
WDBK-LMD

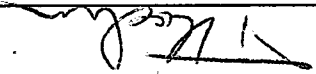
SUBJECT-MESSAGE

De Rene Grant Street Well

Please find attached copies of recent  
sample results from the subject  
municipal well

REPLY

SIGNED



DATE

3-26-92

RETURN THIS COPY TO SENDER

SIGNED

DATE

2-25-91

# City of De Pere

Wisconsin

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

February 24, 1992

Kenneth Bro  
Wis. Division of Health  
P.O. Box 309  
Madison, WI 53701-0309

These are the sample test results we are required to take at our Grant and Front Street wells. If you have any questions on these test results please contact me at 414-339-4063.

Sincerely,

*Allen Baeten*

Allen Baeten, Superintendent  
De Pere Water Department

cc: Steven J. Faryan  
Terry K. Koehn

*Safe Drinking Water Act*

# City of De Pere

Wisconsin

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

March 24, 1992

Kenneth Bro  
Wis. Dept. of Health  
P.O. Box 309  
Madison, WI 53701

Enclosed is the recheck of the sample taken from De Pere's Grant Street well. File Reference 3300. This recheck was ordered by Mark Schuelke of the Department of Natural Resources.

Sincerely,

*Allen Baeten*

Allen Baeten, Superintendent  
De Pere Water Department

cc: Mark Schuelke  
Terry Koehn  
Gary Edelstien  
David Linnear



cc: D. Rossberg LMD-SU  
D. Linneer US EPA Rep II

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny  
Secretary

Lake Michigan District Headquarters  
Box 10448, 1126 N. Military Avenue  
Green Bay, Wisconsin 54307-0448  
MAIN# 414-492-6885/FAX# 414-492-6913

March 30, 1992

File Ref: 3300  
405045300

Mr. Allen Baeten  
DePere Water Department  
925 South Sixth Street  
DePere, WI 54115

Dear Mr. Baeten:

In a Department letter dated February 28, 1992, the City of DePere was requested to collect follow up samples to a sample collected at the Grant Street well on February 10, 1992, which showed a detection of chromium. The follow up samples were collected on March 9, 1992 and the results were reported to the Department in a letter dated March 24, 1992.

The results showed no detection for volatile organic chemicals, cadmium, chromium, lead, nickel, zinc and cyanide. In addition, conductivity remained relatively unchanged. Based on these results, the city should resume its normal semi-annual testing at the Grant Street well for chromium, zinc, cyanide, and conductivity.

Thank you for your prompt response in this matter.

Sincerely,

Mark A. Schuelke  
Water Supply Engineer

MAS:mjs

cc: Public Water Supply - WS/2

~~Terry Koehn - LMD~~

Gary Edelstien - SW/3

Kenneth Bro, WI Dept. of Health, P.O. Box 309, Madison, WI 53701



# City of De Pere

Wisconsin

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

March 24, 1992

Kenneth Bro  
Wis. Dept. of Health  
P.O. Box 309  
Madison, WI 53701

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Sincerely,

*Allen Baeten*

Allen Baeten, Superintendent  
De Pere Water Department

cc: Mark Schuelke  
Terry Koehn  
Gary Edelstien  
David Linnear

VOLATILE ORGANIC CHEMICAL ANALYSIS  
RESULTS FROM COMMERCIAL LABORATORIES

This portion to be completed by DNR.

Water Supply System Name

DEPIEWE WATER DEPT

Post Office or City

3351 ISIBRIDWAY

County Code

OUT

PWS ID Number

System Type

- (CM) Community - Municipal
- (CO) Community -OTM
- (NN) Nontransient Noncommunity
- (NT) Transient Noncommunity

System Well No.

12

WI Unique Well No.

Entry Point ID Number

Entry Point Description:

GRANT ST. WELL

Sample must be collected by:

MMDDYY

Report must be returned to DNR by:

MMDDYY

This portion to be completed by SAMPLER.

Sample Collection Date:

03/09/92  
MMDDYY

Sample Collection Time:

HH:MM

(24 hour clock)

(Example: 2:30 p.m. is 14:30)

Sampling Point Location

GRANT ST WELLS

Sampling Conditions Description

How long was the well pump running prior to sampling:

HH:MM

(24 hour clock)

First initial and last name of sampler

[Redacted]

This portion to be completed by LABORATORY OFFICIAL. Report analytical results on the other side of this sheet.

Laboratory ID Number

2168181760

Laboratory Name

SWANSON ENVIRONMENTAL

Date Sample Received

03/10/92  
MMDDYY

Date Results Reported

03/19/92  
MMDDYY

Laboratory Sample Number (Optional)

0390-111

EPA - Approved SDWA VOC Analytical Method Used (Check all that apply):

- Method 502.1
- Method 502.2
- Method 503.1
- Method 524.1
- Method 524.2

Signature of Laboratory Official

*Rumayh. D...*

Date Signed

3-19-92

This portion to be completed by WATER SUPPLY SYSTEM OFFICIAL (after analysis has been performed).

I certify that I have personally examined and am familiar with the information submitted on this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true and accurate, and complete. I also certify that the values being submitted are the actual values found in the sample; no values have been modified or changed in any manner. Wherever I believe a value being reported is inaccurate, I have added an explanation indicating the reasons why the value is inaccurate.

Signature of Owner, Principal Executive Officer, or Authorized Agent of the Water Supply System.

Signature *Allen Baxter*

Title *Water Dept*

Date Signed *3/23/92*

Return to: Department of Natural Resources, Bureau of Water Supply, P.O. Box 7921, Madison, WI 53707.

This page to be completed by laboratory performing VOC analysis.

Parameter	STORET Parameter Code	√ If Parameter Is Not Detected	Limit of Detection (LOD) or Laboratory Reporting Limit (LRL) (µg/l)	Limit of Quantitation (LOQ) (µg/l)	√ If Parameter Detected Below The LOQ	Quantified Result (µg/l) (If Result Is Above LOQ)
Benzene	34235	<input checked="" type="checkbox"/>	0.5		<input type="checkbox"/>	
Bromobenzene	81555	<input type="checkbox"/>			<input type="checkbox"/>	
Bromodichloromethane	32101	<input type="checkbox"/>			<input type="checkbox"/>	
Bromoform	32104	<input type="checkbox"/>			<input type="checkbox"/>	
Bromomethane	34413	<input type="checkbox"/>			<input type="checkbox"/>	
Carbon Tetrachloride	32102	<input type="checkbox"/>			<input type="checkbox"/>	
Chlorobenzene	34301	<input type="checkbox"/>			<input type="checkbox"/>	
Chloroethane	34311	<input type="checkbox"/>			<input type="checkbox"/>	
Chloroform	32106	<input type="checkbox"/>			<input type="checkbox"/>	
Chloromethane	34418	<input type="checkbox"/>			<input type="checkbox"/>	
o - Chlorotoluene	77275	<input type="checkbox"/>			<input type="checkbox"/>	
p - Chlorotoluene	77277	<input type="checkbox"/>			<input type="checkbox"/>	
Dibromomethane	77596	<input type="checkbox"/>	↓		<input type="checkbox"/>	
Dibromochloromethane	32105	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
1,2 - Dibromo - 3 - Chloropropane	38760	<input type="checkbox"/>	1.0		<input type="checkbox"/>	
o - Dichlorobenzene	34536	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
m - Dichlorobenzene	34566	<input type="checkbox"/>			<input type="checkbox"/>	
p - Dichlorobenzene	34571	<input type="checkbox"/>			<input type="checkbox"/>	
1,1 - Dichloroethane	34496	<input type="checkbox"/>			<input type="checkbox"/>	
1,2 - Dichloroethane	34531	<input type="checkbox"/>			<input type="checkbox"/>	
1,1 - Dichloroethylene	34501	<input type="checkbox"/>			<input type="checkbox"/>	
1,2 - Dichloroethylene, cis	77093	<input type="checkbox"/>	↓		<input type="checkbox"/>	
1,2 - Dichloroethylene, trans	34546	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
Dichloromethane	34423	<input type="checkbox"/>	1.0		<input type="checkbox"/>	
1,2 - Dichloropropane	34541	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
1,3 - Dichloropropane	77173	<input type="checkbox"/>			<input type="checkbox"/>	
1,1 - Dichloropropene	77168	<input type="checkbox"/>			<input type="checkbox"/>	
2,2 - Dichloropropane	77170	<input type="checkbox"/>			<input type="checkbox"/>	
1,3 - Dichloropropene	34562	<input type="checkbox"/>	↓		<input type="checkbox"/>	
Ethylbenzene	34371	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
Ethylene Dibromide	77651	<input type="checkbox"/>	1.0		<input type="checkbox"/>	
Styrene	77128	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
1,1,1,2 - Tetrachloroethane	77562	<input type="checkbox"/>			<input type="checkbox"/>	
1,1,2,2 - Tetrachloroethane	34516	<input type="checkbox"/>			<input type="checkbox"/>	
Tetrachloroethylene	34475	<input type="checkbox"/>			<input type="checkbox"/>	
Toluene	34481	<input type="checkbox"/>			<input type="checkbox"/>	
1,1,1 - Trichloroethane	34506	<input type="checkbox"/>			<input type="checkbox"/>	
1,1,2 - Trichloroethane	34511	<input type="checkbox"/>			<input type="checkbox"/>	
Trichloroethylene	39180	<input type="checkbox"/>	↓		<input type="checkbox"/>	
1,2,3 - Trichloropropane	77443	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
Vinyl Chloride	39175	<input type="checkbox"/>	0.3		<input type="checkbox"/>	
o - Xylene	77135	<input type="checkbox"/>	0.5		<input type="checkbox"/>	
Xylenes, meta & para	85795	<input checked="" type="checkbox"/>	0.5		<input type="checkbox"/>	

Were any of the above parameters detected (at or above the LOD or LRL) in the:

Trip Blank? Yes  No  Laboratory Blank? Yes  No (If "Yes" for either, see instructions.)

3150 North Brookfield Road  
 Brookfield, Wisconsin 53045  
 telephone (414) 783-6111  
 FAX (414) 783-5752



WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B8607

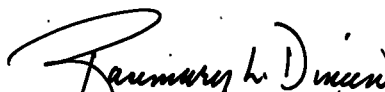
City of DePere Water Department  
 925 South 6th Street  
 DePere, WI 54115  
  
 Attn: Mr. Al Baeten

DATE: March 19, 1992  
 PURCHASE ORDER:  
 SEI NO: WL0390  
 DATE COLLECTED: See Below  
 DATE RECEIVED: 03/10/92

Matrix: Water

Units: ug/l (ppb)

Parameter	SEI ID Sample ID	0390-1 03/09/92 Grant St. Well	0390-2 03/02/92 Trip Blank
EPA Method 502.2			
1,2-Dichloroethylene, trans		<0.5	<0.5
Dichloromethane		<1.0	<1.0
1,2-Dichloropropane		<0.5	<0.5
1,3-Dichloropropane		<0.5	<0.5
1,1-Dichloropropene		<0.5	<0.5
2,2-Dichloropropane		<0.5	<0.5
1,3-Dichloropropene		<0.5	<0.5
Ethylbenzene		<0.5	<0.5
Ethylene Dibromide		<1.0	<1.0
Styrene		<0.5	<0.5
1,1,1,2-Tetrachloroethane		<0.5	<0.5
1,1,2,2-Tetrachloroethane		<0.5	<0.5
Tetrachloroethylene		<0.5	<0.5
Toluene		<0.5	<0.5
1,1,1-Trichloroethane		<0.5	<0.5
1,1,2-Trichloroethane		<0.5	<0.5
Trichloroethylene		<0.5	<0.5
1,2,3-Trichloropropane		<0.5	<0.5
Vinyl Chloride		<0.3	<0.3
o-Xylene		<0.5	<0.5
Xylenes, meta & para		<0.5	<0.5

  
 Rosemary L. Dineen  
 Laboratory Director

3150 North Brookfield Road  
 Brookfield, Wisconsin 53045  
 telephone (414) 783-6111  
 FAX (414) 783-5752



WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B8607

City of DePere Water Department  
 925 South 6th Street  
 DePere, WI 54115  
  
 Attn: Mr. Al Baeten

DATE: March 19, 1992  
 PURCHASE ORDER:  
 SEI NO: WL0390  
 DATE COLLECTED: See Below  
 DATE RECEIVED: 03/10/92

Matrix: Water

Units: ug/l (ppb)

<u>Parameter</u>	<u>SEI ID</u>	<u>0390-1</u>	<u>0390-2</u>
	<u>Sample ID</u>	<u>03/09/92</u>	<u>03/02/92</u>
		<u>Grant S. Well</u>	<u>Trip Blank</u>
EPA Method 502.2			
Benzene		<0.5	<0.5
Bromobenzene		<0.5	<0.5
Bromodichloromethane		<0.5	<0.5
Bromoform		<0.5	<0.5
Bromomethane		<0.5	<0.5
Carbon tetrachloride		<0.5	<0.5
Chlorobenzene		<0.5	<0.5
Chloroethane		<0.5	<0.5
Chloroform		<0.5	<0.5
Chloromethane		<0.5	<0.5
o-Chlorotoluene		<0.5	<0.5
p-Chlorotoluene		<0.5	<0.5
Dibromomethane		<0.5	<0.5
Dibromochloromethane		<0.5	<0.5
1,2-Dibromo-3-Chloropropane		<1.0	<1.0
o-Dichlorobenzene		<0.5	<0.5
m-Dichlorobenzene		<0.5	<0.5
p-Dichlorobenzene		<0.5	<0.5
1,1-Dichloroethane		<0.5	<0.5
1,2-Dichloroethane		<0.5	<0.5
1,1-Dichloroethylene		<0.5	<0.5
1,2-Dichloroethylene, cis		<0.5	<0.5



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WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B8607

City of DePere Water Department  
925 South 6th Street  
DePere, WI 54115

Attn: Mr. Al Baeten

DATE: March 19, 1992  
PURCHASE ORDER:  
SEI NO: WL0390  
DATE COLLECTED: See Below  
DATE RECEIVED: 03/10/92

Matrix: Water

Units: ug/l (ppb)

<u>Parameter</u>	<u>SEI ID</u>	<u>Sample ID</u>	<u>Grant S. Well</u>
✓ Cadmium	0390-1		<0.2
✓ Chromium	03/09/92		<2
✓ Lead			<2
✓ Nickel			<100
✓ Zinc			<20
✓ Cyanides, Total			<10
✓ Conductivity, umhos/cm			488

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Brookfield, Wisconsin 53045  
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FAX (414) 783-5752



WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B8312  
ADDITIONAL ANALYSIS 03/16/92

City of DePere Water Department  
925 South 6th Street  
DePere, WI 54115

Attn: Mr. Al Baeten

DATE: February 19, 1992  
PURCHASE ORDER:  
SEI NO: WLO104  
DATE COLLECTED: 02/04/92  
DATE RECEIVED: 02/11/92

Matrix: Water

Units: ug/l (ppb)

<u>Parameter</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>0104-2</u> <u>Grant Street Well</u>
✓ Chromium		<2

Rerun of Original 2-10-92 Sample

*Gary E Barry*  
\_\_\_\_\_  
Gary E. Barry  
Projects Coordinator

# City of De Pere

Wisconsin

City Hall  
335 South Broadway  
De Pere, Wisconsin 54115-2593



Municipal Service Center  
925 South Sixth Street  
De Pere, Wisconsin 54115-1199

August 27, 1991

Julie Hayward  
Division of Health  
P.O. Box 309  
Madison, WI 53701-0309

Ms. Hayward,

Enclosed are the test results from the City of De Pere's Front and Grant Street wells. If you have any questions or concerns, please contact me at 414-339-4063.

Sincerely,

*Allen Baeten*

Allen Baeten, Superintendent  
De Pere Water Department

cc: Steven J. Faryan  
Terry K. Koehn



3150 North Brookfield Road  
 Brookfield, Wisconsin 53045  
 telephone (414) 783-6111  
 facsimile (414) 783-5752



AIHA Accreditation #352  
 WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B6165

City of DePere Water Department  
 925 South 6th Street  
 DePere, WI 53115

Attn: Mr. Al Baeten

DATE: August 19, 1991  
 PURCHASE ORDER: 9570  
 SEI JOB NO: WL7932  
 DATE COLLECTED: 08/05/91  
 DATE RECEIVED: 08/07/91

Well Water Samples

Units: mg/l (ppm)

<u>Parameter</u>	<u>SEI ID Sample ID</u>	<u>7932-2 Well #2</u>
Chromium		<0.002
Zinc		<0.06
Cyanides, Total		<0.01

Units: ug/l (ppb)

<u>Parameter</u>	<u>SEI ID Sample ID</u>	<u>7932-1 Well #1</u>
Benzene		<1
Ethylbenzene		<1
Toluene		<1
Xylenes		<1

Reviewed & Approved by:

*Rosemary L. Dineen*  
 Rosemary L. Dineen  
 Laboratory Director

3150 North Brookfield Road  
Brookfield, Wisconsin 53045  
telephone (414) 783-6111  
facsimile (414) 783-5752



AIHA Accreditation #352  
WDNR Certification #268181760

**ANALYTICAL REPORT**

REPORT NUMBER: B2189

City of DePere Water Department  
925 South 6th Street  
DePere, WI 54115  
  
Attn: Mr. Al Baeten

DATE: August 23, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL3788  
DATE COLLECTED: 08/06/90  
DATE RECEIVED: 08/07/90

Groundwater Samples

Units: mg/l (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

<u>Parameter</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>3788-2</u> <u>Grant St. Well</u>
Chromium (0.01)		ND
Zinc (0.02)		ND
Conductivity, umhos/cm		500
Cyanides, Total (0.005)		ND

Units: ug/l (ppb)

<u>Parameter</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>3788-1</u> <u>Front St. Well</u>
Benzene		ND
Ethylbenzene		ND
Toluene		ND
Xylenes		ND

ND---Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
Laboratory Director

NORTHERN LAKE SERVICE, INC. WIS. CERTIFICATION NO. 721026460  
Analytical Laboratory and Environmental Consulting Service  
400 N. Lake Avenue  
Crandon, WI 54520

ANALYTICAL REPORT

SAMPLE NO: 526  
Page 1

DePere Water Dept.  
925 S. 6th St.  
DePere, WI

SAMPLE DESCRIPTION: Munic. Well - Grant St.

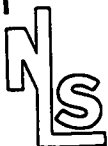
COLLECTED  
02-19-90 0900

RECEIVED  
02-20-90 0930

REPORTED  
03-23-90

✓ Chromium, tot. by furnace	<1.0	ug/l
✓ Conductivity, lab	520	umho@25C
✓ Cyanide, tot. (distilled)	<0.020	mg/l
✓ Zinc, tot. as Zn	0.05	mg/l

Tom Herman  
LABORATORY DIRECTOR



3150 North Brookfield Road  
 Brookfield, Wisconsin 53045  
 telephone (414) 783-6111  
 facsimile (414) 783-5752



AIHA Accreditation #352  
 WDNR Certification #268181760

REPORT NUMBER: B4259

ANALYTICAL REPORT

City of DePere Water Department  
 925 South 6th Street  
 DePere, WI 54115

Attn: Mr. Al Baeten

DATE: February 20, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL5915  
 DATE COLLECTED: 02/04/91  
 DATE RECEIVED: 02/05/91

Groundwater Samples

Units: mg/l (ppm)

<u>Parameter</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>5915-1</u> <u>Grant</u>
✓ Chromium		<0.02
✓ Zinc		0.03
✓ Conductivity, umhos/cm		445
✓ Cyanides, Total		<0.005

Units: ug/l (ppb)

<u>Parameter</u>	<u>SEI ID</u> <u>Sample ID</u>	<u>5915-2</u> <u>Front</u>
Benzene		<1
Ethylbenzene		<1
Toluene		<1
Xylenes		<1

Reviewed & Approved by:

*Rosemary L. Dineen*  
 Rosemary L. Dineen  
 Laboratory Director

Date: August 30, 1989

File Ref: 3300

To: Robin Schmidt

From: Rick Stoll

*R. C. Stoll*

Subject: Aquifers of Use Within the Allouez and Ashwaubenon Municipal Districts

The following points out the extreme importance of preserving the water quality at every well within these municipal systems. Since every well is blended within its respective system, its water quality can affect the entire system's water quality as a whole.

#### Allouez

The Village of Allouez has seven municipal wells. Three of these wells (#1, #2, and #4) are open to the Saint Peters group. The Saint Peters in this area generally ranges from 213-360'. One of these wells (#2 on the hilltop) is only cased to 172.5' and is also open to the above Sinnipee group (Galena Platteville formations) which tops at 165' and extends to 325'. The other two wells are open to the entire Saint Peters group and areas below. Although the remaining four wells (#3, #5, #6, and #7) are cased through the Sinnipee and Saint Peters groups (approximately 410-556' of casing). The waters from these wells are blended in the system with wells #1, #2, and #4. Therefore, adverse water quality aspects at any particular well in this system have the ability to adversely impact the entire system and its users. Wells #3, #4, and #5 are within three miles of the Better Brite Zinc Shop in De Pere. Wells #1 and #2 are within four miles of the zinc shop.

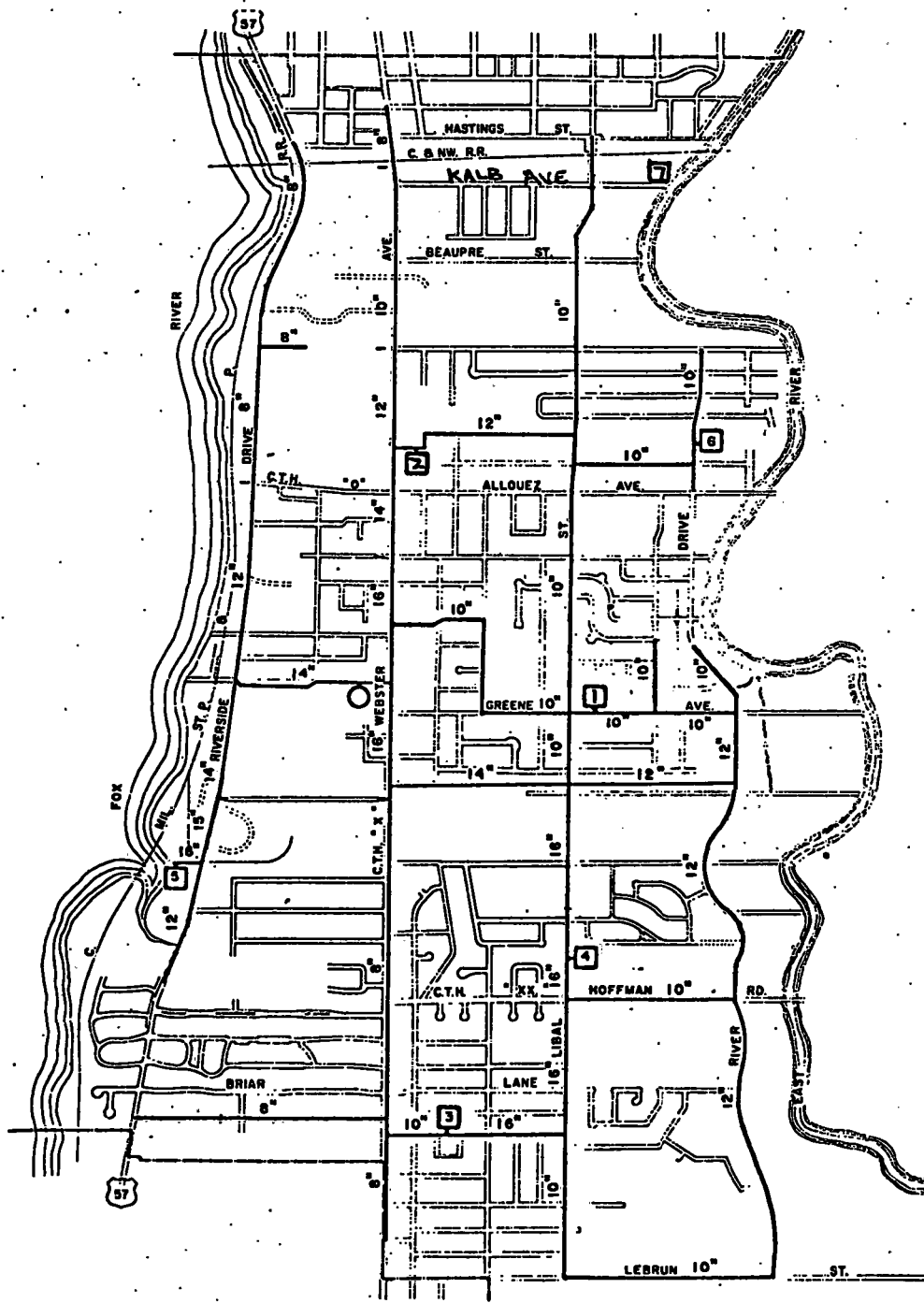
#### Ashwaubenon

The Village of Ashwaubenon has five municipal wells. One of these wells (#1) is cased to 190' and therefore is open to the Sinnipee (86-270') and Saint Peters (270-383') groups. The remaining four wells are cased to at least 475' and consequently are not drawing from these groups. However, since all the wells pumpage is blended in the system, the water quality of any particular member well can significantly affect the water quality of the system as a whole. Wells #4 and #2 are within three miles of the Better Brite Zinc Shop in De Pere. Well #1 is within three and one-quarter miles of the zinc shop.

I am not currently aware of additional proposed or existing locations or construction details for any additional wells in these municipalities. For further information, please contact Jim Schedgick (497-3157), the WDNR municipal engineer, or Bob Barnum (497-4053), the WDNR water supply supervisor.

RS:cm.

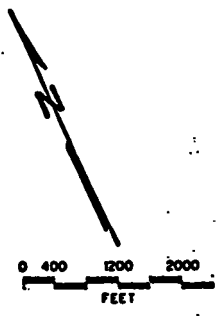
cc:→Annette Weissbach  
Jim Schedgick  
Bob Barnum

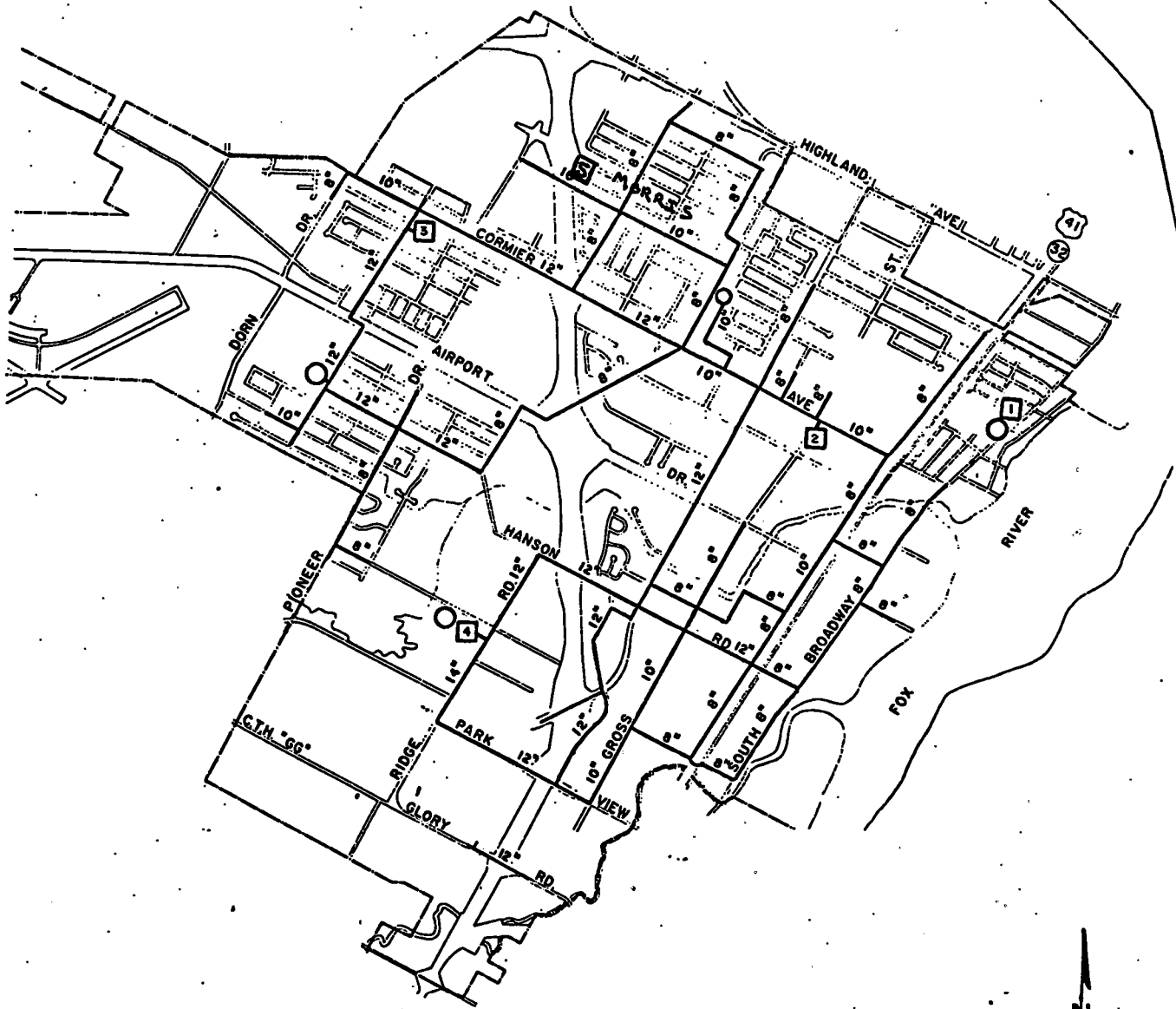


**LEGEND**

- 1 WELL LOCATION & NO.
- O ELEVATED STORAGE TANK OR STANDPIPE
- 12" WATERMAIN LOCATION & SIZE




**TOWN OF ALOUEZ**

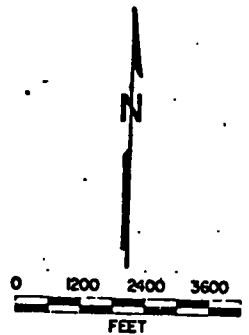




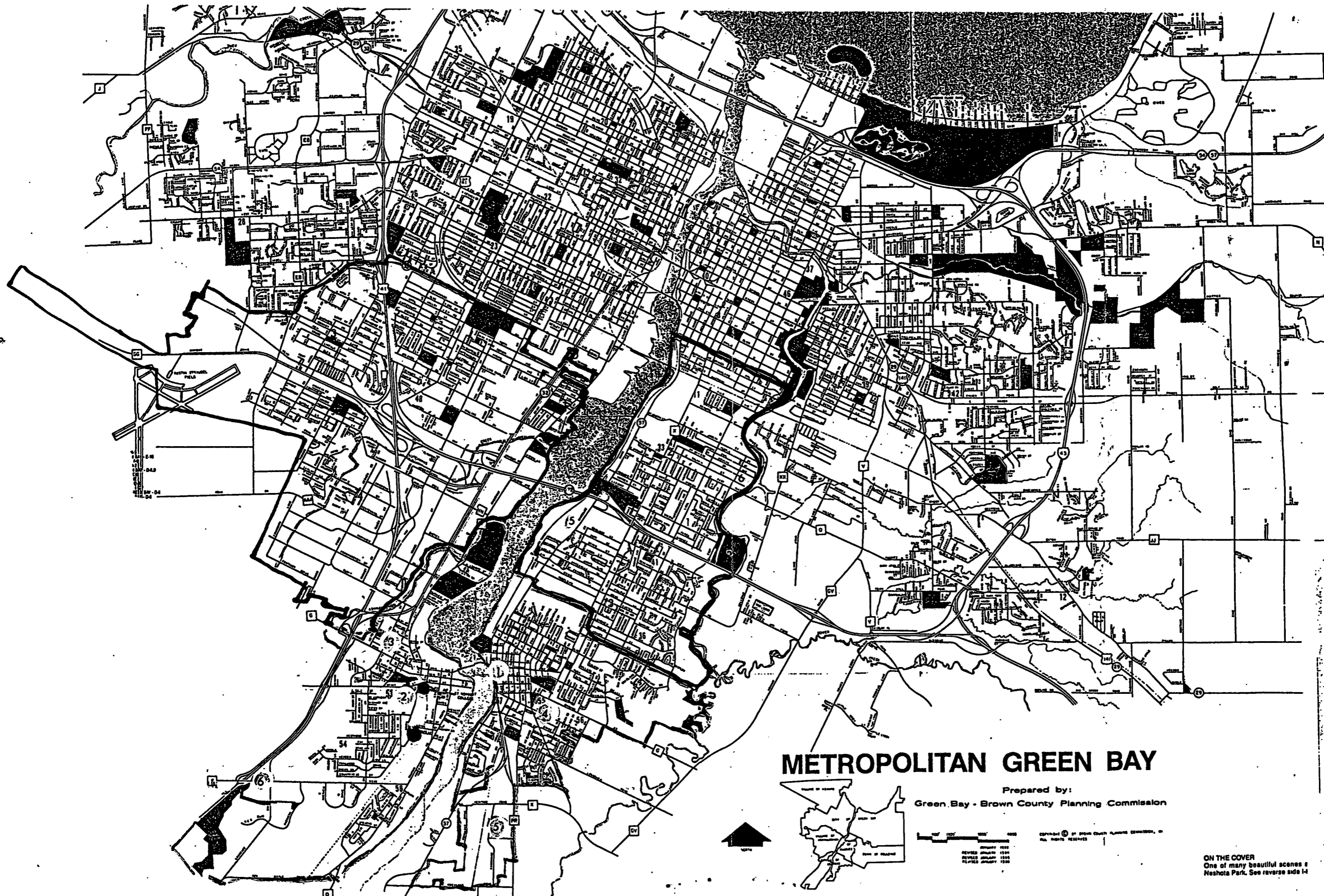
ASHWAUBENON

LEGEND

-  WELL LOCATION & NO.
-  ELEVATED STORAGE TANK OR STANDPIPE
-  WATERMAIN LOCATION & SIZE

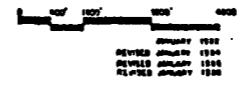






# METROPOLITAN GREEN BAY

Prepared by:  
Green Bay - Brown County Planning Commission



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January 1952  
Revised January 1956  
Revised January 1958  
Revised January 1960

ON THE COVER  
One of many beautiful scenes is  
Neshota Park. See reverse side 14

NORTHERN LAKE SERVICE, INC.  
Analytical Laboratory and Environmental Consulting Service  
400 N. Lake Avenue  
Crandon, WI 54520

WIS. CERTIFICATION NO. 721026460

# GRANT ST WELL

## ANALYTICAL REPORT

SAMPLE NO: 92976

Page 1

DePere Water Department  
P.O. Box 672  
DePere, WI

Allen Baeten

SAMPLE DESCRIPTION: Municipal Well

COLLECTED  
08-07-89 0930

RECEIVED  
08-08-89 0930

REPORTED  
08-17-89

Sample #1

✓ Chromium, tot. as Cr	<0.04	mg/l
✓ Conductivity, lab	560	umho@25C
✓ Cyanide, amen. to chlorine	<0.020	mg/l
✓ Cyanide, tot. (distilled)	<0.020	mg/l
✓ Zinc, tot. as Zn	<0.05	mg/l

Tom Herman  
LABORATORY DIRECTOR



NORTHERN LAKE SERVICE, INC.  
Analytical Laboratory and Environmental Consulting Service  
400 N. Lake Avenue  
Crandon, WI 54520

WIS. CERTIFICATION NO. 721026460

ANALYTICAL REPORT

*Grant st well*

SAMPLE NO: 92976  
Page 1

DePere Water Department  
P.O. Box 672  
DePere, WI

Allen Baeten

SAMPLE DESCRIPTION: Municipal Well

COLLECTED  
08-07-89 0930

RECEIVED  
08-08-89 0930

REPORTED  
09-12-89

Sample #1

✓ Chromium, tot. by furnace	<1	ug/l
✓ Conductivity, lab	560	umho@25C
✓ Cyanide, amen. to chlorine	<0.020	mg/l
✓ Cyanide, tot. (distilled)	<0.020	mg/l
✓ Zinc, tot. as Zn	<0.05	mg/l

Tom Herman  
LABORATORY DIRECTOR



State Laboratory of Hygiene  
University of Wisconsin Center for Health Sciences  
465 Henry Mall, Madison, WI 53706

R.H. Laessig, Ph.D., Director

S.L. Inhorn, M.D., Medical Director

Environmental Science Section (608) 262-3458 DNR LAB ID 113133790

--- Inorganic chemistry (#25 of 49 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: 002 Field #: DP-2-J Route: WS40  
Collection Date: 12/22/88 Time: 09:24 County: 05 (Brown)  
From: GRANT STREET DEPERE PUMP TAP  
To: SCHEDGICK Type: Regular composite  
DNR Source: Municipal  
GREEN BAY

Account number: WS011 Collected by: APFEL  
Date Received: 12/23/88 Labslip #: I9051127 Reported: 01/30/89

CHROMIUM, AA FURNACE  
CONDUCTIVITY (AT 25 DEG C)

<3  
355.

UG/L  
UMOHS/CM

--- Inorganic chemistry (#26 of 49 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: 002 Field #: DP-2-K Route: WS40  
Collection Date: 01/04/89 Time: 10:24 County: 05 (Brown)  
From: DEPERE WATER DEPT. GRANT STREET PUMP TAP  
To: SCHEDGICK Type: DW  
DNR Source: Municipal  
GREEN BAY

Account number: WS011 Collected by: APFEL  
Date Received: 01/05/89 Labslip #: I9052647 Reported: 01/30/89

CHROMIUM, AA FURNACE  
CONDUCTIVITY (AT 25 DEG C)  
TEMPERATURE FIELD

<3  
565.  
11.3

UG/L  
UMOHS/CM  
C

State Laboratory of Hygiene  
University of Wisconsin Center for Health Sciences  
465 Henry Mall, Madison, WI 53706

R.H. Laessig, Ph.D., Director

S.L. Inhorn, M.D., Medical Director

Environmental Science Section

(608) 262-3458

DNR LAB ID 113133790

--- Inorganic chemistry (#25 of 49 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: 002 Field #: DP-2-J Route: WS40  
Collection Date: 12/22/88 Time: 09:24 County: 05 (Brown)  
From: GRANT STREET DEPERE PUMP TAP  
To: SCHEDGICK Type: Regular composite  
DNR Source: Municipal  
GREEN BAY

Account number: WS011

Collected by: APFEL

Date Received: 12/23/88

Labslip #: I9051127

Reported: 01/30/89

CHROMIUM, AA FURNACE  
CONDUCTIVITY (AT 25 DEG C)

<3  
355.

UG/L  
UMOHS/CM

--- Inorganic chemistry (#26 of 49 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: 002 Field #: DP-2-K Route: WS40  
Collection Date: 01/04/89 Time: 10:24 County: 05 (Brown)  
From: DEPERE WATER DEPT. GRANT STREET PUMP TAP  
To: SCHEDGICK Type: DW  
DNR Source: Municipal  
GREEN BAY

Account number: WS011

Collected by: APFEL

Date Received: 01/05/89

Labslip #: I9052647

Reported: 01/30/89

CHROMIUM, AA FURNACE  
CONDUCTIVITY (AT 25 DEG C)  
TEMPERATURE FIELD

<3  
565.  
11.3

UG/L  
UMOHS/CM  
C

State Laboratory of Hygiene  
University of Wisconsin Center for Health Sciences  
465 Henry Mall, Madison, WI 53706

R.H. Laessig, Ph.D., Director

S.L. Inhorn, M.D., Medical Director

Environmental Science Section

(608) 262-2797

DNR LAB ID 113133790

--- Organic chemistry (#16 of 17 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: 003 Field #: DP-3 Route: WS40  
Collection Date: 01/04/89 Time: 10:37 County: 05 (Brown)  
From: DE PERE WATER DEPT., NINTH STREET, DE PERE WI  
Description: PUMP SAMPLE TAP  
To: JIM SCHEDGICK, DNR Type: DW  
P.O. BOX 10448 Source: Municipal  
GREEN BAY

Account number: WS026

Collected by: APFEL

Date Received: 01/05/89

Labslip #: 09001988

Reported: 02/01/89

BENZENE	ND (LOD=0.30 UG/L)
BROMOBENZENE	ND (LOD=0.30 UG/L)
BROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMODICHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMOFORM	ND (LOD=0.30 UG/L)
BROMOMETHANE	ND (LOD=0.60 UG/L)
N-BUTYLBENZENE	ND (LOD=0.30 UG/L)
CARBON TETRACHLORIDE	ND (LOD=0.30 UG/L)
CHLOROBENZENE	ND (LOD=0.30 UG/L)
CHLOROETHANE	ND (LOD=0.30 UG/L)
CHLOROFORM	ND (LOD=0.30 UG/L)
CHLOROMETHANE	ND (LOD=0.30 UG/L)
2-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
4-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
CIS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DIBROMO-3-CHLOROPROPANE	ND (LOD=0.50 UG/L)
DIBROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
1,2-DIBROMOETHANE (EDB)	ND (LOD=0.30 UG/L)
DIBROMOMETHANE	ND (LOD=0.30 UG/L)
1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,3-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,4-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
DICHLORODIFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,3-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
2,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROPROPANE	ND (LOD=0.30 UG/L)

... continuing Labslip # 09001988, Field # **DP-3**

ETHYLBENZENE	ND (LOD=0.30 UG/L)
HEXACHLOROBUTADIENE	ND (LOD=0.30 UG/L)
ISOPROPYLBENZENE	ND (LOD=0.30 UG/L)
P-ISOPROPYLTOLUENE	ND (LOD=0.30 UG/L)
M/P-XYLENE	ND (LOD=0.30 UG/L)
METHYLENE CHLORIDE	ND (LOD=0.30 UG/L)
NAPTHHALENE	ND (LOD=0.30 UG/L)
N-PROPYLBENZENE	ND (LOD=0.30 UG/L)
SEC-BUTYLBENZENE	ND (LOD=0.30 UG/L)
STYRENE	ND (LOD=0.30 UG/L)
TERT-BUTYLBENZENE	ND (LOD=0.30 UG/L)
1,1,1,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
TETRACHLOROETHYLENE	ND (LOD=0.30 UG/L)
TOLUENE	ND (LOD=0.30 UG/L)
TRANS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROENZENE	ND (LOD=0.30 UG/L)
1,2,4-TRICHLOROENZENE	ND (LOD=0.30 UG/L)
1,1,1-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
TRICHLOROETHYLENE	ND (LOD=0.30 UG/L)
TRICHLOROFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,2,4-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
1,3,5-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
VINYL CHLORIDE	ND (LOD=0.30 UG/L)
O-XYLENE	ND (LOD=0.30 UG/L)
VOCS BY CAPILLARY COLUMN - PREP	C

State Laboratory of Hygiene

University of Wisconsin Center for Health Sciences

465 Henry Mall, Madison, WI 53706

R.H. Laessig, Ph.D., Director

S.L. Inhorn, M.D., Medical Director

Environmental Science Section (608) 262-2797 DNR LAB ID 11313379

--- Organic chemistry (#17 of 17 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: **005** Field #: DP-5 Route: WS40  
 Collection Date: 01/04/89 Time: 11:01 County: 05 (Brown)  
 From: DE PERE WATER DEPT., ENTERPRISE DRIVE, DE PERE WI  
 Description: PUMP SAMPLE TAP  
 To: JIM SCHEDGICK, DNR Type: DW  
 P.O. BOX 10448 Source: Municipal  
 GREEN BAY

Account number: WS026

Collected by: APFEL

Date Received: 01/05/89

Labslip #: 09001989

Reported: 02/01/89

BENZENE	ND (LOD=0.30 UG/L)
BROMOBENZENE	ND (LOD=0.30 UG/L)
BROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMODICHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMOFORM	ND (LOD=0.30 UG/L)
BROMOMETHANE	ND (LOD=0.40 UG/L)

Id: 405045300 Point/Well/...: 005 Field #: DP-5 Route: WS40  
Collection Date: 01/04/89 Time: 11:01 County: 05 (Brown)  
From: DE PERE WATER DEPT., ENTERPRISE DRIVE, DE PERE WI  
Description: PUMP SAMPLE TAP  
To: JIM SCHEDGICK, DNR Type: DW  
P.O. BOX 10448 Source: Municipal  
GREEN BAY

Account number: WS026 Collected by: APFEL  
Date Received: 01/05/89 Labslip #: 09001989 Reported: 02/01/89

BENZENE	ND (LOD=0.30 UG/L)
BROMOBENZENE	ND (LOD=0.30 UG/L)
BROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMODICHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMOFORM	ND (LOD=0.30 UG/L)
BROMOMETHANE	ND (LOD=0.60 UG/L)
N-BUTYLBENZENE	ND (LOD=0.30 UG/L)
CARBON TETRACHLORIDE	ND (LOD=0.30 UG/L)
CHLOROBENZENE	ND (LOD=0.30 UG/L)
CHLOROETHANE	ND (LOD=0.30 UG/L)
CHLOROFORM	ND (LOD=0.30 UG/L)
CHLOROMETHANE	ND (LOD=0.30 UG/L)
2-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
4-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
CIS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DIBROMO-3-CHLOROPROPANE	ND (LOD=0.50 UG/L)
DIBROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
1,2-DIBROMOETHANE (EDB)	ND (LOD=0.30 UG/L)
DIBROMOMETHANE	ND (LOD=0.30 UG/L)
1,2-DICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,3-DICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,4-DICHLOROBENZENE	+ 0.51 UG/L
detected between 0.30 (LOD) and 1.0 (LOQ) UG/L	
DICHLORODIFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,2-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,3-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
2,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROPROPENE	ND (LOD=0.30 UG/L)
ETHYLBENZENE	ND (LOD=0.30 UG/L)
HEXACHLOROBUTADIENE	ND (LOD=0.30 UG/L)
ISOPROPYLBENZENE	ND (LOD=0.30 UG/L)

State Laboratory of Hygiene  
University of Wisconsin Center for Health Sciences  
465 Henry Mall, Madison, WI 53706  
R.H. Laessig, Ph.D., Director S.L. Inhorn, M.D., Medical Director

Environmental Science Section (608) 262-2797 DNR LAB ID 11313379

... continuing Labslip # 09001989, Field # DP-5

P-ISOPROPYLTOLUENE ND (LOD=0.30 UG/L)



... continuing Labslip # 09001989, Field # DP-5

P-ISOPROPYLTOLUENE	ND (LOD=0.30 UG/L)
M/P-XYLENE	ND (LOD=0.30 UG/L)
METHYLENE CHLORIDE	+ 0.87 UG/L
detected between 0.30 (LOD) and 1.0 (LOD) UG/L	
NAPHTHALENE	ND (LOD=0.30 UG/L)
N-PROPYLBENZENE	ND (LOD=0.30 UG/L)
SEC-BUTYLBENZENE	ND (LOD=0.30 UG/L)
STYRENE	ND (LOD=0.30 UG/L)
TERT-BUTYLBENZENE	ND (LOD=0.30 UG/L)
1,1,1,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
TETRACHLOROETHYLENE	ND (LOD=0.30 UG/L)
TOLUENE	ND (LOD=0.30 UG/L)
TRANS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,2,4-TRICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,1,1-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
TRICHLOROETHYLENE	ND (LOD=0.30 UG/L)
TRICHLOROFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,2,4-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
1,3,5-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
VINYL CHLORIDE	ND (LOD=0.30 UG/L)
O-XYLENE	ND (LOD=0.30 UG/L)
VOCS BY CAPILLARY COLUMN - PREP	C

Environmental Science Section

(608) 262-2797

DNR LAB ID 11313379

--- Organic chemistry (#17 of 17 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: 005 Field #: DP-5 Route: WS40

Collection Date: 01/04/89 Time: 11:01 County: 05 (Brown)

From: DE PERE WATER DEPT., ENTERPRISE DRIVE, DE PERE WI

Description: PUMP SAMPLE TAP

To: JIM SCHEDGICK, DNR

Type: DW

P.O. BOX 10448

Source: Municipal

GREEN BAY

Account number: WS026

Collected by: APFEL

Date Received: 01/05/89

Labslip #: 09001989

Reported: 02/01/89

BENZENE	ND (LOD=0.30 UG/L)
BROMOBENZENE	ND (LOD=0.30 UG/L)
BROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMODICHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMOFORM	ND (LOD=0.30 UG/L)
BROMOMETHANE	ND (LOD=0.60 UG/L)
N-BUTYLBENZENE	ND (LOD=0.30 UG/L)
CARBON TETRACHLORIDE	ND (LOD=0.30 UG/L)
CHLOROBENZENE	ND (LOD=0.30 UG/L)
CHLOROETHANE	ND (LOD=0.30 UG/L)
CHLOROFORM	ND (LOD=0.30 UG/L)
CHLOROMETHANE	ND (LOD=0.30 UG/L)
2-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
4-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
CIS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DIBROMO-3-CHLOROPROPANE	ND (LOD=0.50 UG/L)
DIBROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
1,2-DIBROMOETHANE (EDB)	ND (LOD=0.30 UG/L)
DIBROMOMETHANE	ND (LOD=0.30 UG/L)
1,2-DICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,3-DICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,4-DICHLOROBENZENE	+ 0.51 UG/L
detected between 0.30 (LOD) and 1.0 (LOQ) UG/L	
DICHLORODIFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,2-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,3-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
2,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROPROPENE	ND (LOD=0.30 UG/L)
ETHYLBENZENE	ND (LOD=0.30 UG/L)
HEXACHLOROBTADIENE	ND (LOD=0.30 UG/L)
ISOPROPYLBENZENE	ND (LOD=0.30 UG/L)

Environmental Science Section (608) 262-2797

DNR LAB ID 113133790

... continuing Labslip # 09001989, Field # **DP-5**

P-ISOPROPYLTOLUENE	ND (LOD=0.30 UG/L)
M/P-XYLENE	ND (LOD=0.30 UG/L)
METHYLENE CHLORIDE	0.87 UG/L
detected between 0.30 (LOD) and 1.0 (LOQ) UG/L	
+	
NAPHTHALENE	ND (LOD=0.30 UG/L)
N-PROPYLBENZENE	ND (LOD=0.30 UG/L)
SEC-BUTYLBENZENE	ND (LOD=0.30 UG/L)
STYRENE	ND (LOD=0.30 UG/L)
TERT-BUTYLBENZENE	ND (LOD=0.30 UG/L)
1,1,1,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
TETRACHLOROETHYLENE	ND (LOD=0.30 UG/L)
TOLUENE	ND (LOD=0.30 UG/L)
TRANS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,2,4-TRICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,1,1-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
TRICHLOROETHYLENE	ND (LOD=0.30 UG/L)
TRICHLOROFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,2,4-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
1,3,5-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
VINYL CHLORIDE	ND (LOD=0.30 UG/L)
O-XYLENE	ND (LOD=0.30 UG/L)
VOCS BY CAPILLARY COLUMN - PREP.	C

State Laboratory of Hygiene  
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R.H. Laessig, Ph.D., Director

S.L. Inhorn, M.D., Medical Director

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Environmental Science Section (608) 262-2797 DNR LAB ID 113133790

--- Organic chemistry (#16 of 17 on 02/02/89, unseen)

Id: 405045300 Point/Well/...: 003 Field #: DP-3 Route: WS40

Collection Date: 01/04/89 Time: 10:37 County: 05 (Brown)

From: DE PERE WATER DEPT., NINTH STREET, DE PERE WI

Description: PUMP SAMPLE TAP

To: JIM SCHEDGICK, DNR

Type: DW

P.O. BOX 10448

Source: Municipal

GREEN BAY

Account number: WS026

Collected by: AFFEL

Date Received: 01/05/89

Labslip #: 09001988

Reported: 02/01/89  
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BENZENE	ND (LOD=0.30 UG/L)
BROMOBENZENE	ND (LOD=0.30 UG/L)
BROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMODICHLOROMETHANE	ND (LOD=0.30 UG/L)
BROMOFORM	ND (LOD=0.30 UG/L)
BROMOMETHANE	ND (LOD=0.60 UG/L)
N-BUTYLBENZENE	ND (LOD=0.30 UG/L)
CARBON TETRACHLORIDE	ND (LOD=0.30 UG/L)
CHLOROBENZENE	ND (LOD=0.30 UG/L)
CHLOROETHANE	ND (LOD=0.30 UG/L)
CHLOROFORM	ND (LOD=0.30 UG/L)
CHLOROMETHANE	ND (LOD=0.30 UG/L)
2-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
4-CHLOROTOLUENE	ND (LOD=0.30 UG/L)
CIS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DIBROMO-3-CHLOROPROPANE	ND (LOD=0.50 UG/L)
DIBROMOCHLOROMETHANE	ND (LOD=0.30 UG/L)
1,2-DIBROMOETHANE (EDB)	ND (LOD=0.30 UG/L)
DIBROMOMETHANE	ND (LOD=0.30 UG/L)
1,2-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,3-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,4-DICHLOROETHANE	ND (LOD=0.30 UG/L)
DICHLORODIFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,2-DICHLOROETHANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,3-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
2,2-DICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,1-DICHLOROPROPANE	ND (LOD=0.30 UG/L)

State Laboratory of Hygiene  
University of Wisconsin Center for Health Sciences

465 Henry Mall, Madison, WI 53706

R.H. Laessig, Ph.D., Director

S.L. Inhorn, M.D., Medical Director

Environmental Science Section

(608) 262-2797

DNR LAB ID 11313379

... continuing Labslip # 09001988,

Field # **DF-3**

ETHYLBENZENE	ND (LOD=0.30 UG/L)
HEXACHLOROBUTADIENE	ND (LOD=0.30 UG/L)
ISOPROPYLBENZENE	ND (LOD=0.30 UG/L)
P-ISOPROPYLTOLUENE	ND (LOD=0.30 UG/L)
M/P-XYLENE	ND (LOD=0.30 UG/L)
METHYLENE CHLORIDE	ND (LOD=0.30 UG/L)
NAPHTHALENE	ND (LOD=0.30 UG/L)
N-PROPYLBENZENE	ND (LOD=0.30 UG/L)
SEC-BUTYLBENZENE	ND (LOD=0.30 UG/L)
STYRENE	ND (LOD=0.30 UG/L)
TERT-BUTYLBENZENE	ND (LOD=0.30 UG/L)
1,1,1,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2,2-TETRACHLOROETHANE	ND (LOD=0.30 UG/L)
TETRACHLOROETHYLENE	ND (LOD=0.30 UG/L)
TOLUENE	ND (LOD=0.30 UG/L)
TRANS-1,2-DICHLOROETHYLENE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,2,4-TRICHLOROBENZENE	ND (LOD=0.30 UG/L)
1,1,1-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
1,1,2-TRICHLOROETHANE	ND (LOD=0.30 UG/L)
TRICHLOROETHYLENE	ND (LOD=0.30 UG/L)
TRICHLOROFLUOROMETHANE	ND (LOD=0.30 UG/L)
1,2,3-TRICHLOROPROPANE	ND (LOD=0.30 UG/L)
1,2,4-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
1,3,5-TRIMETHYLBENZENE	ND (LOD=0.30 UG/L)
VINYL CHLORIDE	ND (LOD=0.30 UG/L)
O-XYLENE	ND (LOD=0.30 UG/L)

DATE  
 08/11/88  
 08/25/88  
 09/08/88  
 09/22/88  
 10/00/88  
 10/27/88  
 11/10/88  
 11/23/88  
 12/08/88  
 12/22/88  
 10/10/88  
 01/04/88  
 01/19/88

TEMP  
 14.7°C  
 14.1°C  
 19.2°C  
 16.8°C  
 11.8°C  
 14.6°C  
 13.5°C  
 16.5°C  
 16.2°C  
 10.6°C  
 11.3°C  
 12.3°C

FIELD CONDUCTIV.  
 604 μS  
 567 μS  
 228 μS  
 446 μS  
 539 μS  
 368 μS  
 595 μS  
 230 μS  
 570  
 221  
 476  
 540

LAB RESULTS  
 CH. Chlorine  
 < 3 μg  
 < 3  
 < 3  
 < 3  
 < 3  
 < 3  
 < 3  
 < 3  
 < 3  
 < 3

Cond. Conductivity  
 500 μS  
 500 μS  
 550  
 530  
 500 μS  
 500 μS  
 560

MISC

bat 11 cc → 5 ml deq. 5  
 bat 11 cc → 5 ml deq. 5  
 bat 11 cc → 5 ml deq. 5

Front Street



State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

Lake Michigan District Headquarters

1125 North Military Avenue

Box 10448

Green Bay, Wisconsin 54307-0448

File → DePere

January 12, 1989

File Ref: 3300

Mr. Carl Weber  
City Engineer  
925 S. Sixth St.  
De Pere, WI 54115

Dear Mr. Weber:

Attached you will find a copy of a report written by our district hydrogeologist concerning the possible contamination of the sandstone aquifer near the Grant Street well. This projected contamination would be from the problems already occurring at the Better-Brite Chrome and Zinc Plating Shops.

Under the Pre-remedial Superfund program, Screening Site Inspections (SSI's) were performed at the Better-Brite Zinc and Chrome Shops in July 1988. The SSI report for the Better-Brite Chrome Shop is available through the Bureau of Solid and Hazardous Waste by contacting Danielle Valvassori (608-267-5063). The SSI report for the Zinc Shop will be available in a few weeks. A Listing Site Inspection (LSI), conducted by EPA's contractor, is currently under way at the Zinc Shop. The LSI will determine if and when the site is placed on the National Priorities List (NPL). Once on the NPL, remedial investigation and ultimate cleanup will occur. There is a possibility that both the Chrome and the Zinc Shops may be dealt with simultaneously; however, that will be EPA's decision. The WDNR is fairly confident that the sites will be placed on the NPL. Unfortunately, this is a very time consuming process and cleanup may not commence for two to three years.

Presently at the Chrome Shop, the EPA's Emergency Response contractor is designing a pretreatment system. The collection trench installed in 1979 will be used to gather groundwater. Currently the city is periodically pumping the trench. The pretreatment will use a sulfide precipitation method to remove chromium from groundwater. The City of De Pere has been asked to enter into a cooperative agreement with the DNR for operation and maintenance of the system. The Department believes that EPA is also planning on regrading the site and restoring proper surface runoff.

Routine sampling from the Grant Street well is recommended. The Department strongly recommends that the city begin semi-annual monitoring of this well for chrome, zinc, cyanide, and conductivity, and that the city develop a contingency plan for the continued use of this well. Granted, the projected

- impact is not in the immediate future, but it would be prudent for the city to take these steps to provide for the health and welfare of the consuming public.

Please provide a written response to the Department within 60 days as to what actions the city will be taking. If you have any questions, or would like to meet to discuss this report, feel free to contact me.

Sincerely,



Jim Schedgick  
Water Supply Engineer

Approved:

  
R.P. Barnum

JS:bb/cm

cc: Al Baeten, De Pere Water Superintendent  
Baumeister - WS/2  
Rossberg/Weissbach - LMD



## CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: December 2, 1988

File Ref: 3300

To: Bob Barnum

From: Rick Stoll

R.C. Stoll

Subject: Summary of the Potential Impacts to the Bedrock Aquifer from the Better Brite Chrome and Zinc Shops - De Pere, WI 1988

The following is an analysis of the available De Pere Municipal Well #2 information as it pertains to the Better Brite Chrome and Zinc plating plants. This information suggests that eventual contamination to this well is quite likely and is supported by the following sources (summarized below and attached).

1) De Pere Municipal Well #2 Construction Log (1955) -

Static water level	120'
Cased to	180'
Total depth	765'

2) 'A Three-Dimensional Model of Flow to the Sandstone Aquifer in Northeastern Wisconsin with Discussion of Contamination Potential'-- Daniel T. Feinstein Thesis (1986) -

Downward leakage occurs within the Green Bay/De Pere cone of depression.

Downward leakage within the shallow groundwater basin is the dominant source of water to wells in the lower Fox basin.

The groundwater supply for the entire lower Fox Valley depends largely on the leakage through the shallow groundwater basin encompassed by the model.

Some high recharge areas communicate with the sandstone aquifer (Fig. 29).

Zones of high contamination potential to the sandstone aquifer exist just west of Brown County and in the vicinity of De Pere (Fig. 30).

3) Report on Soil Borings, Monitoring Wells Installation, and Groundwater Sampling at Better Brite Zinc and Chrome Plating Sites, De Pere, WI-- STS Project No. 15054-XH (1987) -

**Better Brite Chrome groundwater samples:**

Shallow well #B-105B (18.8' deep) in unconsolidated contained 62,000 ppb chrome.

Deep well #B-103 (63' total depth) in dolomite bedrock contained 660 ppb chrome.

Top of bedrock is at about 36 feet.

Sandstone is estimated to be approximately 150 feet below the top of the dolomite.

**Better Brite Zinc groundwater samples:**

Shallow well #W-2A (20.1' deep) in unconsolidated contained 310,000 ppb chrome.

Deeper well #W-2 (30.1' deep) screened at top of dolomite bedrock contained 2300 ppb chrome.

This report states that there is a downward vertical gradient in the silty clay at the site and it appears to be significant. All six monitoring wells at the zinc site exceeded the enforcement standard for chromium (50 ppb) in groundwater.

The zinc shop is located about 300' from the De Pere Municipal Well #2. The chrome shop is located about 2,100' from the same well. The dolomite is about 150' thick and directly overlies one of the sandstone formations that the municipal well draws from. The existence or degree of fractures in the dolomite is unknown.

- 4) As the attached map and well logs indicate (Appendix, 1-20 and A-I), many private wells actively draw water from the dolomite aquifer and within 5 miles of the Better Brite shops. Most casing depths average between 60-100 feet and terminate in the upper dolomite. The private wells within the De Pere municipal service area are now presumed to be abandoned, but were only cased to about 60 feet (top of dolomite) and produced between 4-15 gpm from the open dolomite. This information gives evidence that the dolomite is a producible, usable aquifer that should be protected from the further contamination which is emanating from the Better Brite shops. If not protected, a further spread of contamination within this aquifer will be quite likely.

**Recommendation #1**

Routine sampling of the municipal well #2 for metals is highly recommended.

**Justification**

The cone of depression for the municipal well encompasses both the Better Brite zinc and chrome shops. The recharge rate to the underlying sandstone

aquifer as predicted by the Feinstein model is between 2.01 to 4.0 inches/year. This same model assigns a medium level contamination potential to the sandstone aquifer in the De Pere area. It further suggests permeabilities which indicate flow from the water table to the sandstone aquifer could take between 420-836 years. However, at the Better Brite chrome shop approximately 1/7-1/3 of this distance has already been traveled by chromium contaminants in less than twenty years. This suggests that certain conditions at this location allow the downward movement of the chromium at a much more rapid rate than what the model predicts. Considering these two factors only suggests that about 60-140 years from now is the maximum time it would take before the sandstone aquifer is impacted by chromium contamination.

#### Recommendation #2

The bedrock monitoring wells at the Better Brite chrome site be properly abandoned within one year of this date.

#### Justification

Ten years have elapsed since the discovery of chromium contamination at the Better Brite chrome shop. Since discovery, many monitoring wells have been placed at the site, but only minimal cleanup has actually occurred. In May 1987, three monitoring wells were placed into the dolomite bedrock to evaluate it. These wells were specifically designed to eliminate the possibility of bedrock contamination by the wells themselves. A part of that construction required the use of neat cement grout as a seal. Neat cement is not completely compatible with chromic acid, and thus the life expectancy of the bedrock wells is limited. Since it does not appear that site cleanup will take place soon, it is not wise to leave these wells in place longer than is absolutely necessary.

cc: Doug Rossberg  
Jim Schedgick  
WS/2

If New Facility

Bill To:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other \_\_\_\_\_

I.D. Number 405045300 Point/Well # 002 Field No. DP2G County # 45 Route Code WS40

I.D. Name De Pere Water Dept. P.O. or City De Pere WI.

Collection Date 11/10/88 Time: 09:30 Sample Location Grant Street  
M M D D Y Y H H M M

Sampling Point Description pump tap

Send Report To: DEPARTMENT OF NATURAL RESOURCES  
LAKE MICHIGAN DISTRICT HEADQUARTERS  
P. O. BOX 10448  
GREEN BAY, WI 54307-0448

Account Number WS011  
Att.: JIM SCHEDSICK

Collected By Apfel

Phone (414)497.3106

Check any appropriate:  
 S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable  
Sample Type: (√ One)  
 D (SCWA) Compliance Sample  
 C (SDWA) Check (Initial Sample Date) 11/10/88  
 W Raw Water  if New Well  
 I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field \_\_\_\_\_  
pH - Field \_\_\_\_\_  
Alkalinity, Total (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l  
Arsenic (As) [50.] \_\_\_\_\_ µg/l  
Barium (Ba) [1000.] \_\_\_\_\_ µg/l  
Cadmium (Cd) [10.] \_\_\_\_\_ µg/l  
Calcium (Ca) \_\_\_\_\_ mg/l  
Chloride (Cl) [250.\*] \_\_\_\_\_ mg/l  
 Chromium, total (Cr) [50.] < 3 µg/l ✓  
Color [15\*] \_\_\_\_\_ cu  
Copper (Cu) [1000.\*] \_\_\_\_\_ µg/l  
Fluoride (F) [2.2] \_\_\_\_\_ mg/l  
Foaming Agents (MBAS) [0.5\*] \_\_\_\_\_ mg/l  
Hardness, Total (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l  
Iron (Fe) [0.3\*] \_\_\_\_\_ mg/l  
Lead (Pb) [50.] \_\_\_\_\_ µg/l  
Magnesium (Mg) \_\_\_\_\_ mg/l  
Manganese (Mn) [50.\*] \_\_\_\_\_ µg/l  
Mercury (Hg) [2.] \_\_\_\_\_ µg/l  
NO<sub>3</sub> + NO<sub>2</sub> (as N) [10.] \_\_\_\_\_ mg/l

pH - Lab \_\_\_\_\_  
Selenium (Se) [10.] \_\_\_\_\_ µg/l  
Silver (Ag) [50.] \_\_\_\_\_ µg/l  
Sodium (Na) \_\_\_\_\_ mg/l  
Sulfate (SO<sub>4</sub>) [250\*] \_\_\_\_\_ mg/l  
Total Solids [500\*] \_\_\_\_\_ mg/l  
Turbidity [1.] \_\_\_\_\_ NTU  
Zinc (Zn) [5000.\*] \_\_\_\_\_ µg/l

Other (Notification of state laboratory required prior to sample collection)  
\* CONDUCTIVITY 560 ✓

Comments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
**BAS**

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received And Sample No. \_\_\_\_\_  
Date Reported Nov 11 1988

CC: DIST. - OWNER

Nov 11 1988 41553  
DEC 13 1988

Department of Natural Resources

INORGANICS - Water Supply  
Form 4800-8 Rev. 1-88

→ file

If New Facility

Bill To:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other

I.D. Number 105045300 Point/Well # 002 Field No. DP2F County # 05 Route Code WS40

I.D. Name De Pere Water Dept. P.O. or City DePere WI

Collection Date 10/27/88 Time 09:46 Sample Location Grant Street  
M M D D Y Y H H M M

Sampling Point Description pump tap

DEPARTMENT OF NATURAL RESOURCES  
LAKE MICHIGAN DISTRICT HEADQUARTERS  
P. O. BOX 10443  
GREEN BAY, WI 54307-0443

Send Report To:

Account Number

Collected By

Phone

Check any appropriate:

- S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

Attn: JIM SCHEDWICK  
WS011

Apfel

(414) 497-3106

- M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable

Sample Type: (✓ One)

- D (SCWA) Compliance Sample  
 C (SDWA) Check

Initial Sample Date

- W Raw Water  if New Well  
 I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field	_____
pH - Field	_____
Alkalinity, Total (as CaCO <sub>3</sub> )	_____ mg/l
Arsenic (As) [50.]	_____ µg/l
Barium (Ba) [1000.]	_____ µg/l
Cadmium (Cd) [10.]	_____ µg/l
Calcium (Ca)	_____ mg/l
Chloride (Cl) [250.*]	_____ mg/l
<input checked="" type="checkbox"/> Chromium, total (Cr) [50.]	_____ <u>&lt;3</u> µg/l
Color [15*]	_____ cu
Copper (Cu) [1000.*]	_____ µg/l
Fluoride (F) [2.2]	_____ mg/l
Foaming Agents (MBAS) [0.5*]	_____ mg/l
Hardness, Total (as CaCO <sub>3</sub> )	_____ mg/l
Iron (Fe) [0.3*]	_____ mg/l
Lead (Pb) [50.]	_____ µg/l
Magnesium (Mg)	_____ mg/l
Manganese (Mn) [50.*]	_____ µg/l
Mercury (Hg) [2.]	_____ µg/l
NO <sub>3</sub> + NO <sub>2</sub> (as N) [10.]	_____ mg/l

pH - Lab	_____
Selenium (Se) [10.]	_____ µg/l
Silver (Ag) [50.]	_____ µg/l
Sodium (Na)	_____ mg/l
Sulfate (SO <sub>4</sub> ) [250*]	_____ mg/l
Total Solids [500*]	_____ mg/l
Turbidity [1.]	_____ NTU
Zinc (Zn) [5000.*]	_____ µg/l

Other (Notification of state laboratory required prior to sample collection)

\* CONDUCTIVITY 560

Comments:

BAS

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received And Sample No. \_\_\_\_\_

Date Reported Oct 28 1988 C37884

CC: DIST. - OWNER

New Facility

Bill to:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other

I.D. Number 405045300 Point/Well # QC2 Field No. DP2E County # 05 Route Code WS40

I.D. Name De Pere Water Dept. P.O. or City De Pere WI  
905 Sixth Street

Collection Date 10/16/88 Time: 10:47 Sample Location Grant Street  
MM DD YY HH MM

Sampling Point Description pump tap

Send Report To:

DEPARTMENT OF NATURAL RESOURCES  
LAKE MICHIGAN DISTRICT HEADQUARTERS  
P. O. BOX 10448  
GREEN BAY, WI 54307-0448

M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable

Account Number

Attn: Jim Scheegick  
W5676 021

Sample Type: (√ One)

Collected By Apfel

D (SCWA) Compliance Sample

Phone (414) 497-3106

C (SDWA) Check 1/1  
(Initial Sample Date)

Check any appropriate:  
 S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

W Raw Water  if New Well  
 I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field	---
pH - Field	---
Alkalinity, Total (as CaCO <sub>3</sub> )	--- mg/l
Arsenic (As) [50.]	--- μg/l
Barium (Ba) [1000.]	--- μg/l
Cadmium (Cd) [10.]	--- μg/l
Calcium (Ca)	--- mg/l
Chloride (Cl) [250.*]	--- mg/l
<input checked="" type="checkbox"/> Chromium, total (Cr) [50.]	--- <u>&lt;3</u> μg/l ✓
Color [15*]	--- cu
Copper (Cu) [1000.*]	--- μg/l
Fluoride (F) [2.2]	--- mg/l
Foaming Agents (MBAS) [0.5*]	--- mg/l
Hardness, Total (as CaCO <sub>3</sub> )	--- mg/l
Iron (Fe) [0.3*]	--- mg/l
Lead (Pb) [50.]	--- μg/l
Magnesium (Mg)	--- mg/l
Manganese (Mn) [50.*]	--- μg/l
Mercury (Hg) [2.]	--- μg/l
NO <sub>3</sub> + NO <sub>2</sub> (as N) [10.]	--- mg/l

pH - Lab	---
Selenium (Se) [10.]	--- μg/l
Silver (Ag) [50.]	--- μg/l
Sodium (Na)	--- mg/l
Sulfate (SO <sub>4</sub> ) [250*]	--- mg/l
Total Solids [500*]	--- mg/l
Turbidity [1.]	--- NTU
Zinc (Zn) [5000.*]	--- μg/l

Other (Notification of state laboratory required prior to sample collection)

\* CONDUCTIVITY 550 ✓

Comments:  
BAS

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received \_\_\_\_\_  
And Sample No. \_\_\_\_\_  
Date Reported Oct 7 1988 32688

CC: DIST. - OWNER

NOV 7 1988

If New Facility

Bill To:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other

I.D. Number 405045300 Point/Well # 002 Field No. DP2D County # 05 Route Code WS40

I.D. Name De Pere Water Dept. P.O. or City De Pere WI

Collection Date 09/22/88 Time: 09:20 Sample Location Grant Street  
M M D D Y Y H H M M

Sampling Point Description off pump tap

Send Report To: **DEPARTMENT OF NATURAL RESOURCES  
LAKE MICHIGAN DISTRICT HEADQUARTERS  
P. O. BOX 10448  
GREEN BAY, WI 54307-0448**  
Attn: Jim Schedgick  
Account Number WS211  
Collected By Apfel  
Phone (414)497.3106  
Check any appropriate:  
 S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable  
Sample Type: ( One)  
 D (SCWA) Compliance Sample  
 C (SDWA) Check     /    /      
(Initial Sample Date)  
 W Raw Water   if New Well  
 I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field	_____	pH - Lab	_____
pH - Field	_____	Selenium (Se) [10.]	_____ µg/l
Alkalinity, Total (as CaCO <sub>3</sub> )	_____ mg/l	Silver (Ag) [50.]	_____ µg/l
Arsenic (As) [50.]	_____ µg/l	Sodium (Na)	_____ mg/l
Barium (Ba) [1000.]	_____ µg/l	Sulfate (SO <sub>4</sub> ) [250*]	_____ mg/l
Cadmium (Cd) [10.]	_____ µg/l	Total Solids [500*]	_____ mg/l
Calcium (Ca)	_____ mg/l	Turbidity [1.]	_____ NTU
Chloride (Cl) [250.*]	_____ mg/l	Zinc (Zn) [5000.*]	_____ µg/l
<input checked="" type="checkbox"/> Chromium, total (Cr) [50.]	<u>&lt; 3</u> µg/l ✓	Other (Notification of state laboratory required prior to sample collection)	
Color [15*]	_____ cu	* <u>CONDUCTIVITY</u> <u>550</u> ✓	
Copper (Cu) [1000.*]	_____ µg/l	_____	
Fluoride (F) [2.2]	_____ mg/l	_____	
Foaming Agents (MBAS) [0.5*]	_____ mg/l	_____	
Hardness, Total (as CaCO <sub>3</sub> )	_____ mg/l	_____	
Iron (Fe) [0.3*]	_____ mg/l	_____	
Lead (Pb) [50.]	_____ µg/l	_____	
Magnesium (Mg)	_____ mg/l	_____	
Manganese (Mn) [50.*]	_____ µg/l	_____	
Mercury (Hg) [2.]	_____ µg/l	_____	
NO <sub>3</sub> + NO <sub>2</sub> (as N) [10.]	_____ mg/l	_____	

Comments:  
**CC: DIST. - OWNER** **BAS**

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received And Sample No. \_\_\_\_\_  
Date Reported SEP 23 1988 C28043

If New Facility

Bill To:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other \_\_\_\_\_

I.D. Number 405045300 Point/Well # 002 Field No. DPAC County # 25 Route Code WS40

I.D. Name DePere Water Dept. P.O. or City DePere WI

Collection Date 09/08/88 Time 09:25 Sample Location Grant Street

Sampling Point Description off pump tap

Send Report To: 

DEPARTMENT OF NATURAL RESOURCES  
LAND MICHIGAN DISTRICT HEADQUARTERS  
1125 NORTH MILITARY AVENUE  
P.O. BOX 10448  
GREEN BAY, WI 54307-0448

Account Number WS011

Collected By Apfel

Phone (414)497.3106

Check any appropriate:  
 S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable  
Sample Type: (✓ One)  
 D (SCWA) Compliance Sample  
 C (SDWA) Check     /    /      
(Initial Sample Date)  
 W Raw Water  ✓ if New Well  
 I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field \_\_\_\_\_  
pH - Field \_\_\_\_\_  
Alkalinity, Total (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l  
Arsenic (As) [50.] \_\_\_\_\_ µg/l  
Barium (Ba) [1000.] \_\_\_\_\_ µg/l  
Cadmium (Cd) [10.] \_\_\_\_\_ µg/l  
Calcium (Ca) \_\_\_\_\_ mg/l  
Chloride (Cl) [250.\*] \_\_\_\_\_ mg/l  
 Chromium, total (Cr) [50.] < 3 µg/l ✓  
Color [15\*] \_\_\_\_\_ cu  
Copper (Cu) [1000.\*] \_\_\_\_\_ µg/l  
Fluoride (F) [2.2] \_\_\_\_\_ mg/l  
Foaming Agents (MBAS) [0.5\*] \_\_\_\_\_ mg/l  
Hardness, Total (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l  
Iron (Fe) [0.3\*] \_\_\_\_\_ mg/l  
Lead (Pb) [50.] \_\_\_\_\_ µg/l  
Magnesium (Mg) \_\_\_\_\_ mg/l  
Manganese (Mn) [50.\*] \_\_\_\_\_ µg/l  
Mercury (Hg) [2.] \_\_\_\_\_ µg/l  
NO<sub>3</sub> + NO<sub>2</sub> (as N) [10.] \_\_\_\_\_ mg/l

pH - Lab \_\_\_\_\_  
Selenium (Se) [10.] \_\_\_\_\_ µg/l  
Silver (Ag) [50.] \_\_\_\_\_ µg/l  
Sodium (Na) \_\_\_\_\_ mg/l  
Sulfate (SO<sub>4</sub>) [250\*] \_\_\_\_\_ mg/l  
Total Solids [500\*] \_\_\_\_\_ mg/l  
Turbidity [1.] \_\_\_\_\_ NTU  
Zinc (Zn) [5000.\*] \_\_\_\_\_ µg/l

Other (Notification of state laboratory required prior to sample collection)  
\* CONDUCTIVITY 5.30 ✓

Comments:  
BAS  
CC. DIST. OWNER

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received And Sample No. \_\_\_\_\_  
Date Reported SEP 9 1988 23248



--- SLH Inorganic chemistry (#36 of 46 on 09/29/88, unseen)

Id: 405045300 Point/Well/..: 002 Field #: DP2C Route: WS40  
Collection Date: 09/08/88 Time: 09:25 County: 05 (Brown)  
From: DEBERE WATER DEPT GRANT STREET OFF PUMP TAP  
To: SCHEDGICK Type: DW  
DNR Source: Municipal  
GREEN-BAY

Account number: WS011 Collected by: SCHEDGICK  
Date Received: 09/09/88 Labslip #: I9023248 Reported: 09/28/88

CHROMIUM, AA FURNACE <3 UG/L  
CONDUCTIVITY ( UMHQS/CM AT 25 DEG C ) 530. UMHQS/CM

→ file

Department of Natural Resources

INORGANICS - Water Supply  
Form 4800-8 Rev. 1-88

If New Facility

Bill To:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other

I.D. Number 405045300 Point/Well # 002 Field No. DPaB County # 05 Route Code WS40

I.D. Name DePere Water Dept P.O. or City DePere, WI

Collection Date 08/25/88 Time: 09:30 Sample Location Grant Street  
M M D D Y Y H H M M

Sampling Point Description at pump to

Send Report To: DEPARTMENT OF NATURAL RESOURCES  
LAKE MICHIGAN DISTRICT HEADQUARTERS  
1125 NORTH MILITARY AVENUE  
P. O. BOX 10448  
GREEN BAY, WI 54307-0448

Account Number WS010  
Attn: Jim Schedgick

Collected By Apfel

Phone (414)497.3106

Check any appropriate:  
 S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable  
Sample Type: (√ One)  
 D (SCWA) Compliance Sample  
 C (SDWA) Check     /    /      
(Initial Sample Date)  
 W Raw Water  √ if New Well  
 I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field       
pH - Field       
 Alkalinity, Total (as CaCO<sub>3</sub>)      mg/l  
 Arsenic (As) [50.]      µg/l  
 Barium (Ba) [1000.]      µg/l  
 Cadmium (Cd) [10.]      µg/l  
 Calcium (Ca)      mg/l  
 Chloride (Cl) [250.\*]      mg/l  
 Chromium, total (Cr) [50.] <3 µg/l ✓  
 Color [15\*]      cu  
 Copper (Cu) [1000.\*]      µg/l  
 Fluoride (F) [2.2]      mg/l  
 Foaming Agents (MBAS) [0.5\*]      mg/l  
 Hardness, Total (as CaCO<sub>3</sub>)      mg/l  
 Iron (Fe) [0.3\*]      mg/l  
 Lead (Pb) [50.]      µg/l  
 Magnesium (Mg)      mg/l  
 Manganese (Mn) [50.\*]      µg/l  
 Mercury (Hg) [2.]      µg/l  
 NO<sub>3</sub> + NO<sub>2</sub> (as N) [10.]      mg/l

pH - Lab       
 Selenium (Se) [10.]      µg/l  
 Silver (Ag) [50.]      µg/l  
 Sodium (Na)      mg/l  
 Sulfate (SO<sub>4</sub>) [250\*]      mg/l  
 Total Solids [500\*]      mg/l  
 Turbidity [1.]      NTU  
 Zinc (Zn) [5000.\*]      µg/l

Other (Notification of state laboratory required prior to sample collection)  
CONDUCTIVITY 560 ✓

Comments:  
BAS

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received And Sample No. \_\_\_\_\_  
Date Reported \_\_\_\_\_

Aug 26 1988  
3:15 PM

If New Facility

Bill To:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other

I.D. Number 405045300 Point/Well # 2 Field No. DP2A County # 05 Route Code WS40

I.D. Name DePere Water Dept P.O. or City DePere

Collection Date 08/11/88 Time: 09:18 Sample Location Grant Street (Well #2 - DePere)  
M M D D Y Y H H M M

Sampling Point Description pump tap

Send Report To:

DEPARTMENT OF NATURAL RESOURCES  
LAKE MICHIGAN DISTRICT HEADQUARTERS  
1125 NORTH MILITARY AVENUE  
P. O. BOX 10448  
GREEN BAY, WI 54307-0448

Attn.: Jim Schedgick

Account Number

WS011

Collected By

Apfel

Phone

(414) 497-3106

Check any appropriate:

S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable

Sample Type: (√ One)

D (SCWA) Compliance Sample

C (SDWA) Check

  /  /    
(Initial Sample Date)

W Raw Water

if New Well

I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field       
pH - Field       
 Alkalinity, Total (as CaCO<sub>3</sub>)      mg/l  
 Arsenic (As) [50.]      µg/l  
 Barium (Ba) [1000.]      µg/l  
 Cadmium (Cd) [10.]      µg/l  
 Calcium (Ca)      mg/l  
 Chloride (Cl) [250.\*]      mg/l  
 Chromium, total (Cr) [50.] <3 µg/l ✓  
 Color [15\*]      cu  
 Copper (Cu) [1000.\*]      µg/l  
 Fluoride (F) [2.2]      mg/l  
 Foaming Agents (MBAS) [0.5\*]      mg/l  
 Hardness, Total (as CaCO<sub>3</sub>)      mg/l  
 Iron (Fe) [0.3\*]      mg/l  
 Lead (Pb) [50.]      µg/l  
 Magnesium (Mg)      mg/l  
 Manganese (Mn) [50.\*]      µg/l  
 Mercury (Hg) [2.]      µg/l  
 NO<sub>3</sub> + NO<sub>2</sub> (as N) [10.]      mg/l

pH - Lab       
 Selenium (Se) [10.]      µg/l  
 Silver (Ag) [50.]      µg/l  
 Sodium (Na)      mg/l  
 Sulfate (SO<sub>4</sub>) [250\*]      mg/l  
 Total Solids [500\*]      mg/l  
 Turbidity [1.]      NTU  
 Zinc (Zn) [5000.\*]      µg/l

Other (Notification of state laboratory required prior to sample collection)

Conductivity 520 ✓  
           
         

Comments:

      
     gas  
      
**CC: DIST. - OWNER**

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received And Sample No.     

Date Reported     

**Aug 12 1988**

1988

--- SLH Inorganic chemistry (#8 of 24 on 09/15/88, unseen)

Id: 405045300 Point/Well/...: 2 Field #: DP2A Route: WS40  
Collection Date: 08/11/88 Time: 09:18 County: 05 (Brown)  
From: DEPERE WATER DEPT GRANT STREET WELL 2 DEPERE PUMP TAP  
To: APFEL Type: DW  
DNR Source: Municipal  
GREEN BAY

Account number: WS011 Collected by: APFEL  
Date Received: 08/12/88 Labslip #: 19015190 Reported: 09/13/88

CHROMIUM, AA FURNACE <3 UG/L  
CONDUCTIVITY ( UMHOS/CM AT 25 DEG C ) 520. UMHOS/CM  
FIELD CONDUCTIVITY 624  $\mu S$

If New Facility

Bill To:  Solid Waste  Hazardous Waste  Wastewater  Water Supply  Spills  Other

I.D. Number 405045300 Point/Well # --- Field No. DE PERE County # 05 Route Code WS40

I.D. Name DE PERE WATERWORKS P.O. or City DE PERE

Collection Date 07.12.88 Time: 14:30 Sample Location GRANT STREET WELL  
M M D D Y Y H H M M

Sampling Point Description SAMPLE TAP

Send Report To: STOLL  
DNR-LMD

Account Number WS01L

Collected By ERDMAN

Phone (414) 497.4055

Check any appropriate:  
 S Split  E Enforcement  B Field Blank  
 Z Surface Source  T Treated

M Community-Municipality  
 O Community-Other than Municipal  
 N Non-community  
 P Private  
 X Non-potable  
Sample Type: (√ One)  
 D (SCWA) Compliance Sample  
 C (SDWA) Check ---/---/---  
(Initial Sample Date)  
 W Raw Water  √ if New Well  
 I Miscellaneous Distribution

Maximum Contaminant Levels Are Indicated in Brackets [ ].  
All MCL's Are Health Limits Except Those Indicated by [\*] Which Are Aesthetic Limits

Temperature (°C) Field ---  
pH - Field ---  
 Alkalinity, Total (as CaCO<sub>3</sub>) --- mg/l  
 Arsenic (As) [50.] --- µg/l  
 Barium (Ba) [1000.] --- µg/l  
 Cadmium (Cd) [10.] --- µg/l  
 Calcium (Ca) --- mg/l  
 Chloride (Cl) [250.\*] --- mg/l  
 Chromium, total (Cr) [50.] <3 µg/l ✓  
 Color [15\*] --- cu  
 Copper (Cu) [1000.\*] --- µg/l  
 Fluoride (F) [2.2] --- mg/l  
 Foaming Agents (MBAS) [0.5\*] --- mg/l  
 Hardness, Total (as CaCO<sub>3</sub>) --- mg/l  
 Iron (Fe) [0.3\*] --- mg/l  
 Lead (Pb) [50.] <3 µg/l ✓  
 Magnesium (Mg) --- mg/l  
 Manganese (Mn) [50.\*] --- µg/l  
 Mercury (Hg) [2.] --- µg/l  
 NO<sub>3</sub> + NO<sub>2</sub> (as N) [10.] --- mg/l

pH - Lab ---  
 Selenium (Se) [10.] --- µg/l  
 Silver (Ag) [50.] --- µg/l  
 Sodium (Na) --- mg/l  
 Sulfate (SO<sub>4</sub>) [250\*] --- mg/l  
 Total Solids [500\*] --- mg/l  
 Turbidity [1.] --- NTU  
 Zinc (Zn) [5000.\*] <20 µg/l ✓

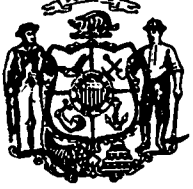
Other (Notification of state laboratory required prior to sample collection)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments: ---  
\_\_\_\_\_  
\_\_\_\_\_

R. H. Laessig, PhD, Director  
Wisconsin State Laboratory of Hygiene  
Madison, Wisconsin 53706

Date Received And Sample No. \_\_\_\_\_  
Date Reported JUL 14 1988 05043

CC: DIST. OWNER



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Lake Michigan District Headquarters  
1125 N. Military Avenue  
P. O. Box 10448  
Green Bay, WI 54307-0448

Carroll D. Besadny  
Secretary

April 29, 1988

File Ref: 3300  
405045300

Mr. Allen Baeten, Superintendent  
DePere Water Department  
925 So. Sixth Street  
DePere, WI 54115

Dear Mr. Baeten:

Attached is a report on the investigation of the DePere water system conducted on March 8, 1988. The report describes the physical facilities, evaluates water quality and concludes with recommendations concerning conditions observed.

On the basis of this investigation, it is concluded that the operation and maintenance of the DePere system is excellent. However, to improve the water system and protect the health and welfare of the consumer, the DePere Water Department is urged to implement the recommendations in this report. The Department is requesting a written response to the Conclusions/Recommendations section of the attached report by June 15, 1988.

Sincerely,

A handwritten signature in cursive script that reads "Jim Schedgick".

Jim Schedgick  
Water Supply Engineer

JS:lvp

Attach.

cc: Public Water Supply Section, Madison - WS/2  
Robert P. Barnum - LMD

Report on the Investigation of the  
Public Water Supply System at  
DePere, Wisconsin

The following report describes in detail an investigation of the public water supply at DePere, Wisconsin made on March 8, 1988. This study was part of a series of routine investigations of such systems within the state.

General Description and History of the Water System

The water system is owned by the City and was initially installed in 1885. It originally consisted of two wells on each side of the river, which have since been abandoned. The present system consists of well #1 - drilled in 1949, well #2 - drilled in 1955, well #3 - drilled in 1959, well #4 - drilled in 1965, well #5 - drilled in 1970, and a well #6 - drilled in 1979. The waterworks has one, 500,000 gallon and two, 250,000 gallon elevated storage reservoirs. There is one, 160,000 gallon and four, 250,000 gallon ground storage reservoirs. The combined pumping capacity for the system is 6,566,400 gallons per day.

Well #1 Well #1 is located on Front Street, has a total depth of 812 feet and is grouted from the 199.5 foot level to the surface. The well pump has a capacity of 780 gpm and discharges into a 160,000 gallon ground storage reservoir from which two, 780 gpm booster pumps discharge into the distribution system. The well construction, pumping equipment and piping all meet present day standards. The air line for measuring water depth in the well is broken. This should be repaired the next time the well pump is pulled for servicing. The specific capacity of the well when pumped at 780 gpm is 6.90 gpm per foot of draw down.

Well #2 Well #2 is located on Grant Street, has a total depth of 760 feet and is grouted from the 180 foot level to the surface. The well was reconstructed in 1960 with a 10 inch liner and cemented in place from the 464 foot level to the 415 foot level. The well pump has a capacity of 460 gpm and discharges directly into the distribution system. The well construction and pumping equipment are adequate and meet present day standards. The specific capacity of the well when pumped at 460 gpm is 4.42 gpm per foot of draw down.

Well #3 Well #3 is located on Ninth Street, has a depth of 795 feet and is grouted from the 459 foot level to the surface. The well has a capacity of 1200 gpm and discharges to an adjacent ground storage reservoir. Two booster pumps each rated at 940 gpm pump water from the reservoir directly into the distribution system. The well pumping equipment and piping are all adequate and meet present day construction requirements. This well has a specific capacity of 6.49 gpm per foot of draw down.

Well #4 Well #4 is located on Merrill Street, has a depth of 845 feet and is grouted from the 259 feet 8 inch level to the surface. The well pump has a capacity of 790 gpm and discharges into an adjacent ground storage reservoir. Two booster pump each rated at 330 gpm pump water from the reservoir directly into the distribution system.

The well vent should be reconstructed to terminate in a complete U-bend with a fine mesh screen. The specific capacity of the well is 6.32 gpm per foot of draw down.

Well #5 Well #5 is located on Enterprise Drive, has a total depth of 875 feet and is grouted from the 265 foot level to the surface. The well pump has a capacity of 760 gpm and discharges into an adjacent ground storage reservoir. Two booster pumps each rated at 700 gpm pump water from the reservoir into the distribution system. The well construction, pumping equipment and piping are all adequate and meet present day construction requirements. The well has a specific capacity of 4.97 gpm per foot of draw down.

Well #6 Well #6 is located on Scheuring Road, has a depth of 787 feet and grouted from the 500 foot to 250 foot level and also from the 184 foot level to the surface. The well pump has a capacity of 760 gpm and discharges into an adjacent reservoir. Two Allis Chalmers centrifugal booster pumps each rate at 590 gpm pump water from the reservoir directly into the distribution system. The well construction, pumping equipment and piping are all adequate and meet present day standards. However, the well needs a new seal between the pump base and the concrete foundation. This well has a specific capacity of 10.41 gpm per foot of draw down.

#### Chemical Addition

Chlorine Chlorine gas is added to the water at each of the wells for disinfection. The facility uses Advance Control units, with a capacity of 0 to 10 lbs., at wells 2, 3, 4, 5 & 6 and 0 to 20 lbs. at well #1. Each well has a properly equipped chlorine room with gas masks and chlorine indicators.

Any future improvements to pumphouse #1 should include updating the chlorine room in accordance with NR 111 of the Wisconsin Administrative Code.

Sodium Hexametaphosphate Sodium Hexametaphosphate solution is added at each well to sequester iron and prevent scale formation in the distribution system. A Precision pump with a rated capacity of 0 to 60 gallons per day is used at wells #1, 2, 3 4 & 5 to deliver polyphosphate to the water supply. At well #6, a Wallace & Tiernan pump having a capacity of 44 gallon per day is in use. The polyphosphate solution is stored in approved plastic drums with overlapping covers. The entire polyphosphate handling systems are in excellent condition and well maintained.

Storage Storage is provided by five ground storage reservoirs having a total capacity of 1,160,000 gallons and three elevated reservoirs having a total capacity of 1,000,000 gallons. All the ground storage reservoirs are constructed as required and are in good condition. When any of the ground storage reservoirs are taken out of service and drained, the waterworks should notify this Department so we can assist with inspection of the interior.



The facility has two 250,000 gallon steel legged towers that are inspected every three years and are in good condition. However, the tower on 9th Street needs a locking gate in accordance with NR 111 of the Wisconsin Administrative Code, to keep unauthorized individuals from having access to the water supplies.

In 1986, a 500,000 gallon pedestal spheroid reservoir was constructed on Matthew Drive. It is 134.5 feet high and is equipped with an eight inch screened overflow pipe, screened vent pipe at the top, a storm sewer discharge pipe for drainage and a locking door slightly above ground level.

Distribution System

The distribution system consists of approximately 78.61 miles of mains. The sizes, materials and lengths are tabulated below:

6" Ductile Iron	6 feet
12" " "	326 feet
16" " "	1,447 feet
2" Cast Iron	1,455 feet
4" " "	16,643 feet
6" " "	183,514 feet
8" " "	83,081 feet
10" " "	37,728 feet
12" " "	49,985 feet
6" Asbestos Cement	4,596 feet
1½" PVC	180 feet
6" "	1,829 feet
8" "	8,966 feet
10" "	5,054 feet
12" "	6,918 feet
¾" Copper	41 feet
1" Copper	619 feet
1½" to 2" Galvanized	3,791 feet
¾" to 1" Galvanized	8,906 feet

Hydrant flow tests indicate that the system can provide adequate fire flows. However, water mains less than 6 inches in diameter (approximately 7.7% of the system) generally do not provide adequate fire flows. The City should consider eventual replacement of these mains.

The waterworks pump 106,967,000 gallons during 1986 that was unaccounted for. This amounts to 18.62% of the total pumpage and is a considerable loss in revenue. The City should try to determine when and/or where these losses are occurring and then take steps to eliminate them.

Water Quality The chemical quality of the water at all the wells is relatively good except to the iron concentration which ranges from .28 to 1.1 ppm. Results of the Langelier Index indicate the water is stable with a value of -.03.

Radium The DePere water supply exceeds the drinking water standard for radium. The standard is 5 picocuries per liter and the yearly rolling average for DePere is 7.4 picocuries per liter. Below is a tabulation of radium data starting in January 1986.

Rolling Radium Averages - DePere

Date	pci/l	Rolling Average
Jan. 24, 1986	4.6	
May 15, 1986	4.0	
Sept. 12, 1986	4.0	
Dec. 22, 1986	5.8	4.6
Mar. 16, 1987	7.1	5.2
June 26, 1987	8.6	6.4
Sept. 24, 1987	7.4	7.2
Dec. 29, 1987	6.4	7.4

On September 16, 1987, the Department sent the City a "Notice of Violation" (NOV) of the radium standards. A proposed compliance schedule was enclosed and the City notified the Department on October 13, 1987, that a final reply to the NOV and compliance schedule were forthcoming on or about October 27, 1987. As of the date of this report, the Department has not received a final reply as promised.

In accordance with State and Federal law, the DePere Water Department is required to notify all water customers of the radium levels on a calendar quarterly basis. This public noticing is being carried out quarterly.

Lead Lead in drinking water has become a national concern because it is harmful to human health. A new Federal law requires that by June 19, 1988, all municipalities must issue to each customer a specifically worded written public notice on lead in drinking water. The City of DePere has elected to notify its customers by publishing the lead notice in the Green Bay Press Gazette.

Records and Sampling The City is required to submit at least 17 bacteriological water samples per month from the distribution system to the State Laboratory of Hygiene for analysis. An examination of this record for the past 12 months is as follows:

March 1987 - 18	Sept. 1987 - 18
April 1987 - 18	Oct. 1987 - 17
May 1987 - 18	Nov. 1987 - 18
June 1987 - 17	Dec. 1987 - 18
July 1987 - 18	Jan. 1988 - 18
Aug. 1987 - 19	Feb. 1988 - 18

Also, the City is required to submit quarterly raw water samples from each of its wells to assure a safe supply prior to chlorination. This has been occurring.

From this record, it is apparent, that the Water Department has met these sampling requirements. You should be commended for this. Only through the proper submission of bacteriological samples can a safe water supply be assured to the public.

The monthly operating reports submitted by the Water Department are properly filled out and submitted in a timely manner. The Department uses the reports to determine if operational consistency is being maintained and if proper chemical dosages are being administered.

Cross-Connections Reportedly, no known cross-connections exist and the Water Department has a cross-connection inspection program in place. A record of cross-connection inspections is being kept current and is available for annual review by the Department.

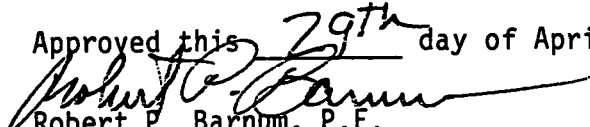
#### Conclusions and Recommendations

Based on the investigation and a review of records available, it is concluded that the DePere public water supply is excellently operated and maintained. However, to improve the water system, the City is urged to implement the following recommendations:

- 1) The air line at well #1 should be repaired the next time the well pump is pulled for service.
- 2) At well #4, the well vent should terminate in a fall U-bend with a fine mesh screen attached to the end of the vent opening.
- 3) At well #6, a new seal is needed between the pump base and the concrete foundation.
- 4) A locking gate should be installed on the 9th Street water tower to prevent unauthorized access.
- 5) Any future improvements to well #1 should include updating the chlorine room in accordance with the construction requirements of NR 111 of the Wisconsin Administrative Code.
- 6) The Department is requesting a final reply to the "Notice of Violation" (NOV) sent to the City on September 16, 1987.

Respectfully Submitted,

  
Jim Schedgick  
Water Supply Engineer

Approved this <sup>29th</sup> day of April, 1988  
  
Robert P. Barnum, P.E.  
Water Supply Unit Supervisor  
Environmental Protection Section

cc: Public Water Supply, WS/2 - Madison  
Robert P. Barnum - LMD

General Information

Reviewer Jim Schudgick

Date March 8, 1988

Waterworks De Pere

Ownership De Pere

County BROWN

Certified Operator Allen Baeten

Population: 1970 13309

No. of Other Cert. Operators 4

1980 14892

System Classification FW

1986 16150

Supply Information

Customers: Total 5235 No. Metered 5235

Residential 4810 Industrial 40

Commercial 333 Other Public 52

Consumption in 1986

Ave. Day 1,573,532 Gal.

Per/Capita/Day 97.43

Max. Day 5/24/86 2,512,000 Gal.

Total Pumped 574,339,000

Min. Day 12/1/86 1,224,000 Gal.

Total Metered 467,372,000

% Loss 18.62%

Gravity Storage 1,000,000 Gal.

Other Storage 1,160,000 Gal.

Total Well Pump Capacity 6,566,400 Gal./Day

Works De Pere

Reviewer Jim Schlegel

Date March 8, 1988

Well Number 1 Location FRONT STREET

Date Constructed 1949 Total Depth 812'

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? No Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available:

DRIFT 0' to 29' Sandstone 185'-812'  
Limestone 29'-185'

Casing and screen Depth & Diameter:

Inner 12" to 199 1/2' Grout Depth 199 1/2'  
12" Liner from 232'-466'  
Outer 20" to 29' Screen Length \_\_\_\_\_  
Open Drillhole Length 812'

Means for Measuring Water Level altitude gauge Airline Length 412' (line is cut)

Static Water Level 187' Pumping Water Level 300 @ 780 gpc

Specific Capacity 6.9027 gpm/ft.

Pump Base Description concrete Well Seal good

Well Vent yes U-Bend yes Screen yes Height Above Floor 1/2'

Gravel Refill Pipes N/A Capped N/A Height Above Floor \_\_\_\_\_

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_

Waterworks DePere  
Well No. 1

Reviewer Jim Schedgik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 750 GPM @ 150' Ft.Hd.  
Actual 780 GPM @ 128' Ft.Hd.  
Pump Setting 412' Lubrication Water Prelube Water  
Motor HP 100 Backspin Protection Ratchet  
Aux. Power Continental Fuel gasoline Freq. of Oper. 1 x monthly

Comments:

Pump Station:

Description Brick & Concrete Floor: Dist. Above Ground ≈ 4' below grade  
Door Open Out yes Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 7' Discharge To Sanitary Sewer  
Flooding None Dist. to San. Sewer 2.5 feet

Comments:

Piping and Valves:

Air Relief None U-Bend — Screen — Hgt. Above Floor —  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent Screened

High Lift Pump(s): 2

Make Fairbanks + Morse Type Vertical Turbine Discharges To distribution system  
Capacity: Design 750 GPM @ 150' Ft.Hd.  
Actual 780 GPM @ 128' Ft.Hd.

Reviewer Jim Schedgich  
Date March 8, 1988

ID 405045300

Waterworks De Pere

Well No. 1

Chemical Addition

Chemical Sodium HEXAMETAPHOSPHATE Concentration DRY

Feeder Type Precision pump Capacity 0 to 6.0 gallons/day

Feeder Setting 70% Feeder Control well pump Strokes/Min/ 75

Point of Application after check valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type \_\_\_\_\_ Means for Determining Usage measuring stick

Solution Tank: Type plastic Size 45 gallon Cover plastic & over lapping

Water Pump: Capacity \_\_\_\_\_ System Pressure 65 psig

Chemical Dilution 2 1/2 lbs of dry Na Hexametaphosphate per 5 gallons of water

Calculations:

Chlorine Room

Door Open Out \_\_\_\_\_ Window \_\_\_\_\_ Switch Locations \_\_\_\_\_

Fresh Air Intake Location \_\_\_\_\_ Chlorinator Vent \_\_\_\_\_

Exhaust Fan: Capacity \_\_\_\_\_ Intake Location \_\_\_\_\_

Gas Mask Type \_\_\_\_\_ Cylinders Secured \_\_\_\_\_

Other Treatment \_\_\_\_\_

Treatment Codes \_\_\_\_\_

Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks DePere

Well No. 1

Chemical Addition

Chemical Chlorine Concentration GAS

Feeder Type Advance Capacity 70 lbs/day

Feeder Setting 3.5 Feeder Control Well pump Strokes/Min/ —

Point of Application after check valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type HACH Means for Determining Usage Scale

Solution Tank: Type — Size — Cover —

Water Pump: Capacity — System Pressure 6.5 psig

Chemical Dilution —

Calculations:

Chlorine Room

Door Open Out No Window INDOOR (Can not see cylinder) Switch Locations Inside

Fresh Air Intake Location ceiling Chlorinator Vent outside

Exhaust Fan: Capacity unknown Intake Location FLOOR

Gas Mask Type MSA No. 14F-60 Cylinders Secured Chained

Other Treatment —

Treatment Codes —



Reviewer Jim Schedgich

Waterworks De Pere

Date March 8, 1988

Ground Storage Reservoir:

Date Constructed 1950 Location Well #1 Construction Concrete

Capacity 160,000 gallons Dimensions — Condition good

Vent Description 4" screened Overflow Description Vent

Access Manhole yes Locking and Overlapping Cover yes

Intake and Discharge Discharge - yes Lines Under Pressure Intake - No Top: Dist. Above Ground ground level

Drain plung - Sump in Reservoir Distance to Sanitary Sewer 25 feet

Inside Inspection Once every two or three years

Elevated Storage Reservoir:

Date Constructed \_\_\_\_\_ Type \_\_\_\_\_ Location \_\_\_\_\_

Capacity \_\_\_\_\_ Height to Overflow \_\_\_\_\_ High Water Level \_\_\_\_\_

Other Tank(s) High Water Level \_\_\_\_\_ System Pressure \_\_\_\_\_

Overflow Description \_\_\_\_\_ Splash Pad \_\_\_\_\_

Safety Cage and Ladder \_\_\_\_\_ Locking Gate \_\_\_\_\_

Vent Description \_\_\_\_\_ Access Manholes \_\_\_\_\_

Means for Drainage \_\_\_\_\_ Silt Stop \_\_\_\_\_

Riser: Diameter \_\_\_\_\_ Insulated \_\_\_\_\_ Sampling and Disinfection Taps \_\_\_\_\_

Paint Description \_\_\_\_\_ Inside Inspection \_\_\_\_\_

Safety Bars (Riser >8 inches) \_\_\_\_\_

Hydro-Pneumatic Tank:

Date Constructed \_\_\_\_\_ Capacity \_\_\_\_\_ Location \_\_\_\_\_

Drain \_\_\_\_\_ Sight Glass \_\_\_\_\_ Well Pump Capacity \_\_\_\_\_

Air Compressor \_\_\_\_\_ Air Relief \_\_\_\_\_

Bypass Piping \_\_\_\_\_ Access Manhole \_\_\_\_\_

Controls & Water Levels \_\_\_\_\_ Pressure Gauge \_\_\_\_\_

Waterworks DePere  
Well No. 2

Reviewer Jim Schedgik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Distribution System  
Capacity: Design 650 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 460 GPM @ 148 Ft.Hd.  
Pump Setting 370 Lubrication water Prelube water  
Motor HP 100 Backspin Protection ratchet  
Aux. Power None Fuel \_\_\_\_\_ Freq. of Oper. \_\_\_\_\_

Comments:

Pump Station:

Description Brick + Concrete Block Floor: Dist. Above Ground 6 inches  
Door Open Out on Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 8 feet Discharge To Sanitary Sewer  
Flooding None Dist. to San. Sewer 100 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend yes Screen yes Hgt. Above Floor 3 feet  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent yes - screened

High Lift Pump(s):

Make \_\_\_\_\_ Type \_\_\_\_\_ Discharges To \_\_\_\_\_  
Capacity: Design \_\_\_\_\_ GPM @ \_\_\_\_\_ Ft.Hd.  
Actual \_\_\_\_\_ GPM @ \_\_\_\_\_ Ft.Hd.

Works DePerre Reviewer Jim Schudgich

Date March 9, 1988

Well Number 2 Location GRANT STREET

Date Constructed 1955 Total Depth 760 feet

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? Yes Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available:  
\_\_\_\_\_  
\_\_\_\_\_

Casing and screen Depth & Diameter:

Inner 12" to 180' and 12" from 319' to 430' Grout Depth 180'

Outer 18" to 24' Screen Length \_\_\_\_\_

Open Drillhole Length 760'

Means for Measuring Water Level at static gauge Airline Length 320 feet

Static Water Level 160 Pumping Water Level 264 @ 460 gpc

Specific Capacity 4.4231 gpm/ft.

Pump Base Description 8" concrete Well Seal good

Well Vent yes U-Bend yes Screen yes Height Above Floor 20"

Gravel Refill Pipes \_\_\_\_\_ Capped \_\_\_\_\_ Height Above Floor \_\_\_\_\_

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks DePere

Well No. 2

Chemical Addition

Chemical Chlorine Concentration gas

Feeder Type Advance Capacity 10 lbs / day

Feeder Setting 3.5 Feeder Control well pump Strokes/Min/     

Point of Application after check valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type Haeh Means for Determining Usage Scale

Solution Tank: Type      Size      Cover     

Water Pump: Capacity      System Pressure 58 psig

Chemical Dilution     

Calculations:

Chlorine Room

Door Open Out yes Window yes Switch Locations outside

Fresh Air Intake Location Ceiling Chlorinator Vent outside

Exhaust Fan: Capacity unknown Intake Location Floor

Gas Mask Type MSA Cylinders Secured chain

Other Treatment     

Treatment Codes

Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks De Pere

Well No. 2

Chemical Addition

Chemical Sodium Hexametaphosphate Concentration dry

Feeder Type Precision Capacity 0-60 gallons/day

Feeder Setting 25 Feeder Control well pump Strokes/Min/ 40

Point of Application before check valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type — Means for Determining Usage measuring stick

Solution Tank: Type plastic Size 45 gallon Cover plastic overlapping

Water Pump: Capacity — System Pressure 58 psig

Chemical Dilution 2 1/2 lbs of Na Hexametaphosphate per 5 gallons of water

Calculations:

Chlorine Room

Door Open Out \_\_\_\_\_ Window \_\_\_\_\_ Switch Locations \_\_\_\_\_

Fresh Air Intake Location \_\_\_\_\_ Chlorinator Vent \_\_\_\_\_

Exhaust Fan: Capacity \_\_\_\_\_ Intake Location \_\_\_\_\_

Gas Mask Type \_\_\_\_\_ Cylinders Secured \_\_\_\_\_

Other Treatment \_\_\_\_\_

Treatment Codes \_\_\_\_\_

Works De Pere Reviewer Jim Schudrik

Date March 8, 1988

Well Number 3 Location 9th STREET

Date Constructed 1959 Total Depth 795 feet

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? YES Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available: Unknown  
\_\_\_\_\_  
\_\_\_\_\_

Casing and screen Depth & Diameter:

Inner 12" to 459' Grout Depth 459'  
Outer 18" to 175' Screen Length \_\_\_\_\_  
Open Drillhole Length 795'

Means for Measuring Water Level altitude gauge Airline Length 420'

Static Water Level 164 Pumping Water Level 349 @ 1200 gpm

Specific Capacity 6.4865 gpm/ft.

Pump Base Description Concrete - 8" Well Seal good

Well Vent yes U-Bend yes Screen yes Height Above Floor 18"

Gravel Refill Pipes \_\_\_\_\_ Capped \_\_\_\_\_ Height Above Floor \_\_\_\_\_

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Waterworks DePere  
Well No. 3

Reviewer Jim Schedgik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 1000 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 1200 GPM @ 0 Ft.Hd.  
Pump Setting 420 Lubrication water Prelube water  
Motor HP 150 Backspin Protection ratchet  
Aux. Power Ford Fuel natural gas Freq. of Oper. 1 x weekly

Comments:

Pump Station:

Description Brick and tile Floor: Dist. Above Ground 6 inches  
Door Open Out yes Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 6 feet Discharge To sanitary sewer  
Flooding none Dist. to San. Sewer 100 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend no Screen yes Hgt. Above Floor 5 feet  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent yes

High Lift Pump(s): 2

Make LAYNE Type Vertical Turbine Discharges To distribution system  
Capacity: Design 1000 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 940 GPM @ 128 Ft.Hd.

Reviewer Jim Schedgrik  
Date March 8, 1988

Waterworks De Pere

Ground Storage Reservoir:

Date Constructed 1964 Location Well #3, 9th Street Construction Concrete  
Capacity 250,000 gallons Dimensions — Condition good  
Vent Description 3-8" screened pipes Overflow Description yes  
Access Manhole yes Locking and Overlapping Cover yes  
Intake and Discharge Discharge - yes  
Lines Under Pressure Intake - No Top: Dist. Above Ground Ground level  
Drain Valve to storm sewer Distance to Sanitary Sewer 100 feet  
Inside Inspection once every 2 or 3 years

Elevated Storage Reservoir:

Date Constructed 1960 Type Steel lagged Location 9th Street  
Capacity 250,000 gallons Height to Overflow 148' High Water Level 148'  
Other Tank(s) High Water Level — System Pressure 58 psig  
Overflow Description 6" pipe Splash Pad Concrete  
Safety Cage and Ladder yes Locking Gate yes  
Vent Description 6" screened pipe Access Manholes yes  
Means for Drainage Hydrant Silt Stop yes  
Riser: Diameter 4 feet Insulated no Sampling and Disinfection Taps No  
Paint Description epoxy Inside Inspection once every 2 years  
Safety Bars (Riser >8 inches) yes

Hydro-Pneumatic Tank:

Date Constructed \_\_\_\_\_ Capacity \_\_\_\_\_ Location \_\_\_\_\_  
Drain \_\_\_\_\_ Sight Glass \_\_\_\_\_ Well Pump Capacity \_\_\_\_\_  
Air Compressor \_\_\_\_\_ Air Relief \_\_\_\_\_  
Bypass Piping \_\_\_\_\_ Access Manhole \_\_\_\_\_  
Controls & Water Levels \_\_\_\_\_ Pressure Gauge \_\_\_\_\_



Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks DePeap

Well No. 3

Chemical Addition

Chemical Chlorine

Concentration GAS

Feeder Type Advance

Capacity 10 lbs/day

Feeder Setting 4.0

Feeder Control Well pump

Strokes/Min/         

Point of Application after shut off valve

Anti Siphon Device yes

Solution Lines plastic

Residual Tester Type Hach

Means for Determining Usage scale

Solution Tank: Type         

Size         

Cover         

Water Pump: Capacity         

System Pressure 58 psig

Chemical Dilution         

Calculations:

Chlorine Room

Door Open Out yes Window None

Switch Locations Inside

Fresh Air Intake Location Top of Door

Chlorinator Vent outside

Exhaust Fan: Capacity Unknown

Intake Location floor

Gas Mask Type MSA

Cylinders Secured Chained

Other Treatment         

Treatment Codes

Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks DePece

Well No. 3

**Chemical Addition**

Chemical Sodium Hexametaphosphate Concentration dry

Feeder Type precision Capacity 0-60 gallons/day

Feeder Setting 75 Feeder Control well pump Strokes/Min/ \_\_\_\_\_

Point of Application after shut off valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type \_\_\_\_\_ Means for Determining Usage measuring stick

Solution Tank: Type plastic Size 45 gallon Cover plastic-overlapping

Water Pump: Capacity \_\_\_\_\_ System Pressure 58 psig

Chemical Dilution 2 1/2 lbs Na Hexametaphosphate per 5 gallons of water

Calculations:

**Chlorine Room**

Door Open Out \_\_\_\_\_ Window \_\_\_\_\_ Switch Locations \_\_\_\_\_

Fresh Air Intake Location \_\_\_\_\_ Chlorinator Vent \_\_\_\_\_

Exhaust Fan: Capacity \_\_\_\_\_ Intake Location \_\_\_\_\_

Gas Mask Type \_\_\_\_\_ Cylinders Secured \_\_\_\_\_

Other Treatment \_\_\_\_\_

Treatment Codes \_\_\_\_\_

Works DePerre Reviewer Jim Schudgich

Well Number 4 Location Merrill Street

Date Constructed 1965 Total Depth 845 feet

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? yes Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available: unknown  
\_\_\_\_\_  
\_\_\_\_\_

Casing and screen Depth & Diameter:

Inner 20" to 259'-8" Grout Depth 259'-8"  
Outer 26" to 96'-3" Screen Length \_\_\_\_\_  
Open Drillhole Length 845 feet

Means for Measuring Water Level attitude gauge Airline Length 440

Static Water Level 223 Pumping Water Level 348 @ 790 gpc

Specific Capacity 6.3200 gpm/ft.

Pump Base Description concrete - 12" above floor Well Seal good

Well Vent yes U-Bend no Screen yes Height Above Floor 2'

Gravel Refill Pipes \_\_\_\_\_ Capped \_\_\_\_\_ Height Above Floor \_\_\_\_\_

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Waterworks De Pere  
Well No. 4

Reviewer Jim Schedgik  
Date March 8, 1988

Well Pump:

Make Layne Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 1000 GPM @ 320 Ft.Hd.  
Actual 790 GPM @ 128 Ft.Hd.  
Pump Setting 440 feet Lubrication Water Prelube Water  
Motor HP 15.0 Backspin Protection Time Delay  
Aux. Power International Harvester Fuel natural gas Freq. of Oper. 1 X Weekly

Comments:

Pump Station:

Description Brick & Concrete block Floor: Dist. Above Ground 6"  
Door Open Out yes Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 4' Discharge To Sanitary sewer  
Flooding None Dist. to San. Sewer 30 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend No Screen yes Hgt. Above Floor 5 feet  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent yes

High Lift Pump(s): 2

Make Layne Type Vertical Turbine Discharges To distribution system  
Capacity: Design 1000 GPM @ 121 Ft.Hd.  
Actual 880 GPM @ 128 Ft.Hd.

Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks DePere

Well No. 4

Chemical Addition

Chemical Chlorine

Concentration gas

Feeder Type advance

Capacity 10 lbs/day

Feeder Setting 4.5

Feeder Control well pump Strokes/Min/

Point of Application directly into Reservoir

Anti Siphon Device yes

Solution Lines plastic

Residual Tester Type Hach

Means for Determining Usage scale

Solution Tank: Type --- Size ---

Cover ---

Water Pump: Capacity ---

System Pressure 65 psig

Chemical Dilution ---

Calculations:

Chlorine Room

Door Open Out yes Window Indoor Switch Locations Inside

Fresh Air Intake Location ceiling Chlorinator Vent outside

Exhaust Fan: Capacity --- Intake Location floor

Gas Mask Type yes MSA Cylinders Secured Chained

Other Treatment ---

Treatment Codes ---

Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks De Pere

Well No. 4

Chemical Addition

Chemical Sodium Hexametaphosphate

Concentration dry

Feeder Type Precision

Capacity 0-60 gallons/day

Feeder Setting 30

Feeder Control well pump

Strokes/Min/ 30

Point of Application after check valve

Anti Siphon Device yes

Solution Lines plastic

Residual Tester Type \_\_\_\_\_

Means for Determining Usage measuring stick

Solution Tank: Type plastic Size 45 gallon

Cover plastic - overlapping

Water Pump: Capacity \_\_\_\_\_

System Pressure 65 psi

Chemical Dilution 2 1/2 lbs of Na Hexametaphosphate per 5 gallons of water

Calculations:

Chlorine Room

Door Open Out \_\_\_\_\_ Window \_\_\_\_\_ Switch Locations \_\_\_\_\_

Fresh Air Intake Location \_\_\_\_\_ Chlorinator Vent \_\_\_\_\_

Exhaust Fan: Capacity \_\_\_\_\_ Intake Location \_\_\_\_\_

Gas Mask Type \_\_\_\_\_ Cylinders Secured \_\_\_\_\_

Other Treatment \_\_\_\_\_

Treatment Codes \_\_\_\_\_

Works De Pere Reviewer Jim Schudgich

Date March 8, 1988

Well Number 5 Location ENTERPRISE DRIVE

Date Constructed 1970 Total Depth 875 feet

Aquifer Type: Sandstone  Limestone \_\_\_\_\_  
Glacial Drift \_\_\_\_\_ Other \_\_\_\_\_

Is a SGS well log available? yes Well Const. Report \_\_\_\_\_

Geologic Data if known and if no log is available: unknown  
\_\_\_\_\_  
\_\_\_\_\_

Casing and screen Depth & Diameter:

Inner 20" to 265' Grout Depth 265'  
Outer 24" to 105' Screen Length \_\_\_\_\_  
Open Drillhole Length 875

Means for Measuring Water Level altitude gauge Airline Length 400 feet

Static Water Level 181 Pumping Water Level 334 @ 260 gpd

Specific Capacity 4.9673 gpm/ft.

Pump Base Description 8" concrete Well Seal good

Well Vent yes U-Bend yes Screen yes Height Above Floor 18"

Gravel Refill Pipes — Capped — Height Above Floor —

Chemical Quality good

P&A Data \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Waterworks De Pere  
Well No. 5

Reviewer Jim Schedyrik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 1200 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 760 GPM @ 128 Ft.Hd.  
Pump Setting 400 feet Lubrication water Prelube water  
Motor HP 150 Backspin Protection Time delay  
Aux. Power Intermittent Fuel natural gas Freq. of Oper. 1 X Weekly  
Harvester

Comments:

Pump Station:

Description Brick and Concrete Block Floor: Dist. Above Ground 6"  
Door Open Out yes Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 6 feet Discharge To sanitary sewer  
Flooding None Dist. to San. Sewer 100 feet

Comments:

Piping and Valves:

Air Relief None U-Bend \_\_\_\_\_ Screen \_\_\_\_\_ Hgt. Above Floor \_\_\_\_\_  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement METEK Well Vent yes - screened  
MEASURES - static, pumping levels and water temperature

High Lift Pump(s): 2

Make LAYNE Type Vertical turbine Discharges To distribution system  
Capacity: Design 800 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 700 GPM @ 128 Ft.Hd.



Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks De Pere

Well No. 5

**Chemical Addition**

Chemical Sodium Hexametaphosphate Concentration dry

Feeder Type Precision Capacity 0-60 gallons/day

Feeder Setting 90 Feeder Control well pump Strokes/Min/ 80

Point of Application after shut off valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type \_\_\_\_\_ Means for Determining Usage measuring stick

Solution Tank: Type Plastic Size 45 gallon Cover plastic overlapping

Water Pump: Capacity \_\_\_\_\_ System Pressure 65 psig

Chemical Dilution 2 1/2 lbs of Na Hexametaphosphate per 5 gallons of water

Calculations:

**Chlorine Room**

Door Open Out \_\_\_\_\_ Window \_\_\_\_\_ Switch Locations \_\_\_\_\_

Fresh Air Intake Location \_\_\_\_\_ Chlorinator Vent \_\_\_\_\_

Exhaust Fan: Capacity \_\_\_\_\_ Intake Location \_\_\_\_\_

Gas Mask Type \_\_\_\_\_ Cylinders Secured \_\_\_\_\_

Other Treatment \_\_\_\_\_

Treatment Codes \_\_\_\_\_

Reviewer Jim Schedgich  
Date March 8, 1988

ID 405045300

Waterworks De Pere

Well No. 5

Chemical Addition

Chemical Chlorine Concentration gas

Feeder Type Advance Capacity 10 lbs/day

Feeder Setting 4.5 Feeder Control well pump Strokes/Min/

Point of Application after the shut off valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type hack Means for Determining Usage scale

Solution Tank: Type \_\_\_\_\_ Size \_\_\_\_\_ Cover \_\_\_\_\_

Water Pump: Capacity \_\_\_\_\_ System Pressure 65 psig

Chemical Dilution \_\_\_\_\_

Calculations:

Chlorine Room

Door Open Out yes Window yes (well) Switch Locations outside

Fresh Air Intake Location ceiling Chlorinator Vent outside

Exhaust Fan: Capacity unknown Intake Location floor

Gas Mask Type MSA Cylinders Secured chain

Other Treatment \_\_\_\_\_

Treatment Codes \_\_\_\_\_

Reviewer Jim Schedgick  
Date March 8, 1988

Waterworks DePere

Ground Storage Reservoir:

Date Constructed 1970 Location Well #5, Enterprise Drive Construction Concrete  
Capacity 250,000 gallons Dimensions — Condition good  
Vent Description 3 - 8" pipes (screened) Overflow Description screened  
Access Manhole yes Locking and Overlapping Cover yes  
Intake and Discharge Discharge - yes  
Lines Under Pressure Intake - NO Top: Dist. Above Ground ground level  
Drain pump - sump in Reservoir Distance to Sanitary Sewer 100 feet  
Inside Inspection once every 2 or 3 years

Elevated Storage Reservoir:

Date Constructed \_\_\_\_\_ Type \_\_\_\_\_ Location \_\_\_\_\_  
Capacity \_\_\_\_\_ Height to Overflow \_\_\_\_\_ High Water Level \_\_\_\_\_  
Other Tank(s) High Water Level \_\_\_\_\_ System Pressure \_\_\_\_\_  
Overflow Description \_\_\_\_\_ Splash Pad \_\_\_\_\_  
Safety Cage and Ladder \_\_\_\_\_ Locking Gate \_\_\_\_\_  
Vent Description \_\_\_\_\_ Access Manholes \_\_\_\_\_  
Means for Drainage \_\_\_\_\_ Silt Stop \_\_\_\_\_  
Riser: Diameter \_\_\_\_\_ Insulated \_\_\_\_\_ Sampling and Disinfection Taps \_\_\_\_\_  
Paint Description \_\_\_\_\_ Inside Inspection \_\_\_\_\_  
Safety Bars (Riser >8 inches) \_\_\_\_\_

Hydro-Pneumatic Tank:

Date Constructed \_\_\_\_\_ Capacity \_\_\_\_\_ Location \_\_\_\_\_  
Drain \_\_\_\_\_ Sight Glass \_\_\_\_\_ Well Pump Capacity \_\_\_\_\_  
Air Compressor \_\_\_\_\_ Air Relief \_\_\_\_\_  
Bypass Piping \_\_\_\_\_ Access Manhole \_\_\_\_\_  
Controls & Water Levels \_\_\_\_\_ Pressure Gauge \_\_\_\_\_

Works DePere Reviewer Jim Schudzik

Date March 8, 1988

Well Number 6 Location Scheuring Road

Date Constructed Nov. 1979 Total Depth 787 feet

Aquifer Type: Sandstone  Limestone   
Glacial Drift  Other

Is a SGS well log available? yes Well Const. Report yes

Geologic Data if known and if no log is available: yes  
DRIFT 0 to 88' Sandstone 178' to 787'  
Dolomite 88' to 178'

Casing and screen Depth & Diameter:  
Inner 20" to 187'; 16" 250' to 500' Grout Depth 0' to 184'  
Outer 24" to 98' Screen Length 250' to 500'  
Open Drillhole Length 787 feet

Means for Measuring Water Level altitude gauge Airline Length 350 feet

Static Water Level 13.5 feet Pumping Water Level 208 @ 760 gpm

Specific Capacity 10.4110 gpm/ft.

Pump Base Description Concrete 24" Well Seal none

Well Vent yes U-Bend yes Screen yes Height Above Floor 3'

Gravel Refill Pipes — Capped — Height Above Floor —

Chemical Quality good

P&A Data —

Comments: —

—

Waterworks DePere  
Well No. 6

Reviewer Jim Schodgik  
Date March 8, 1988

Well Pump:

Make LAYNE Type Vertical Turbine Discharges To Reservoir  
Capacity: Design 700 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 760 GPM @ 148' Ft.Hd.  
Pump Setting 350 Lubrication Water Prelube Water  
Motor HP 100 Backspin Protection ratchet  
Aux. Power \_\_\_\_\_ Fuel \_\_\_\_\_ Freq. of Oper. \_\_\_\_\_

Comments:

Pump Station:

Description Brick + Concrete Block Floor: Dist. Above Ground 6"  
Door Open Out On Roof Hatch yes Heater yes  
Floor Drain yes Dist. From Well 7 feet Discharge To Sanitary Sewer  
Flooding None Dist. to San. Sewer 150 feet

Comments:

Piping and Valves:

Air Relief yes U-Bend yes Screen yes Hgt. Above Floor 2'  
Check Valve yes Meter yes Shutoff Valve yes  
Sampling Tap yes Pressure Gauge yes  
Water Level Measurement altitude gauge Well Vent yes

High Lift Pump(s): 2

Make Allis Chalmers Type Centrifugal Discharges To distribution system  
Capacity: Design 600 GPM @ \_\_\_\_\_ Ft.Hd.  
Actual 590 GPM @ 148 Ft.Hd.

Reviewer Jim Schedgich  
 Date March 8, 1988

Waterworks De Pere

**Ground Storage Reservoir:**

Date Constructed 1966 Location Well #4, Merrill Street Construction Concrete  
 Capacity 250,000 gallons Dimensions \_\_\_\_\_ Condition good  
 Vent Description 3-8" screened pipe Overflow Description Screened pipe  
 Access Manhole yes Locking and Overlapping Cover yes  
 Intake and Discharge DISCHARGE - yes  
 Lines Under Pressure Intake - No Top: Dist. Above Ground Ground Level  
 Drain pump - sump in reservoir Distance to Sanitary Sewer 30 feet  
 Inside Inspection every two years

**Elevated Storage Reservoir:**

Date Constructed 1960 Type Steel legged Location Merrill Street - Well #4  
 Capacity 250,000 gallons Height to Overflow 128' High Water Level 128'  
 Other Tank(s) High Water Level \_\_\_\_\_ System Pressure 65 psig  
 Overflow Description 4" pipe (screened) Splash Pad over flow discharges to storm sewer  
 Safety Cage and Ladder yes Locking Gate No  
 Vent Description 6" screened pipe Access Manholes yes  
 Means for Drainage HYDRANT Silt Stop yes  
 Riser: Diameter 4' Insulated No Sampling and Disinfection Taps None  
 Paint Description Epoxy Inside Inspection Once every 3 years  
 Safety Bars (Riser > 8 inches) yes

**Hydro-Pneumatic Tank:**

Date Constructed \_\_\_\_\_ Capacity \_\_\_\_\_ Location \_\_\_\_\_  
 Drain \_\_\_\_\_ Sight Glass \_\_\_\_\_ Well Pump Capacity \_\_\_\_\_  
 Air Compressor \_\_\_\_\_ Air Relief \_\_\_\_\_  
 Bypass Piping \_\_\_\_\_ Access Manhole \_\_\_\_\_  
 Controls & Water Levels \_\_\_\_\_ Pressure Gauge \_\_\_\_\_

Reviewer Jim Schodgick  
Date March 8, 1988

ID 405045300

Waterworks De Pere

Well No. 6

**Chemical Addition**

Chemical Sodium Hexametaphosphate Concentration dry

Feeder Type Wallace + Tieman Capacity 44 gallons/day

Feeder Setting 90 Feeder Control well pump Strokes/Min/ 68

Point of Application after shut off valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type — Means for Determining Usage measuring stick

Solution Tank: Type Plastic Size 100 gallons Cover plastic - overlapping

Water Pump: Capacity — System Pressure 58 psig

Chemical Dilution 1/2 lbs of Na Hexametaphosphate per 5 gallon of water

Calculations:

**Chlorine Room**

Door Open Out \_\_\_\_\_ Window \_\_\_\_\_ Switch Locations \_\_\_\_\_

Fresh Air Intake Location \_\_\_\_\_ Chlorinator Vent \_\_\_\_\_

Exhaust Fan: Capacity \_\_\_\_\_ Intake Location \_\_\_\_\_

Gas Mask Type \_\_\_\_\_ Cylinders Secured \_\_\_\_\_

Other Treatment \_\_\_\_\_

Treatment Codes \_\_\_\_\_

Reviewer Jim Schedgick  
Date March 8, 1988

ID 405045300

Waterworks De Pere

Well No. 6

Chemical Addition

Chemical Chlorine Concentration gas

Feeder Type Advance Capacity 10 lbs / day

Feeder Setting 3 Feeder Control well pump Strokes/Min/     

Point of Application after shut off valve

Anti Siphon Device yes Solution Lines plastic

Residual Tester Type Hach Means for Determining Usage Scale

Solution Tank: Type      Size      Cover     

Water Pump: Capacity      System Pressure 58 psig

Chemical Dilution     

Calculations:

Chlorine Room

Door Open Out yes Window yes Switch Locations outside

Fresh Air Intake Location ceiling Chlorinator Vent outside

Exhaust Fan: Capacity unknown Intake Location floor

Gas Mask Type MSA Cylinders Secured Chained

Other Treatment     

Treatment Codes



Reviewer Jim Schedgich  
 Date March 8, 1988

Waterworks De Pere

**Ground Storage Reservoir:**

Date Constructed 1982 Location Well #6 Construction concrete  
 Capacity 250,000 gallons Dimensions \_\_\_\_\_ Condition good  
 Vent Description 3" screened pipe Overflow Description screened 10" pipe  
 Access Manhole yes Locking and Overlapping Cover yes  
 Intake and Discharge Lines Under Pressure both - yes Top: Dist. Above Ground 16 feet  
 Drain fillup reservoir Distance to Sanitary Sewer 150 feet  
 Inside Inspection once every 2 or 3 years

**Elevated Storage Reservoir:**

Date Constructed 1986 Type Pedestal-Spheroid Location Matthew Drive  
 Capacity 500,000 Height to Overflow 134.5 feet High Water Level 134.5 feet  
 Other Tank(s) High Water Level \_\_\_\_\_ System Pressure 58 psig  
 Overflow Description 3" screened pipe Splash Pad storm sewer discharge (2 1/2 pipe diameter above street sewer.)  
 Safety Cage and Ladder yes Locking Gate yes  
 Vent Description screened pipe at top Access Manholes yes  
 Means for Drainage Hydrant Silt Stop yes  
 Riser: Diameter 16" Insulated yes Sampling and Disinfection Taps yes  
 Paint Description epoxy Inside Inspection once every 3 years  
 Safety Bars (Riser > 8 inches) yes

**Hydro-Pneumatic Tank:**

Date Constructed \_\_\_\_\_ Capacity \_\_\_\_\_ Location \_\_\_\_\_  
 Drain \_\_\_\_\_ Sight Glass \_\_\_\_\_ Well Pump Capacity \_\_\_\_\_  
 Air Compressor \_\_\_\_\_ Air Relief \_\_\_\_\_  
 Bypass Piping \_\_\_\_\_ Access Manhole \_\_\_\_\_  
 Controls & Water Levels \_\_\_\_\_ Pressure Gauge \_\_\_\_\_

Waterworks De Pere

Reviewer Jim Schlegel

Date March 8, 1988

Cross Connections: Control Program? yes

Water Supply to STP yes - water supply protected with Reverse pressure back flow preventers.

Connections between water mains and sanitary sewers none

Private wells 3

Bacteriological Quality: Samples required per month 17

<u>Year(s)</u>	<u>Safe</u>	<u>Unsafe</u>	<u>Total</u>	<u>% Unsafe</u>
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Monthly Operating Reports:

Chemical Quality:

Langelier Index \_\_\_\_\_ Aggressive Index (AC pipe) \_\_\_\_\_

Standards and Quality \_\_\_\_\_

Consumer Complaints: None

Distribution System: Current system map available? yes

Fire Flows 1500 gpm Static Pressure Range 50 psig

<u>Materials</u>	<u>Water Main size and length</u>	<u>Number of Services</u>	<u>% Plumbing Systems</u>
Ductile Iron	6"-6', 12"-326', 16"-1,447'		
Cast Iron	12"-49,985', 10"-37728', 8"-83081', 6"-183,514', 4"-16,643'	30	.6%
<del>Cast Iron</del>	2"-1,455'		
Asbestos-Cement	6"-4,596'		
PVC	1 1/2"-180', 8"-89,666', 10"-50,544', 12"-69,181', 6"-18,229'	1	.02%
Concrete			
Copper	3/4"-41', 1"-619'	5003	99.38%
Lead			
Other Galvanized	1 1/2"-2" → 3791', 3/4"-1" → 8906'		

Check if present

<input type="checkbox"/> copper alloys	<input checked="" type="checkbox"/> lead solder	<input type="checkbox"/> vinyl pipe lining
<input type="checkbox"/> lead alloys	<input checked="" type="checkbox"/> lead caulking	<input type="checkbox"/> coal tar lining
	<input type="checkbox"/> lead pipe lining	<input checked="" type="checkbox"/> neoprene gaskets

MUNICIPAL STORMWATER DRAINAGE WELL  
INVENTORY QUESTIONNAIRE

Municipality DePere Date March 8, 1988  
Person Interviewed Allen Baeten Telephone No. 414-336-2164

If the municipality representative assisting in the annual inspection is not knowledgeable about the municipality's stormwater drainage system, please fill in the name and telephone number of a person who is knowledgeable in the appropriate spaces above. Do not complete any of the questionnaire below. Bureau of Water Supply staff will contact the person suggested.

Circle the letter of the appropriate responses; otherwise, use short answers.

1. Does the municipality use storm sewers?  Yes \_\_\_ No

If yes, is some or all of the storm sewer pipe perforated to allow infiltration of stormwater into the surrounding soil? \_\_\_ Yes  No

2. What type(s) of stormwater disposal are currently used?

- a. Flow into a surface water body (river/creek, lake/pond, wetland)
- b. Detention/infiltration basin
- c. Improved sinkholes
- d. Stormwater drainage wells

If the municipality does not use stormwater drainage wells, do not continue. If this type of well is used, please answer the following questions.

3. How many stormwater drainage wells exist in the municipality? \_\_\_\_\_

4. In what areas of the municipality are these wells located (for example, entire area, south half, northeast quarter, etc.)? \_\_\_\_\_

5. What types of land use are served by the existing stormwater drainage wells?

- a. Residential                      b. Commercial                      c. Industrial

6. What is/are the primary reason(s) for using stormwater drainage well?  
(Example responses: no storm sewer, undersized storm sewer, cost of new storm sewer, topography/soils favorable to drainage well use, no other disposal methods available, etc.)

\_\_\_\_\_

\_\_\_\_\_

7. What is the typical design used in the construction of the stormwater drainage wells? (Describe, sketch, or obtain a detail of the typical design.)

\_\_\_\_\_

\_\_\_\_\_

CLIENT/SUBJECT \_\_\_\_\_ W.O. NO. \_\_\_\_\_

TASK DESCRIPTION \_\_\_\_\_ TASK NO. \_\_\_\_\_

PREPARED BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

MATH CHECK BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

METHOD REV. BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY	
DEPT _____	DATE _____

8 Feb. 88

Jim,

Enclosed is the analysis for metals + cyanide of the water sample taken from the Grant Street municipal well in De Pere, Wisconsin on 1/13/88. Also included is the analytical results of a blank we took at the same time from distilled water purchased from a nearby grocery. Its difficult to tell the difference.

Thanks very much for your assistance in our site assessment and water sampling. Please feel free to contact my self or Eileen Helmer if you have any questions.

Sincerely,

Billy Helmer



# ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION

140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

02/01/88

LABORATORY REPORT

PAGE 1

R341 8420260 B42

ROY F. WESTON INC. - SPER DIV.  
111 N. CANAL ST. STE 855  
CHICAGO ,IL 60606  
ATTN: SALLY MATZ

SAMPLE 88013-R06280 BETTER BRITE ZINC SHOP DRINKING WATER #1  
DATE COLLECTED 01/13/88 DATE RECEIVED 01/13/88

(Grant St.)  
Well

TEST NAME	RESULT	UNITS
ANTIMONY - TOTAL	<1.0	PPB
BERYLLIUM - TOTAL	<5.0	PPB
THALLIUM - TOTAL	<3.0	PPB
HEXAVALENT CHROMIUM - TOTA	<10	PPB
NICKEL - TOTAL	50	PPB
ZINC - TOTAL	60	PPB
ARSENIC - TOTAL	3.0	PPB
SELENIUM - TOTAL	8.0	PPB
MERCURY - TOTAL	<0.2	PPB
TOTAL CYANIDE	<5	PPB
CADMIUM - TOTAL	6.1	PPB
LEAD - TOTAL	3.3	PPB
SILVER - TOTAL	1.5	PPB
CHROMIUM - TOTAL	<1.0	PPB
COPPER - TOTAL	3.2	PPB

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.  
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.  
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-0486  
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 8 WEEKS FROM THE RECEIVING DATE OF THIS REPORT. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.

! = REPRINT  
FAX #414-764-0486

N/T = NOT TESTED

N/A = NOT APPLICABLE

APPROVAL

WI DNR LAB CERTIFICATION #241283020

(800) 592-5900 DT332



# ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION  
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

RECEIVED

FEB 4 1988

02/01/88

LABORATORY REPORT

JAI REG V *MS*

PAGE 1

R341 8420260 B42

ROY F. WESTON INC. - SPER DIV.  
111 N. CANAL ST. STE 855  
CHICAGO, IL 60606  
ATTN: SALLY MATZ

SAMPLE 88013-R06281 BETTER BRITE ZINC SHOP DRINKING WATER #2  
DATE COLLECTED 01/13/88 DATE RECEIVED 01/13/88

*(Acid Blank)*

TEST NAME	RESULT	UNITS
ANTIMONY - TOTAL	<1.0	PPB
BERYLLIUM - TOTAL	<5.0	PPB
THALLIUM - TOTAL	<3.0	PPB
CADMIUM - TOTAL	2.4	PPB
LEAD - TOTAL	4.1	PPB
SILVER - TOTAL	1.1	PPB
CHROMIUM - TOTAL	<1.0	PPB
COPPER - TOTAL	5.1	PPB
HEXAVALENT CHROMIUM - TOTA	<10	PPB
NICKEL - TOTAL	30	PPB
ZINC - TOTAL	90	PPB
ARSENIC - TOTAL	3.0	PPB
SELENIUM - TOTAL	9.0	PPB
MERCURY - TOTAL	<0.2	PPB
TOTAL CYANIDE	<5	PPB

! : ! : ! : ! : ! : ! : ! : ! : !

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.  
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.  
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! = REPRINT      N/T = NOT TESTED      N/A = NOT APPLICABLE      APPROVAL *[Signature]*  
FAX #414-764-0486      WI DNR LAB CERTIFICATION #241283020      (800) 392-3900 DT332

FACILITY I.D. NUMBER 405045300 WATER SYSTEM NAME CITY OF DEPERE  
 COUNTY BROWN COUNTY CODE 05 P.O. OR MUNICIPALITY DEPERE  
 COLLECTION DATE 01, 21, 87 TIME 10:00 FIELD NO. GRANT  
 M M D D Y Y (24 HR. CLOCK) H H M M  
 SAMPLE SOURCE ADDRESS GRANT STREET WELL (OR) WELL NO. \_\_\_\_\_  
 SAMPLING POINT DESCRIPTION SAMPLE TAP

SEND REPORT TO:

NAME	<u>DNR</u>
ADDRESS	<u>LMD</u>
CITY, STATE, ZIP CODE	

COLLECTED BY ERDMANN

ACCOUNT NUMBER

WS011  
FOR LAB USE ONLY

WATER SYSTEM TYPE (✓ ONE)

- IF SURFACE SOURCE (✓ HERE) . . . . .
- COMMUNITY - MUNICIPAL  
  COMMUNITY - OTHER THAN MUNICIPAL  
  NON-COMMUNITY  
  PRIVATE

SAMPLE TYPE (✓ ONE)

SOWA:

- REGULAR DISTRIBUTION SAMPLE  
  CHECK SAMPLE  
 DATE INITIAL SAMPLE COLLECTED \_\_\_\_\_  
 M M D D Y Y

SPECIAL PURPOSE:

- NEW WELL SAMPLE  
 INVESTIGATIONS & COMPLAINTS

MAXIMUM CONTAMINANT LEVELS ARE INDICATED IN BRACKETS [ ]  
ALL MCL'S ARE HEALTH LIMITS EXCEPT THOSE INDICATED BY [\*] WHICH ARE AESTHETIC LIMITS.

- 131 TEMPERATURE (°C) FIELD \_\_\_\_\_
- 096 pH - FIELD \_\_\_\_\_
- 002 ALKALINITY, TOTAL (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l
- 022 ARSENIC (As) [50.] \_\_\_\_\_ µg/l
- 023 BARIUM (Ba) [1000.] \_\_\_\_\_ µg/l
- 031 CADMIUM (Cd) [10.] \_\_\_\_\_ µg/l
- 032 CALCIUM (Ca) \_\_\_\_\_ mg/l
- 035 CHLORIDE (Cl) [250.\*] \_\_\_\_\_ mg/l
- 040 CHROMIUM, TOTAL (Cr) [50.] \_\_\_\_\_ < 3 µg/l ✓
- 043 COLOR [15°] \_\_\_\_\_ cu
- 044 COPPER (Cu) [1000.\*] \_\_\_\_\_ µg/l
- 065 FLUORIDE (F) [2.2] \_\_\_\_\_ mg/l
- 139 FOAMING AGENTS (MBAS) [0.5\*] \_\_\_\_\_ mg/l
- 068 HARDNESS, TOTAL (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l
- 073 IRON (Fe) [0.3\*] \_\_\_\_\_ mg/l
- 074 LEAD (Pb) [50.] \_\_\_\_\_ µg/l
- 076 MAGNESIUM (Mg) \_\_\_\_\_ mg/l
- 079 MANGANESE (Mn) [50.\*] \_\_\_\_\_ µg/l
- 080 MERCURY (Hg) [2.] \_\_\_\_\_ µg/l
- 085 NO<sub>3</sub> + NO<sub>2</sub> (as N) [10.] \_\_\_\_\_ mg/l

- 097 pH - LAB \_\_\_\_\_
- 110 SELENIUM (Se) [10.] \_\_\_\_\_ µg/l
- 112 SILVER (Ag) [50.] \_\_\_\_\_ µg/l
- 113 SODIUM (Na) \_\_\_\_\_ mg/l
- 116 SULFATE (SO<sub>4</sub>) [250\*] \_\_\_\_\_ mg/l
- 138 TOTAL RESIDUE \_\_\_\_\_ mg/l
- 119 TURBIDITY [1.] \_\_\_\_\_ NTU
- 120 ZINC (Zn) [5000.\*] \_\_\_\_\_ < 20 µg/l ✓

OTHER (NOTIFICATION OF STATE LABORATORY REQUIRED PRIOR TO SAMPLE COLLECTION)

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

COMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DATE RECEIVED AND SAMPLE NO. \_\_\_\_\_

DATE REPORTED JAN 27 1987 C56326

AC: DIST: - QUALITY

FACILITY I.D. NUMBER 405045300

WATER SYSTEM NAME De Pere

COUNTY BROWN COUNTY CODE 05

P.O. OR MUNICIPALITY De Pere

COLLECTION DATE 10/02/86 TIME 4:30  
(24 HR. CLOCK) H H M M

FIELD NO. \_\_\_\_\_  
(OR) WELL NO. 002

SAMPLE SOURCE ADDRESS Givant St Well  
SAMPLING POINT DESCRIPTION Sample tap

SEND REPORT TO:

DEPARTMENT OF NATURAL RESOURCES  
LAKE MICHIGAN DISTRICT HEADQUARTERS  
P.O. BOX 10448  
GREEN BAY, WI 54307-0448

WATER SYSTEM TYPE (✓ ONE) IF SURFACE SOURCE (✓ HERE)

- M COMMUNITY - MUNICIPAL
- O COMMUNITY - OTHER THAN MUNICIPAL
- N NON-COMMUNITY
- P PRIVATE

RECEIVED DNR  
DEC - 2 1986

COLLECTED BY M. Gansberg

SAMPLE TYPE (✓ ONE)  
SDWA:  
 D REGULAR DISTRIBUTION SAMPLE  
 C CHECK SAMPLE  
DATE INITIAL SAMPLE COLLECTED \_\_\_\_\_  
M M D D Y Y

ACCOUNT NUMBER 070030  
FOR LAB USE ONLY

SPECIAL PURPOSE:  
 NEW WELL SAMPLE  
 INVESTIGATIONS & COMPLAINTS

MAXIMUM CONTAMINANT LEVELS ARE INDICATED IN BRACKETS [ ]  
ALL MCL'S ARE HEALTH LIMITS EXCEPT THOSE INDICATED BY [\*] WHICH ARE AESTHETIC LIMITS.

- 131 TEMPERATURE (°C) FIELD \_\_\_\_\_
- 096 pH - FIELD \_\_\_\_\_
- 002 ALKALINITY, TOTAL (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l
- 022 ARSENIC (As) [50.] \_\_\_\_\_ µg/l
- 023 BARIUM (Ba) [1000.] \_\_\_\_\_ µg/l
- 031 CADMIUM (Cd) [10.] \_\_\_\_\_ < 0.2 µg/l ✓
- 032 CALCIUM (Ca) \_\_\_\_\_ mg/l
- 035 CHLORIDE (Cl) [250.\*] \_\_\_\_\_ mg/l
- 040 CHROMIUM, TOTAL (Cr) [50.] \_\_\_\_\_ < 3 µg/l ✓
- 043 COLOR [15\*] \_\_\_\_\_ cu
- 044 COPPER (Cu) [1000.\*] \_\_\_\_\_ µg/l
- 065 FLUORIDE (F) [2.2] \_\_\_\_\_ mg/l
- 139 FOAMING AGENTS (MBAS) [0.5\*] \_\_\_\_\_ mg/l
- 068 HARDNESS, TOTAL (as CaCO<sub>3</sub>) \_\_\_\_\_ mg/l
- 073 IRON (Fe) [0.3\*] \_\_\_\_\_ mg/l
- 074 LEAD (Pb) [50.] \_\_\_\_\_ < 3 µg/l ✓
- 076 MAGNESIUM (Mg) \_\_\_\_\_ mg/l
- 079 MANGANESE (Mn) [50.\*] \_\_\_\_\_ µg/l
- 080 MERCURY (Hg) [2.] \_\_\_\_\_ µg/l
- 085 NO<sub>3</sub> + NO<sub>2</sub> (as N) [10.] \_\_\_\_\_ mg/l

- 087 pH - LAB \_\_\_\_\_
- 110 SELENIUM (Se) [10.] \_\_\_\_\_ µg/l
- 112 SILVER (Ag) [50.] \_\_\_\_\_ µg/l
- 113 SODIUM (Na) \_\_\_\_\_ mg/l
- 116 SULFATE (SO<sub>4</sub>) [250\*] \_\_\_\_\_ mg/l
- 138 TOTAL RESIDUE \_\_\_\_\_ mg/l
- 119 TURBIDITY [1.] \_\_\_\_\_ NTU
- 120 ZINC (Zn) [5000.\*] \_\_\_\_\_ < 20 µg/l ✓

OTHER (NOTIFICATION OF STATE LABORATORY REQUIRED PRIOR TO SAMPLE COLLECTION)  
 082 Nickel \_\_\_\_\_ < 20 µg/l ✓  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

COMMENTS:  
Plz. flush  
collected 10/2/86  
ETS

DATE RECEIVED AND SAMPLE NO. : \_\_\_\_\_

DATE REPORTED Oct 4 1986 031287

R. H. LAESSIG, PHD, DIRECTOR  
WISCONSIN STATE LABORATORY OF WATER RESOURCES  
MADISON, WISCONSIN 53706

CC. DIST. - OWNER

NOV 24 1986



Facility I.D. Number 405045300

County Code 05 County Brown

Collection Date 08/27/84  
M M D D Y Y

Time (24 Hr. Clock) 13:07 Field No. DP2  
H H M M

Water System Name De Pere Water Dept.  
 P.O. or Municipality De Pere  
 Sample Source Address Grant Street  
 (or) Well No. 2  
 Sampling Point Description Raw water sample tap

Send Report To:

**DEPARTMENT OF NATURAL RESOURCES**  
**GREEN BAY AREA OFFICE**  
**200 NORTH JEFFERSON STREET**  
**SUITE 511**  
**GREEN BAY, WI 54301-5199**

Collected By Gary Kincaid  
 Account Number 070070  
For Lab Use Only

Water System Type (check  one)  
 M Community - Municipal  
 O Community - Other Than Municipal  
 N Non-Community  
 P Private  X Non-Potable Well  
 Sample Type (check  one)  
 D Distribution Sample  
 W Raw Water  
 Analysis Type (check  one)  
 GC/MS Screening  
 Confirmation of GC/MS Screening Sample Number (fill in) \_\_\_\_\_  
 Other (Follow Up, Misc.) \_\_\_\_\_

Detection Limits (ug/l) are indicated in brackets [ ]	Detected	Not Detected	(ug/l)
<input type="checkbox"/> 007 Acrolein[50]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 009 Acrylonitrile[20]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 025 Benzene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 046 Bromobenzene[4.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 051 Bromodichloromethane[1.5]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 053 Bromoform[5.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 055 Bromomethane[50]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 063 n-Butylacetate[0.5]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 071 Carbon Disulfide[5.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 073 Carbon Tetrachloride[1.5]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 083 Chlorobenzene[2.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 087 Chloroethane[20]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 093 2-Chloroethylvinyl Ether[4.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 095 Chloroform[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 108 o-Chlorotoluene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 110 p-Chlorotoluene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 147 Dibromochloromethane[2.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 148 1,2-Dibromo-3-Chloropropane	<input type="checkbox"/>	<input type="checkbox"/>	[not quantified]
<input type="checkbox"/> 153 o-Dichlorobenzene[2.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 155 m-Dichlorobenzene[2.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 157 p-Dichlorobenzene[2.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 165 1,1-Dichloroethane[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 167 1,2-Dichloroethane[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 169 1,1-Dichloroethylene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 171 1,2-Dichloroethylene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 174 Dichloriodomethane	<input type="checkbox"/>	<input type="checkbox"/>	[not quantified]
<input type="checkbox"/> 181 1,2-Dichloropropane[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____

	Detected	Not Detected	ug/l
<input type="checkbox"/> 183 cis-1,3-Dichloropropene[2.5]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 185 trans-1,3-Dichloropropene[2.5]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 233 Ethylbenzene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 427 Fluorotrichloromethane[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 298 Isopropylbenzene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 319 Methyl ethyl ketone (MEK)[12]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 393 Styrene[2.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 396 1,1,1,2-Tetrachloroethane[3.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 397 1,1,2,2-Tetrachloroethane[3.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 399 Tetrachloroethylene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 401 Tetrahydrofuran (THF)[200]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 411 Toluene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 421 1,1,1-Trichloroethane[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 423 1,1,2-Trichloroethane[1.5]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 425 Trichloroethylene[1.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 428 Trichlorotrifluoroethane[3.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> 434 Vinyl Chloride	<input type="checkbox"/>	<input type="checkbox"/>	[not quantified]
<input type="checkbox"/> 437 Xylenes[2.0]	<input type="checkbox"/>	<input type="checkbox"/>	_____

**CC: DIST. - OWNER**

Comments \_\_\_\_\_  
 Date Received and Sample No. 845 818 AUG 28 1984  
 Date Reported DPD SEP 4 1984



State of Wisconsin  
Green Bay Area Headquarters  
200 N. Jefferson  
Suite 511  
Green Bay, WI 54301

DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny  
Secretary

3310

October 3, 1984

Mr. Allen Baeten  
De Pere Water Dept.  
925 S. Sixth St.  
De Pere, WI 54115

Dear Mr. Baeten:

Enclosed is a copy of the analytical results of the special samples collected from the De Pere water system on August 27, 1984. These samples were collected by department personnel as part of a special sampling program for volatile organic chemical (VOC's) throughout the state. No VOC's were detected in the samples collected.

The waterworks is advised to retain this analysis record with other analyses which must be kept for a minimum of 10 years in accordance with Wisconsin Administrative Code, Chapter NR 109.82.

Your cooperation in this sampling program is appreciated.. If you have any questions concerning these results, feel free to contact me at 414-497-4361.

Sincerely,

*Gary W Kincaid*

→ Gary W Kincaid  
Area Engineer

GWK:km

Enclosure

cc: Public Water Supply Section via R. Barnum

*J.H.*  
10/5/84

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

1. County Brown { Town   
Village   
City  DE PERE  
Check one and give name

2. Location Grant Street Well - REPAIR OF 1960  
Name of street and number of premise or Section, Town and Range numbers

3. Owner  or Agent  City of De Pere  
Name of individual, partnership or firm

4. Mail Address De Pere, Wisconsin  
Complete address required

RECEIVED

5. From well to nearest: Building \_\_\_\_\_ ft; sewer \_\_\_\_\_ ft; drain \_\_\_\_\_ ft; septic tank \_\_\_\_\_ ft;  
dry well or filter bed \_\_\_\_\_ ft; abandoned well \_\_\_\_\_ ft. JAN 4 1961

6. Well is intended to supply water for: Municipality SANITARY

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
(See original log)					

10. FORMATIONS: ENGINEERING

Kind	From (ft.)	To (ft.)

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
10"	Steel	465	515

9. GROUT:

Kind	From (ft.)	To (ft.)
Neat cement, outside of 10" liner.	465	515

11. MISCELLANEOUS DATA:

Yield test: \_\_\_\_\_ Hrs. at \_\_\_\_\_ GPM.  
 Depth from surface to water-level: \_\_\_\_\_ ft.  
 Water-level when pumping: \_\_\_\_\_ ft.  
 Water sample was sent to the state laboratory at:  
 \_\_\_\_\_ on \_\_\_\_\_ 19\_\_\_\_  
 City

Construction of the well was completed on: \_\_\_\_\_ 19\_\_\_\_

The well is terminated \_\_\_\_\_ 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 D.E. Leicht  
 Registered Well Driller  
 Acting Field Manager

LAYNE-NORTHWEST COMPANY  
 6005 West Martin Drive, Milwaukee, Wis.  
 Complete Mail Address  
 TEL. 8 December 30, 1960

Rec'd \_\_\_\_\_ No. \_\_\_\_\_  
 Ans'd \_\_\_\_\_  
 Interpretation  
CC: DIST # 6  
FILE  
STATE GEOLOGICAL SURVEY

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.	_____	_____	_____	_____	_____
48 hrs.	_____	_____	_____	_____	_____
Confirm	_____	_____	_____	_____	_____
B. Coll	_____	_____	_____	_____	_____
Examiner	_____	_____	_____	_____	_____

GRANT STREET CITY WELL, WEST DE PERE, WIS.

Grant and 6th Sts. Sec. 28, T. 23 N., R. 20 E. DEPERE-WAITE  
 Foth and Porath, Engineers John Kersten and Son, Drillers, 1955  
 Samples examined by F. T. Thwaites and John Steuerwald, Nos.  
 185474-185 626

D G A L E S V I L L E		0-10	10		Clay, sandy, brown-red, dolomitic	18" pipe 24 17" hole 12" pipe cemented 120 water 173 180 16" liner 290 319 17" hole 16" liner 426 430 14" hole
		10-20	10		Till, pale red, dolomitic	
		20-55	35		Dolomite, gray mottled blue-gray	
		55-65	10		Dolomite, shaly, dark blue-gray, gray	
		65-100	35		Dolomite, blue-gray and gray	
		100-110	10		Dolomite, medium-gray, some blue-gray, pyritic	
		110-115	5		Dolomite, dark blue-gray	
		115-140	25		Dolomite, medium-gray, some blue-gray	
		140-160	20		Dolomite, light brown-gray mottled blue-gray	
		160-165	5		Dolomite, med. gy. sandstone fine to med. do	
165		165-170	5		Dolomite, med. gray mottled blue-gray, pyritic	
		170-185	15		Sandstone, very fine to fine, lt. gy, dol. sh.	
S T P E T E		185-300	115		Sandstone, very fine to fine, light gray	
		300-355	55		Sandstone, very fine to medium, light brown-gray, dolomitic	
		355-450	95		Shale, sandy, red; some quartzite, chert	
	270	450-455	5		Siltstone, sandy, red; chert, quartzite	
F R A N		455-460	5		Sandstone, fine to med, silty, red, dolomitic	
		460-480	20		Sandstone, fine to medium, red	
G A L E S V I L L E	50	480-505	25		Sandstone, fine to coarse, red, sl. col.	
		505-545	40		Sandstone, fine to coarse, pale red, dolomitic	
		545-610	65		Sandstone, fine to coarse, red, slightly dolomitic	
		610-670	60		Sandstone, very fine to medium, pale pink	
		670-700	30		Sandstone, very fine to medium, light brown-gray	
	700-745	45		Sandstone, very fine to fine, silty, pink-gray		

Notes  
 No. 0 CONS 712  
 TO BE ADDED

RECEIVED  
 MAY 31 1955  
 ENVIRONMENTAL  
 SANITATION

Grant St. well, De Pere, p. 2

745-765

20

Sanustone, very fine to fine, red-gray

Formations: Drift; Galena - Platteville; St. Peter; Franconia; Galesville (Dresbach)

Tested for one week at 850 g.p.m. specific capacity = 4.25 g.p.m./ft.

Additional copies may be secured from Wisconsin Geological Survey, Science Hall, Madison 6, Wis

*Wm. J. ...*

SITE NAME  
DePere Water Dept.  
#2

MAP SITE NUMBER  
Rd. pink - 14

LOCATION  
COUNTY  
Brown

TOWNSHIP  
NE 1/4 NW 1/4 SEC 28 T 23 N R 20 E

STREET ADDRESS  
Grant Street

SITE OWNER/MANAGER  
ADDRESS Allen Baeten, Superintendent  
DePere Water Dept.  
335 South Broadway  
DePere, WI 54115

MUNICIPALITY  
 CITY  VILLAGE  TOWN DePere

DNR PROGRAM  
Water Supply

DESCRIPTION OF HAZARDOUS SUBSTANCE/CONTAMINATION TYPE

COMMENTS: AMOUNT OF CONTAMINATION, DATE OF INCIDENT, CLEANUP ACTIONS TAKEN

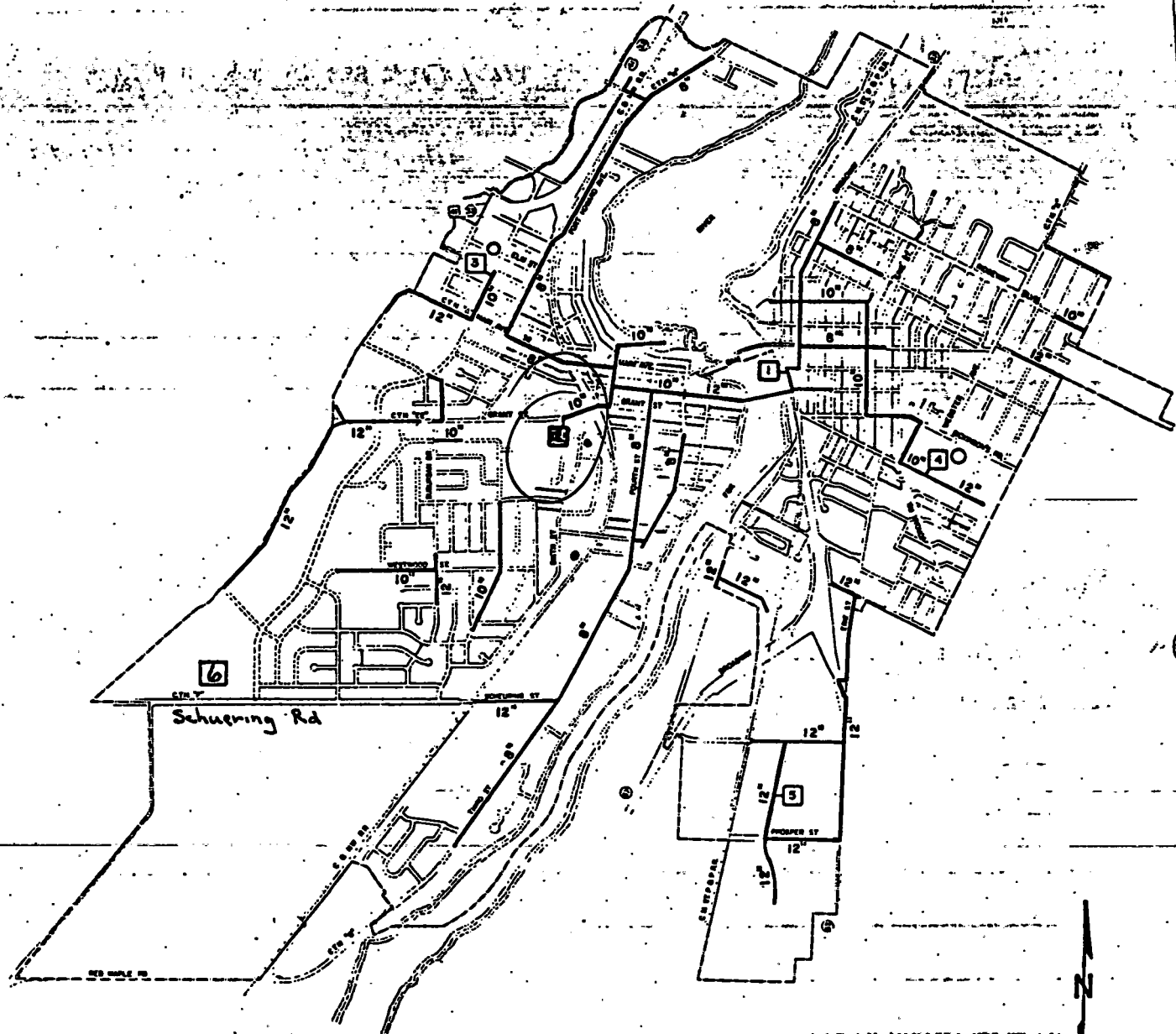
Depth - 785 ft.

Diameter - 18 in.

Casing Depth - 180 ft. 319 - 430 ft.

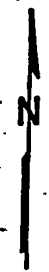
Aquifer - SS

1956



- LEGEND**
- 1 WELL LOCATION & NO.
  - O ELEVATED STORAGE TANK OR STANDPIPE
  - 12" WATERMAIN LOCATION & SIZE

DE PERE



Property Owner City of DePere  
 P. O. Address 926 S. 6th De Pere, WI 54115  
 Well Location Hwy 57 & George St. De Pere, WI  
Street and Number or Fractional Section, Town and Range

Type of Well X Drilled      Driven      Dug      Bored       
 Total Depth of Well 399 Feet Diameter 12 Inches Depth of Casing 102 Feet  
 Depth to Rock      Feet Depth to Water 170 Feet Limestone Formation P  
Yes or No  
 Material Overlying Rock      Clay      Sand or Gravel      X Mixed

Material and yardage used for fill or seal in rock section of well:

Formation*	Sealing Material Used	Cubic Yardage
<u>?</u>	<u>Concrete</u>	<u>12 total</u>
	<u>Note: 4" tremie pipe used to bottom of well</u>	<u>284 SACKS</u>
	<u>DNR Rep- K. Hutchinson</u>	<u>CALL - OK</u>
		<u>BGU</u>

*= 324 FT3  
= 294 SACKS*

\*In mixed formations, list formations (if known) and sealing material according to Section NR 112.21 as indicated on the back of this page.

Material and yardage used for sealing above rock:

Formation	Sealing Material Used	Cubic Yardage
<u>Sand or sand &amp; gravel</u>	<u>see above</u>	<u>see above</u>
<u>Clay</u>		
<u>Till</u>		

To permit adequate grouting, the casing should remain in place but ungrouted liner pipes or any other obstructions need to be removed.

Was casing left in place? yes

Were liners and other obstructions removed? none observed

Name of Person or Firm doing Sealing Work CTW Corporation

Signature of Person doing the Work [Signature] P.E.

Address P.O. Box 994, Waukesha, WI 53187



# MAIN ST. WELL-DEPERE, WIS.

Sec 21, T23, R. 20E.

W. G. Kirchoffer, Engineer

W. L. Thorne, Contractor 1925

Samples examined by F. T. Thwaites

Nos. 75752-75805

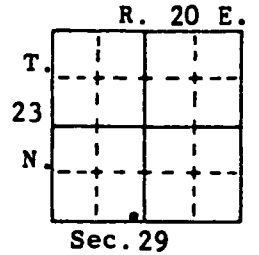
Elevation about 600

Stratum	Top	Bottom	Thickness	Description	Notes
DRIFT	0-37	37		Drift, no samples	
GALENA-PLATTEVILLE	37-180	143	143	Dolomite, no samples	10" pipe 42' 42' 8" pipe 10" hole 126 Shoo
	180-220	40	40	Sandstone, no samples	
ST. PETER	220-235	15	15	Sandstone, coarse to fine, gray, pyritic	
	235-365	130	130	Sandstone, medium to fine, white, some pink and calcareous layers	8" hole
	365-375	10	10	Sandstone, medium to fine, gray, calcareous	
	375-443	38	38	Most red, no sample, probably alternating coarse to medium pink sandstone and red shale	375'
	443-444	28	28	Sandstone, medium to fine, pink, some red shale and possibly dolomite pebbles	4'
	444-450	6	6	Shale, red, no sample	100
	450-470	20	20	Sandstone, medium to coarse, red; red shale; dolomite pebbles	475'
	470-500	30	30	Sandstone, fine to medium, pink, calcareous	
	500-520	20	20	Sandstone, medium to fine, gray and pink, later calcareous	
	520-540	20	20	Sandstone, medium to very coarse, gray and light pink	
FRANCONIA	540-620	80	80	Sandstone, medium, white	
	620-660	40	40	Sandstone, fine to medium, light gray, some pink	6" hole
	660-670	10	10	Sandstone, fine, light gray	
	670-781	111	111	Sandstone, fine to medium, light gray	
DRESBACH	161	111			

Well name De Pere City Well #6  
 Owner.... City of De Pere  
 Address.. 335 S. Broadway  
 De Pere, WI 54115  
 Driller.. Milaeger Well & Pump Co.  
 Engineer. Robert E. Lee & Associates, Inc.  
 Green Bay, Wisconsin

County: Brown

Completed... 11/1/79  
 Field check.  
 Altitude.... 627' ETM  
 Use..... Municipal  
 Static w.l.. 125'  
 Spec. cap... 7.6 GPM/ft.



Location: SW corner, SE<sub>4</sub>, SE<sub>4</sub>, SW<sub>4</sub>, sec. 29, T23N, R20E Quad. De Pere 7<sub>1</sub>/<sub>2</sub>'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
24"	0	184'				24"	Steel, 94.62#/ft. ASTM A53B, welded	0	98'	16"	Steel, 62.58#/ft. ASTM A53B, welded	250'	500'
20"	184'	500'				20"	Steel, 78.60#/ft. ASTM A53B, welded	+1 $\frac{1}{2}$ '	187'				
16"	500'	787'											

Drilling method: Cable tool  
 Samples from 0 to 787' Rec'd: 12/22/79

Grout	from	to
Neat Cement	0	184'
Neat Cement	250'	500'

Studied by: Craig S. Schwandt (0-88')  
 Kathleen Massie (88'-787')

Issued: 10/28/86

Formations: Glaciolacustrine Deposit, Sinnipee Gp (Decorah & Platteville Fms),  
 St. Peter Ss (Tonti & Readstown Mbrs), Prairie du Chien Gp, St. Lawrence Fm,  
 Tunnel City Gp, Elk Mound Gp.

Remarks: Well tested for 24 hours at 800 GPM with 105 feet of drawdown.  
 DNR Permanent Well #75558.

Well is located on the north side of Scheuring Road about 4400' west of the C & NW tracks.

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics	
					Mode	Range		
G L A C I O A C U S T R I N E	0-5		Silt & Clay	Brown	—	—	Calcareous slightly micaceous. Tr qv1(Gr/MP), sand.	
	5-10		"	"	—	—	Same.	
	10-15		"	Strg brown	—	—	Calcus slgtly micus. Tr qv1(Gr/LP), sand, organics.	
	15-20		"	Brown	—	—	Calcus slgtly micus. Tr qv1(Gr/SP), sand, organics.	
	20-25		"	Clay	"	—	—	Calcus slgtly micus. Mch st. Tr granules, sand, organics.
	25-30		"	Silt & Clay	"	—	—	Calcus. Tr gravel(Gr/SP), sand, organics.
	30-35		"	Clay	"	—	—	Calcus, slgtly micus. Little silt. Trace sand.
	35-40		"	"	"	—	—	Calcus. Much silt. Trace sand.
	40-45		"	"	"	—	—	Same.
	45-50		"	"	Lt brown	—	—	Calcus, slgtly micus. Little silt. Tr sand, organics.
	50-55		"	Silt & Clay	Strg brown	—	—	Calcus, slgtly micus. Trace gravel(Gr/MP), sand.
	55-60		"	Clay	"	—	—	Calcus, slgtly micus. Mch silt. Trace gravel(Gr/SP), sand.
60-65		"	"	Lt brown	—	—	Calcus, slgtly micus. Little silt. Trace sand, organics.	
65-70		"	"	Rd brown	—	—	Calcus. Little silt. Trace gravel(Gr/S peb), sand.	
70-75		"	"	"	—	—	Calcus. Little silt. Trace granules, sand.	
75-80		"	"	"	—	—	Calcus. Little silt. Trace gravel(Gr/SP), sand.	
80-88		"	"	"	—	—	Calcus. Little silt. Trace sand.	
D E C O R A H	88-90		Dolomite	Lt bn gy	M	Fn/M	Few fos molds. Tr pyrite, caved granules, red brown clay.	
	90-95		"	Gy brown	"	"	Few fos molds. Tr pyrite, bk lath fossils, caved red brown clay.	
	95-98		"	"	"	"	Same plus little dk brown shale matrix.	
	98-100		"	"	"	"	Mny fos molds. Ltl gn gy sh matx. Tr pyr, dk bn sh matrix.	
	100-110		"	V dk an gy	"	"	Mny fos molds/fracs. Mch gn gy sh matx. Tr pyr, bk fos laths.	
	110-115		"	"	"	"	Mny fos molds/fracs. Ltl gn gy sh matx, pyr. Tr bk lath fossils.	
P L A T T E V I L L E	115-120		"	"	"	"	Mny fos molds/fracs. Mch an gy sh matx. Tr pyr, bk lath fossils.	
	120-125		"	"	"	"	Same.	
	125-130		"	Gy brown	"	"	Tr bk lath fos, dk gy stng, pyr, shly dol as above.	
	130-135		"	"	"	"	Tr bk lath fos, dk gy stng, pyr, dk bn sh partings, fossil molds.	
	135-140		"	"	"	"	Tr bk lath fossils, dk gy stng, pyr, dk bn sh matx, fossil molds.	
	140-145		"	"	"	"	Same plus trace caved fossiliferous shaly dol.	
145-150		"	Pl brown	"	"	Tr pyr, dk bn mottling/parting, bk fossil laths, caved fossil shly dol.		
150-155		"	"	"	"	Same plus trace off white chert.		
155-160		"	"	"	"	Same plus trace free qtz sand.		

Well name: De Pere City Well #6

Depth	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
160-165		Dolomite	Gy brown	M	Fn/M	Tr dk bn fos, flta atz snd, dk gy stng, pyr, dk rd spkls, cvd fossif
165-170		"	"	"	"	Tr dk bn fos, bk lath fos, pyr, dk bn sh matx, fos frags, shly dol,
170-175		"	"	"	"	Ltl dk gy stng, Tr pyr, gn gy sh, cvd fos shly dol, dk gy stng.
175-180		Sandstone	Dk gray	M	Vfn/VC	See end of log. dk bn sh matx, dk rd spkls, bk lath fos,
180-185		"	Gray	"	"	Rnd, Tr G pyr cem, G dol cem, dol, rd bn spkls(w/dol), pl gn bl sh,
185-190		"	"	"	"	See end of log. bk fos frags, mafic incl. Few sec qtz grw, pyr
190-195		"	"	"	"	See end of log. inclusions and coating. Much frosting.
195-200		"	"	"	"	Same as 190'-195' ??
200-205		"	Brown	"	"	Rnd, Tr G dol cem, G pyr cem, wh sil sh, mafic incl, Fn-zr, cl, pyr
205-210		"	"	"	"	Same, incl. Mch frstg. Ltl st, rust from drillg, Few sec qtz grw,
210-215		"	"	"	"	Same plus trace gn gy pyrititic fossiliferous (bk) shale.
215-220		"	"	"	"	Same minus green gray shale.
220-225		"	Pl brown	"	"	Rnd. Ltl G sil cem, Mch frstg. Few sec qtz grw, Tr G pyr cem, G
225-230		"	"	"	"	Same.
230-235		"	"	"	"	cal cem, wh sil sh, lim, mafic incl, st.
235-240		"	"	"	"	"
240-245		"	"	"	"	"
245-250		"	Pink	"	"	Same plus trace gn gray sandy fossiliferous shale.
250-255		Dolomite	Brown	M	Fn/M	See end of log. Tr G pyr cem, G cal cem, pk pyr rich sooty cht
255-260		"	"	"	"	Same. w/tr flta atz sand, mafic incl.
260-265		"	"	"	"	Ltl gn gy sil sh, rd bn hem sh (interlayered). Tr ool (immature &
265-270		"	"	"	"	Same. conc), fltg qtz snd, free qtz snd, drsy dol, lim.
270-275		"	"	"	"	Same plus trace pyrite.
275-280		"	"	"	"	Same plus tr wh oolitic chert.
280-285		"	"	"	"	Ltl pk bn sh, Tr flta atz sand, rd bn hem sh, gn gy sh, free qtz
285-290		"	"	"	"	Same.
290-295		Sandstone	Lt rd bn	M/C	Vfn/VC	Sang to rnd. Ltl pk or VG sil cem/matx (Fn/M), wh VG cal cem/matx
295-300		"	"	"	"	Same. (C) VG or rd to dk bn sil and/or lim cem, st. Few sec atz
300-305		"	Yl rd & dk rd bn	Fn/M	"	See end of log. grw. Mch sh (rd pur micus, dk rd bn micus her sh,
305-310		Shale	Dk rd bn	---	---	See end of log. bl gy to bl pur), frstg. Tr mafic incl, Fn-zr.
310-315		"	"	---	---	Same as 305'-310' plus few chips of sil centd ss.
315-320		"	Pl an gy	---	---	Silcs. Mch atz st, atz snd (Vfn/VC). Ltl dk rd sh, VG sil centd ss.
320-325		"	Gray	---	---	See end of log. Tr gn gy micus sh, pur sh, wh cht.
325-330		"	Pk brown	---	---	Dolic. Mch dk rd bn hem sh, brt gn to pl gn pyric sh, dol chips,
330-335		"	"	---	---	Same. st. Ltl atz snd (Vfn/VC), wh cht.
335-340		"	Pl an gy	---	---	Silcs. Mch atz st, atz snd (Vfn/VC), pk bn sh. Ltl dk rd bn hem sh
340-345		"	"	---	---	Same plus few dol chips.
345-350		"	Rd brown	---	---	Silcs. Mch qtz st, atz and (Vfn/VC), avl (Gr/SP-cht & dol). Ltl gn
350-355		"	"	---	---	Silcs. Mch st, snd, avl (Gr/MP-cht, oolic cht, gy to pl gn av sh.
355-360		Dolomite	Gy brown	M	Fn/M	See end of log. dol). Ltl dk rd bn sh, gn gy sh, gy snd.
360-365		"	"	"	"	Same but much green gray shale.
365-370		"	"	"	"	Ltl free atz and. Tr wh cht, drsy qtz, gn gy sh, dk rd bn s, pyr,
370-375		"	"	"	"	Same but little green gray shale. dk bn mottling.
375-380		Shale	Dk rd bn	---	---	Hemic, micus. Mch gn av micus shly silcs sts, st. Ltl qtz snd,
380-385		"	"	---	---	See end of loc. Tr pl gn sh, Fn-glauc.
385-390		"	"	---	---	Same as 380'-385'.
390-395		"	Pl an gy	---	---	Silcs, micus. Mch pk bn sh, st. Ltl atz snd. Tr dk rd bn hem sh,
395-400		"	Dk rd bn	---	---	Hemic, micus. Mch st. Ltl dk rd bn to an drsy qtz, sil centd ss.
400-405		Sandstone	Lt rd bn	M	Vfn/VC	See end of log. av sil micus sts, atz snd. Tr glauc, drsy qtz, pl
405-410		"	Rd brown	Fn/M	"	See end of log. an sh.
410-415		"	"	"	"	Same as 405'-410' plus little red brown shale.
415-420		"	Dk rd bn	M	"	Sang. Mch VG dol cem (rich w/sh), dk rd bn hem sh, frstg. Ltl Fn/
420-425		"	"	"	"	See end of log. M-glauc, st, er gy micus sh, wh cht/drsy atz. Ai-
425-430		Shale	"	---	---	Hemic, Mch atz snd, st. Ltl M-glauc, wh cht/drsy most e sndy dol.
430-435		Sandstone	"	M	Vfn/VC	Srnd. Mch VG dol cem, dk rd bn hem sh, qtz (some oolic), pl gn s.
435-440		Shale	Rd brown	---	---	See end of log. rd bn specular her, wh cht, drsy atz, Fn/M-glauc.
440-445		"	"	---	---	Same as 435'-440' silt. Little an gray shale.
445-450		"	"	---	---	" centd ss, calc, pyr.
450-455		"	"	---	---	" drsy atz comba(w/ool), ltl Fn/M-glauc, gn gy sh, Tr calc
455-460		Sandstone	Dk rd bn	Fn/M	Vfn/VC	Srnd. Mch G dol cem, rd bn hem sh (mch w/cem), st, frstg, wh cht/
460-465		"	Rd brown	M/C	Vfn/Gr	Srnd. Tr G dol cem, G calc cem, pl gn sh, dk rd bn sh, M-glauc, st,
465-470		"	"	"	"	Same. mafic incl. Mch frstg. Few sec atz grw, perc marks. Ltl
470-475		"	"	"	"	wh chert, drsy qtz (some oolite).
475-480		"	"	"	"	Same but little dark red brown shale.
480-485		"	Lt rd bn	M	Vfn/VC	Srnd to rnd. Ltl F to G calc cem. Mch frstg. Mny sec qtz grw.
485-490		"	"	"	"	Same plus tr pyr. Tr qtz st, dk rd bn sh, gn gy sh, mafic incl,
						wh chert (some oolic), drsy qtz, Fn/M-glauc.

Well name: De Pere City Well #6

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
T	490-495		Sandstone	Lt rd bn	M	Vfn/VC	Same as 485'-490'.
U	495-500		"	Rd brown	M/C	"	Same but ltl wh cht, plus ltl cvd dk rd bn glaucic sandstone.
N	500-505		"	"	M	"	Srnd to rnd. Ltl dk rd bn G calcic to dolic cem, G wh sil cem/
N	505-510		"	"	M/C	"	See end of log. matx. Mch frstg, neat cem. Few sec qtz grw. Tr
E	510-515		"	"	"	"	Same as 505'-510'. mafic incl, qtz silt, M/C glauc.
L	515-520		"	Rd yellow	"	"	Rnd to Wrnd. Mch G to VG calcic to dolic cem. Mny sec qtz grw.
L	520-525		"	"	"	"	Same plus tr wh sil sh, gn qy sh. Ltl qtz st. Tr mafic incl, M-
C	525-530		"	Lt rd bn	"	"	Same. glauc, rd bn hem ctng/sh, cl.
C	530-535		"	"	"	"	hem matrix/shale.
I	535-540		"	"	"	"	Tr sec qtz grw, pl gn sh, mafic incl, wh sil sh, M-glauc, rd bn
T	540-545		"	Pink	"	"	Rnd to Wrnd. Ltl G to VG calcic to dolic cem, qtz st. Mch frstg.
Y	545-550		"	"	"	"	Same but few sec qtz growths.
Y	550-555		"	"	"	"	Rnd to Wrnd. Ltl G to VG calcic to dolic cem. Mch frstg. Few
Y	555-560		"	"	Vfn/Gr	"	Same minus hem sh. sec qtz grw, Tr qtz st, G qtz st, pl gn sh,
Y	560-565		"	Pk white	Vfn/VC	"	Same but tr G calcic mafic incl, wh sil sh, rd bn hem shale.
Y	565-570		"	"	"	"	Same. to dolic cem.
175'	570-575		"	"	"	"	"
	575-580		"	Pink	M	"	Srnd to rnd. Tr G calcic cem, G rd bn sil cem, mafic incl, pl gn
	580-585		"	"	"	"	Same. sh, qtz st, wh sil sh, sec qtz grw. Much frosting.
	585-590		"	Pk white	"	"	Srnd to rnd. Ltl G sil to calcic cem. Few sec qtz grw. Mch
	590-595		"	"	"	"	Same. frstg. Tr G pyr cem, mafic incl, qtz st, Fn-zr, wh sil sh.
	595-600		"	"	"	"	Srnd to rnd. Mch G sil to calcic cem, frstg. Few sec qtz grw. Tr
	600-605		"	"	"	"	Same plus tr cvd gran. G pyr cem, mafic incl, qtz st, Fn-zr, wh
	605-610		"	"	"	"	Same minus granules. sil shale.
	610-615		"	"	"	"	Same.
E	615-620		"	Pk gray	"	"	Srnd to rnd. Ltl G sil cem. Mch frstg. Few sec qtz grw. Tr calc
L	620-625		"	"	"	"	Same. cem, G pyr cem, mafic incl, wh sil sh, pl gn sh, qtz st, Fn-zr.
K	625-630		"	"	Fn/M	"	"
	630-635		"	"	"	"	"
M	635-640		"	Pink	"	"	"
O	640-645		"	"	"	"	"
U	645-650		"	Pk white	"	"	"
N	650-655		"	"	"	"	Same plus trace pink clay.
D	655-660		"	"	M	"	Same.
	660-665		"	"	"	"	"
	665-670		"	"	"	"	"
G	670-675		"	Pk white	"	"	" / Much frosting. Little qtz silt. Few sec quartz growths.
R	675-680		"	Pink	"	"	Srnd to rnd. Tr G sil cem, mafic incl, wh sil sh, pyr, cl, Fn-zr.
O	680-685		"	"	"	"	Same plus trace G calc cement.
U	685-690		"	Pk white	M/C	"	Rnd to Wrnd. Tr G sil cem, G cal cem, mafic incl, wh sil sh, Fn-zr,
P	690-695		"	"	"	"	Same plus tr cl. qtz st, G-pyr cem. Few sec qtz grw. Mch frstg.
	695-700		"	"	"	"	Same.
	700-705		"	"	"	"	"
	705-710		"	Pink	M	"	Rnd. Tr G sil cem, F calc cem, mafic incl, wh sil sh, Fn-zr, G pyr
	710-715		"	"	"	"	Same. cem. Ltl qtz st, cl. Much frosting. Mny sec qtz growths.
	715-720		"	"	"	"	"
	720-725		"	"	"	"	"
	725-730		"	"	"	"	"
	730-735		"	Lt brown	Fn/M	"	Sang to srnd. Mch F to G sil cem, frstg, st, cl. Few sec qtz grw.
	735-740		"	"	M	"	Same. Tr G calc cem, wh sil sh, mafic incl, Fn-zircon.
	740-745		"	"	"	"	" / clav.
	745-750		"	"	"	"	mafic incl, cvd mat. Mch frosting. Few sec qtz grw. Ltl st,
	750-755		"	Pk brown	M/C	"	Srnd to Wrnd. Tr G sil cem, G pyr cem, G calc cem, wh sil sh,
	755-760		"	"	M	"	Same minus caved material.
	760-765		"	"	"	"	Same.
	765-770		"	"	M/C	"	"
	770-775		"	"	"	"	incl, qtz st. Mch frstg, vl bn coating of most grains.
	775-780		"	Yl brown	"	"	Srnd to rnd. Tr G calc cem, G yl br lim cem, wh sil sh, mafic
	780-785		"	"	Vfn/Gr	"	Same plus tr or bn clay.
212'	785-797		"	Strn brown	"	"	Same minus clav plus much purple hem sh w/white mottling.
	END OF LOG						

Well name: De Pere City Well #6

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
		"See end of log" samples				
175-180		Sandstone	Dk gray	M	Vfn/VC	Rnd. Lt1 G dol cem, VG pyr cem, st. Mch frstg, dol. Tr pl gn sh, dk rd speckling, bk fossil frags, Fn/M-zircon, mafic incl, sec quartz growths.
185-190		Sandstone	Gray	M	Vfn/VC	Rnd. Lt1 G dol cem, silt. Mch frosting. Few sec qtz growths. Tr G pyrite cem, pyrite inclusions & coatings, gn gy sh, fossil frags, dk rd speckling, mafic incl, G calc cem, dk bn shale.
190-195		Sandstone	Gray	M	Vfn/VC	Rnd. Lt1 G dol cem, silt. Much frosting. Few sec qtz growths. Tr G pyrite cem, pyrite inclusions & coatings, gn gy shale, fossil frags, dk rd speckling, mafic incl, G calc cem, dk bn sh. Much rust and little neat cement from drilling.
250-255		Dolomite	Brown	M	Fn/M	Much pink brown shale. Little free qtz sand. Tr floating qtz sand, rd bn hem shale, pink chert cemented sandstone, gn gy sil sh, pyrite.
300-305		Sandstone	Mrd&dk rd bn	Fn/M	Vfn/VC	Rnd. Mch VG-V hard sil cem (wh to or to rd to dk rd bn), qtz (cross between drusy qtz & chert but neither), dk rd bn hem (trapped in cement), dk rd bn hem sh (moderately hard to hard). Little gn gy to bl gy shale. Some of the qtz chips could be V hard sts.
305-310		Shale	Dk rd bn	—	—	Hematitic. Little gn gray shale, quartz sand (Vfn/C).
320-325		Shale	Gray	—	—	Siliceous, Micaceous, Semi-hard, Much pk bn sh. Lt1 dk rd bn shale, dolomite chips (plain), qtz sand (Vfn/VC). Tr pl gn gy shale (V soft).
355-360		Dolomite	Gy brown	M	Fn/M	Much pk bn shale. Lt1 free qtz sand, wh chert/drusy qtz combo. Tr qtz silt, dk rd bn shale, gn gy shale.
380-385		Shale	Dk rd bn	—	—	Hemic, micus, Mch gn gy to dk rd bn micus shly silcs sta, st. Lt1 qtz sand. Tr pl gn sh, Fn-glauc (w/sts), wh to tan oolic chert, dolomite, pyrite.
400-405		Sandstone	Lt rd bn	M	Vfn/VC	Sang. Mch VG sil cem, gn gy sil sh. Lt1 st, dk rd bn sh, frstg. Few chert ooliths, sec qtz growths. Trace massive glauc, G calc cem, wh chert, mafic incl.
405-410		Sandstone	Rd brown	Fn/M	Vfn/VC	Sang. Mch G to VG sil cem. Lt1 st, dk rd bn sh, gn gy sh, frosting. Few chert ooliths, sec qtz growths. Trace G dol cem, pyr, mafic incl, wh chert, drusy quartz.
420-425		Sandstone	Dk rd bn	M	Vfn/VC	Srnd. Mch VG dol cem (rich w/sh), dk rd bn hem sh, frosting, wh chert/drusy qtz (some oolitic). Lt1 M-glauc. Tr G sil cem, st, gn gy shale, pyrite.
435-440		Shale	Rd brown	—	—	Dolic. Much hematitic dolic ss, silt. Little Fn/M-glauc, wh cht/drusy qtz combo (some oolitic). Trace gn gy shale.
505-510		Sandstone	Rd brown	M/C	Vfn/VC	Rnd. Mch VG calc to dol cem (wh to rd bn), frosting. Few sec qtz growths. Tr quartz silt, mafic incl, M-glauc, neat cement.

Ninth Street Well, Between Pine & Cedar on NW side of Ninth St., DePere, Wisconsin  
E4, Sec. 28, T 23N, R 20E

Kersten Well Drilling, Driller, October 1959

Sample Nos. 219681 - 219838 - Examined by M. E. Ostrom

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0-5	5		Cl & St, pl rd bn, calcic; ltl C-Vfn snd, tr VC
5-10	5		Cl & St, pl rd bn, calcic, sndy; tr Vfn-fn gvl
10-15	5		Cl & St, pl rd bn, calcic; ltl C-Vfn snd
15-20	5		Cl & St, pl rd bn, calcic; ltl C-Vfn snd; tr Vfn gvl
20-25	5		Cl & St, pl rd bn, calcic; ltl M-Vfn snd
25-30	5		Cl & St, pl rd bn, calcic; ltl fn-Vfn snd; tr Vfn gvl
30-35	5		Cl & St, gry rd, calcic; ltl fn-Vfn snd
35-50	15		Cl & St, gry rd, calcic; ltl fn-Vfn snd; tr fn gvl
50-65	15		Cl & St, gry rd, calcic; ltl fn-Vfn snd
65-75	10		Cl & St, gry rd, calcic; ltl M-Vfn snd
75-80	5		Cl & St, gry rd, calcic; ltl M-Vfn snd, tr VC
80-85	5		Cl & St, gry rd, calcic; ltl Vfn-C snd, tr VC; tr Vfn gvl
85-100	15		Cl & St, gry rd, calcic; ltl Vfn-M snd, tr C; tr M-Vfn gvl
100-110	10		Cl & St, gry rd, calcic; ltl VC-Vfn snd; ltl Vfn-fn gvl
110-115	5		Gvl, M-Vfn, ang; mch VC-Vfn snd; ltl calcic st&cl
115-125	10		Snd, ol gry, VC-Vfn, ang, P srtg, calcic; mostly dol; ltl Vfn gvl; ltl st; tr cl
125-130	5		Dol, ol gry, fn-Vfn, dns; ltl pyr
130-135	5		Dol, ol gry, fn-Vfn, dns; ltl pyr; mch "caved" snd, st&cl
135-140	5		Dol, ol gry, fn-Vfn, dns, noh gry; ltl pyr
140-165	25		Dol, ol gry, fn-Vfn, dns; ltl pyr
165-170	5		Dol, ol gry, fn-Vfn, dns; ltl pyr; tr bn cl
170-175	5		Dol, ol gry, fn-Vfn, dns; ltl pyr
175-180	5		Ss, gry, C-Vfn; mch dollic st&cl; ltl sndy pyr; tr sh
180-185	5		Ss, gry, C-Vfn; mch dollic st&cl; tr sndy pyr & gn sh
185-200	15		Ss, gry, C-Vfn, Ssnd, P srtg; mch dollic st & cl
200-210	10		Ss, ol gry, C-Vfn, Ssnd, P srtg; mch dollic st & cl
210-215	5		Ss, ol gry, C-Vfn, Ssnd, tr VC; mch dollic st & cl
215-230	15		Ss, lt ol gry, C-fn, rnd, P srtg, tr VC & Vfn; tr st & cl; ltl yl gry dol; tr sndy pyr
230-235	5		Ss, lt ol gry, C-M, ltl fn, tr VC & Vfn; tr st&cl;
235-240	5		Ss, lt ol gry, C-fn, tr VC & Vfn; ltl st&cl, ltl dol;
240-250	10		Ss, lt ol gry, C-fn, rnd, P srtg, tr VC & Vfn, mch bn cl, ltl st & dol, tr sndy dol
250-255	5		Ss, lt gry, C-M, rnd, P srtg; few foss; tr sndy pyr
255-260	5		Ss, lt gry, C-fn, Ssnd; few foss; mch pnk dol; tr pyr
260-270	10		Sh, dk rd bn, silty; mch C-Vfn snd
270-275	5		Ss, rd gry, C-Vfn, rnd, P srtg, C cem dol; ltl st&cl
275-280	5		Ss, rd gry, C-Vfn, C cem dol; ltl st&cl; few foss
280-285	5		Ss, rd gry, C-Vfn, P cem dol; ltl st&cl; few foss
285-290	5		Ss, gry or pnk, C-Vfn, G cem dol, tr VC; ltl sh; ltl dol;
290-295	5		Dol, yl gry, Vfn-fn, dns, V sndy, many ools; ltl sh
295-305	10		Dol, yl gry, Vfn-fn, dns, sndy, oolic; mch oolic wh cat; tr pyr & rd & gn sh
305-315	10		Dol, yl gry, Vfn-fn, dns; tr snd; ltl wh cht, some calcic; tr xl qtz
315-320	5		Dol, yl gry, Vfn-fn, dns; tr snd; tr wh cht
320-330	10		Dol, ol gry, Vfn-fn, dns; tr wh cht
330-335	5		Dol, ol gry, Vfn-fn, dns; tr wh cht & xl qtz
335-350	15		Dol, ol gry, Vfn-fn, dns; tr xl qtz
350-355	5		Dol, ol gry, fn-Vfn, dns; tr pyr
355-360	5		Dol, ol gry, fn-Vfn, dns; tr pyr & xl qtz
360-365	5		Dol, ol gry, fn-Vfn, dns; tr pyr & xl qtz
365-370	5		Dol, ol gry, fn-Vfn, dns; tr pyr & xl qtz
370-375	5		Dol, ol gry, fn-Vfn, dns; tr pyr & xl qtz

cement grout  
18" O D pipe

85'

125'

12" pipe  
17" hole

125'

50'

115'

dol;

street Well, Between Pine & Cedar on NW side of Ninth St., DePere, Wisconsin

D U C 115	375-380	5		Dol, ol gry, fn-M, dns; tr cht & pyr	12" pipe 17" hole	
	380-385	5		Sh, lt bn, dolic, sty; ltl Vfn snd; ltl dol		
	385-395	10		Dol, ol gry, C-fn, slgt por, mot rd bn		
	395-405	10		Dol, ol gry, C-fn, slgt por, mot rd bn, sndy, some oolic; ltl xl qtz; tr gn sh		
	405-410	5		Sh, rd bn, dolic, sty & sndy; mch dol		
	410-420	10		Ss, pl bn, C-fn, rnd, P srtg, F cem dol, tr VC & Vfn; mch dol; ltl oolic wh cht & dol		
	420-425	5		Ss, rd gry, C-fn, tr VC & Vfn; mch cl&st; ltl dol;		
	425-435	10		Ss, rd gry, C-fn, rnd, P srtg, F cem dol, tr VC & Vfn; glaucic; ltl cl & st		
	435-445	10		Ss, rd gry, Vfn-C, rnd, P cem dol, V glaucic; mch st&cl		
	445-465	20		Ss, rd gry, Vfn-C, rnd, P srtg, VP cem dol, V glaucic; mch st & cl		459'
F R A N C O N I A	465-470	5		Ss, vl bn, VC-M; mch pyr; ltl dol & rd sts, tr foss	469'	
	470-475	5		Ss, lt rd bn, VC-M, Srnd, P srtg, P cem dol; mch pyr		
	475-480	5		Ss, lt rd bn, VC-M, Srnd, P srtg, F cem dol; mch pyr		
	480-485	5		Ss, pl bn, VC-M, Srnd; ltl pyr; tr dol & rd sts		
	485-490	5		Ss, rd bn, C-Vfn, tr VC; mch dolic st&cl; tr dol&sts		
	490-495	5		No sample		
	495-500	5		Ss, rd bn, C-Vfn, Srnd, P srtg, tr VC; mch dolic st&cl		
	500-505	5		Sts, gry or pnk, dolic; mch cl; ltl dol		
	505-540	35		Ss, rd bn, C-Vfn, Srnd, P srtg, tr VC; mch dolic st & cl		15" hole
	135	540-545	5			Ss, pl rd bn, C-Vfn, Srnd, tr VC; ltl dolic st&cl
545-550		5		Ss, pl rd bn, C-Vfn, tr VC; ltl dolic st&cl; mch sh		
550-555		5		Ss, gry or pnk, C-Vfn, tr VC; mch dolic st&cl; ltl sh		
555-560		5		Ss, gry or pnk, C-Vfn, tr VC; ltl dolic st&cl; tr sh		
560-565		5		Ss, gry or pnk, C-Vfn, Srnd, tr VC; tr st; few foss		
565-570		5		Ss, rd bn, VC-Vfn, Srnd, P cem dol; tr st & glauc		
570-575		5		Ss, rd or, C-Vfn, Srnd, P srtg, tr VC; mch st; tr foss		
575-580		5		Ss, gry or pnk, C-Vfn, Srnd, tr VC; mch st; ltl sh		
580-585		5		Ss, gry or pnk, C-Vfn, Srnd, tr VC; ltl st; tr foss		
585-590		5		Ss, gry or pnk, C-Vfn, Srnd, P srtg, tr VC; ltl st		
D R E S B A C H	590-600	10		Ss, gry or pnk, C-Vfn, Srnd, P srtg, tr VC; ltl st; tr foss		
	600-615	15		Ss, gry or pnk, C-Vfn, Srnd, P srtg, VP cem dol, tr VC; ltl st; tr foss		
	615-620	5		Ss, gry or pnk, C-Vfn, tr VC; ltl st; tr foss; ltl cl		
	620-645	25		Ss, gry or pnk, C-Vfn, Srnd, P srtg, VP cem pnk dol, ltl st; ltl pnk cl; tr foss		
	645-660	15		Ss, gry or pnk, C-Vfn, Srnd, P srtg, VP cem pnk dol, tr VC; mch st; ltl pnk cl; tr foss		
	660-665	5		Ss, gry or pnk, C-Vfn, tr VC; mch st; tr pnk cl; tr foss		
	665-675	10		Ss, gry or pnk, C-Vfn, Srnd, P srtg, VP cem pnk dol, tr VC; mch st; mch pnk cl; tr foss		
	675-685	10		Ss, gry or pnk, C-Vfn, Srnd, P srtg, P cem dol, tr VC; mch st; tr pnk cl; tr foss		
	685-695	10		Ss, gry or pnk, C-Vfn, Srnd, P srtg, P cem dol, tr VC; mch st; ltl pnk cl; tr foss; tr dol		
	695-700	5		Ss, gry or pnk, C-Vfn, tr VC; mch st; mch sty cl; tr dol		
D O L	700-710	10		Ss, gry or pnk, C-Vfn, Srnd, P srtg, P cem dol, tr VC; mch st; ltl pnk cl; ltl dol		
	710-715	5		Ss, pl rd bn, C-fn, ltl VC & Vfn; ltl pnk cl; tr st		
	715-725	10		Ss, pl rd bn, C-fn, Srnd, P srtg, P cem pnk dol, ltl VC & Vfn; mch pnk cl; tr st		
	725-740	15		Ss, gry or pnk, C-Vfn, Srnd, P srtg, VP cem dol, tr VC; ltl st & pnk cl		
	740-745	5		Ss, pl rd bn, C-Vfn, Srnd, VP cem dol, tr VC; ltl st		
	745-750	5		Ss, gry or pnk, C-Vfn, ltl C, tr VC; ltl pnk cl; tr st		

Street Well, Between Pine & Cedar on NW side of Ninth St., DePere, Wisconsin

DRESBACH

750-755	5		Ss, rd bn, M-Vfn, VP cem dol, ltl C; tr VC; ltl st & cl	
755-760	5		Ss, rd bn, M-Vfn, Srnd, P cem pnk dol, ltl C, tr VC	
760-765	5		Ss, pl bn, M-Vfn, P cem pnk dol, ltl C; tr st & foss	
765-770	5		Ss, pl bn, M-Vfn, ltl C; tr st & foss; ltl rd bn cl	
770-780	10		Ss, rd bn, C-Vfn, Srnd, P srtg, P cem pnk dol, tr VC; mch st; ltl rd bn cl; tr foss	
780-785	5		Ss, rd bn, C-Vfn, P cem pnk dol, tr VC; tr st	
785-790	5		Ss, bn, C-Vfn, Srnd, VP cem dol, tr VC; ltl st; tr foss	
224 790-795	5		Ss, yl bn, C-M, tr VC; limonite coated; tr foss & dol	794'

Formations: Drift, Platteville-Galena, St. Peter, Prairie du Chien, Trempealeau, Franconia, Dresbach

Driller reports well tested at 701.1 gpm with 123 ft. of drawdown, specific capacity 5.7 gallons per foot of drawdown. Duration of test not given.

December, 1960 - This well was blasted with 80% glycerine -- 10# shots at the following depths: 610; 615; 620; 625. With 12# shots: 630 feet. With 14# shots: 635; 640; 645; 650; 655; 660; 665; 670. On July 6, 1960, the well was producing 480 GPM, 258 foot pumping level, drawdown of 204 feet, and a static of 54 feet. After blasting, the well produced 1002 GPM, with a pumping level of 260 feet, and a drawdown of 209 feet, and a static water level of 51 feet. This was the production of the well after 27 hour pumping test.



Well name De Pere City Well #5  
 De Pere Township  
 Owner.... City of De Pere  
 Address.. 208 N. Broadway  
 De Pere, Wisconsin 54115  
 Driller.. Milaeger Well & Pump Co., Inc.  
 Engineer. Robert E. Lee  
 Green Bay, Wisconsin

County: Brown  
 Completed... 5/10/70  
 Field check. W.G.S.-R.M.P.  
 Altitude.... 640' ETM  
 Use..... Municipal  
 Static w.l.. 140'  
 Spec. cap... 5.4

R. 20E  
 T. 23  
 N.  
 Sec. 34

Quad. De Pere 7 1/2'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
24"	0'	105'	19"	265'	865'	24"	Steel-3/8" 95#/ft.	0'	105'	20"	Steel-3/8"- 79#/ft. ASTM-53-B	18"	265'
23"	105'	265'											

Grout: Kind		from	to
Neat Cement		0'	265'

Samples from 0' to 863' Rec'd: 8/4/70 Studied by: M. Roshardt Issued: Jan. 1971

Formations: Drift, Sinnipee Group, St. Peter Sandstone, Prairie du Chien Group, Tunnel City Group, Wonevoc Sandstone, Mt. Simon Sandstone, Precambrian

Remarks: Well tested for 24 hours at 1130 gpm with 208' of drawdown.  
 W.G.S. Gamma, Resistivity and Self-Potential Logs, 6/12/70.

FEB 4 1971

LOG OF WELL:

Lake Mich. Dist.

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
D R I F T	0-5		Clay	Red brown	--	--	Calcareous. Little sand.
	5-10		"	"	--	--	Calcareous. Little sand, gravel.
	10-15		"	"	--	--	Calcareous. Trace sand, gravel.
	15-20		"	"	--	--	Same
	20-25		"	"	--	--	"
	25-30		"	"	--	--	"
	30-35		"	"	--	--	"
	35-40		"	"	--	--	"
	40-45		"	"	--	--	"
	45-50		"	"	--	--	"
	50-55		"	Pink bn	--	--	"
	55-60		"	"	--	--	"
	60-65		"	"	--	--	Calcareous. Little gravel. Trace sand.
	65-70		"	"	--	--	Calcareous. Trace sand.
	70-75		"	"	--	--	Same
	75-80		"	"	--	--	"
	80-85		"	"	--	--	Calcareous. Trace sand, gravel.
	85-90		"	"	--	--	Calcareous. Trace sand.
90-95		"	"	--	--	Calcareous. Trace sand, gravel.	
95-100		"	"	--	--	Calcareous. Little gravel. Trace sand.	
100-103		Gravel	Mixed	M peb	Gran/L peb	Little sand. Trace clay.	
S I N N I P E E	103-110		Dolomite	Lt brown	M	Fn/M	--
	110-115		"	"	"	"	Trace fossil fragments, pyrite.
	115-120		"	"	"	"	Same
	120-125		"	"	"	"	"
	125-130		"	"	"	"	"
	130-135		"	Gray	"	"	"
	135-140		"	"	"	"	"
	140-145		"	"	"	"	Few fossil fragments. Trace pyrite.
E	145-150		"	Lt brown	"	"	Same
	150-155		"	Bn & gry	"	Fn/C	Few fossil fragments. Trace pyrite, green shale.
	155-160		"	"	"	"	Same

Well name: De Pere City Well #5

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
S	160-165	/ / /	Dolomite	Pn & gray	M	Fn/C	Few fossil fragments, Trace pyrite, green shale.
I	165-170	/ / /	"	"	"	"	"
N	170-175	/ / /	"	"	"	Fn/M	Trace fossil fragments, pyrite.
N	175-180	/ / /	"	"	"	"	Same plus trace green shale.
I	180-185	/ / /	"	"	"	"	Same
P	185-190	/ / /	"	"	"	"	Few fossil fragments, Trace pyrite.
E	190-195	/ / /	"	"	"	"	Same plus trace green shale.
E	195-200	/ / /	"	"	"	"	Same
E	200-205	/ / /	"	lt brown	"	"	Trace pyrite, green shale, fossil fragments.
	205-210	/ / /	"	"	"	"	Trace fossil fragments, pyrite.
	210-215	/ / /	"	"	"	"	Same
G	215-220	/ / /	"	"	"	"	Trace pyrite, white chert.
R	220-225	/ / /	"	"	"	"	Same
O	225-230	/ / /	"	Brown	"	"	Trace pyrite.
U	230-235	/ / /	"	Gray tan	"	"	Same
P	235-240	/ / /	"	Brown	"	"	"
	240-245	/ / /	"	"	"	"	Trace pyrite, red speckling.
	245-250	/ / /	"	"	"	"	Same
	250-255	/ / /	"	"	"	"	"
157	255-260	/ / /	"	"	"	Fn/C	Little green sandy shale. Trace pyrite, red speckling.
	260-265	/ / /	Sandstone	Tan gray	M & C	Fn/VC	Little dolomite-pyrite cement.
S	265-270	/ / /	"	Gray	C	F/VC	Little calcite cement.
T	270-275	/ / /	"	"	"	"	Little limestone, Trace chert.
	275-280	/ / /	"	"	"	"	Same
P	280-285	/ / /	"	lt gray	M & C	Fn/VC	Trace calcite-pyrite cement.
E	285-290	/ / /	"	"	C	F/VC	Same
T	290-295	/ / /	"	"	"	F/VC	"
E	295-300	/ / /	"	"	M	Fn/C	"
	300-305	/ / /	"	"	"	"	"
	305-310	/ / /	Shale	Red brown	--	--	Little white chert, silica-cemented ss. Trace pyrite.
	310-315	/ / /	"	"	--	--	Same
	315-320	/ / /	"	"	--	--	"
	320-325	/ / /	Sandstone	"	M	Fn/C	Much silica cement, shale. Trace pyrite, white chert.
70	325-330	/ / /	Shale	"	--	--	Much silica-cemented sandstone. Tr pyrite, white chert.
	330-335	/ / /	Dolomite	lt brown	M	Fn/M	Much floating quartz, Trace red shale, orange chert.
P	335-340	/ / /	"	"	"	"	Little floating quartz, Trace pyrite, red & gn shales.
R	340-345	/ / /	"	"	"	"	Trace floating quartz, red shale.
A	345-350	/ / /	"	"	"	"	Same
I	350-355	/ / /	"	"	"	"	Same plus trace orange chert.
R	355-360	/ / /	"	"	"	"	Trace floating quartz, white chert.
I	360-365	/ / /	"	"	"	"	Oolitic. Trace white chert, red shale.
E	365-370	/ / /	"	"	Fn	"	Calc. Wh ool chert, ltl sand, Tr floating qtz, ch. glauc.
E	370-375	/ / /	"	"	"	"	Calc. Wh ool chert, ltl ch. Tr pyr, floating quartz.
	375-380	/ / /	"	"	"	"	Calc. ltl ool chert, sand, Tr pyr, glauc, sh, floating qtz.
D	380-385	/ / /	"	"	M	"	Little white-orange chert, Trace red shale, sand.
U	385-390	/ / /	"	"	"	"	Much wh-or oolitic chert, Tr sand, pyr, glauc, sh & l shales.
	390-395	/ / /	"	"	"	"	Much wh-or oolitic chert, ltl red shale, Tr gn shaly sand.
C	395-400	/ / /	"	"	"	"	Little white oolitic chert.
H	400-405	/ / /	"	"	"	"	Little white chert. Trace pyrite, red shale.
I	405-410	/ / /	"	"	"	"	Much white chert.
E	410-415	/ / /	"	"	"	"	Little white chert, Trace pyrite.
N	415-420	/ / /	"	"	"	"	Little white chert.
	420-425	/ / /	"	"	"	"	Same
	425-430	/ / /	"	Brown	Fn	"	Trace red speckling.
	430-435	/ / /	"	"	"	"	Same
	435-440	/ / /	"	"	"	"	"
	440-445	/ / /	"	"	"	"	"
	445-450	/ / /	"	"	"	"	"
	450-455	/ / /	"	"	"	"	"
	455-460	/ / /	"	Marsen bn	M	"	Trace interstitial hematite, rd speckling, Vfn clausonite.
	460-465	/ / /	"	"	"	"	Same
	465-470	/ / /	"	"	"	"	Little floating qtz, white oolitic chert, Tr red speckling.
	470-475	/ / /	"	"	"	"	Oolitic, Little floating quartz, Trace red speckling.
	475-480	/ / /	"	Pink bn	"	"	Same
	480-485	/ / /	"	"	"	"	Oolitic, Much floating qtz, Tr wh-gray chert, red speckling.
	485-490	/ / /	"	"	"	"	Same but no chert.

Well name: De Perc City Well #5

P.L.C.	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
165'	490-495		Dolomite	Maroon bn	M	Fn/M	Calc. Moh floating Qtz. Tr sm sh. Vfn glauc.
T U N N E L C I T Y	495-500		"	Rd brown	"	"	Shaly. Much floating quartz. M/C glauconite.
	500-505		"	"	"	"	Same
	505-510		Sandstone	"	M	Fn/M	Shaly. Much fn/C glauconite. Little dolomite cement.
	510-515		"	"	"	"	Same
	515-520		"	"	"	Fn/C	Shaly. Little Fn/C glauconite, dolomite cement.
	520-525		"	"	"	"	Same
	525-530		"	"	"	"	"
	530-535		"	"	"	"	"
	535-540		"	"	"	"	"
	540-545		"	"	"	"	"
W O N E W O C	545-550		"	"	"	"	"
	550-555		"	"	"	Vfn/C	"
	555-560		"	"	"	"	"
	560-565		"	Orange gray	M & C	Fn/IC	Trace dolomite cement.
	565-570		"	"	"	"	Same
	570-575		"	"	M	"	"
	575-580		"	Pink gray	C	"	Trace dolomite cement, sooty pyrite.
	580-585		"	"	M & C	"	Trace sooty pyrite, green & red shales.
	585-590		"	Gray	M	"	Trace sooty pyrite, dolomite cement.
	590-595		"	"	C	"	Same plus trace red and green shales.
75' M I S S O N S A N D S T O N E	595-600		"	Pink gray	M	Vfn/IC	Same
	600-605		"	"	"	"	"
	605-610		"	Gray	"	Vfn/C	Trace sooty pyrite, dolomite cement.
	610-615		"	"	C	"	Same
	615-620		"	"	M & C	"	"
	620-625		"	"	M	"	"
	625-630		"	"	M & C	"	"
	630-635		"	"	"	"	"
	635-640		"	Gray or pink	"	Vfn/IC	Trace dolomite cement, pyrite.
	640-645		"	"	C	Fn/IC	Trace dolomite cement.
S I M O N	645-650		"	"	"	"	Trace sooty pyrite.
	650-655		"	"	"	"	Trace sooty pyrite, red shale.
	655-660		"	"	"	V/C	Same
	660-665		"	"	"	"	Trace red shale.
	665-670		"	"	"	"	Trace sooty pyrite.
	670-675		"	"	"	"	Trace silica cement, red shale.
	675-680		"	"	"	"	Same
	680-685		"	Pink gray	"	"	Trace sooty pyrite, white chert, si cem, red & gm shales.
	685-690		"	"	M	Fn/IC	Trace green and red shales.
	690-695		"	"	"	"	Trace red shale.
S A N D S T O N E	695-700		"	"	"	"	Trace red and green shales.
	700-705		"	"	C	"	Trace red shale.
	705-710		"	"	Fn & C	"	Same
	710-715		"	"	M & C	"	"
	715-720		"	"	M	"	"
	720-725		"	"	"	"	"
	725-730		"	"	C	"	"
	730-735		"	"	"	"	"
	735-740		"	"	"	"	"
	740-745		"	"	M	"	"
S A N D S T O N E	745-750		"	"	"	Fn/C	--
	750-755		"	"	C	Fn/IC	Trace red and green shales.
	755-760		"	"	"	"	Trace red shale.
	760-765		"	"	"	"	--
	765-770		"	"	"	"	--
	770-775		"	"	"	"	--
	775-780		"	"	"	"	--
	780-785		"	"	M	Vfn/C	--
	785-790		"	"	Fn	"	--
	790-795		"	"	M	"	--
S A N D S T O N E	795-800		"	"	M & C	"	--
	800-805		"	"	M	"	Trace gray pyritic shale.
	805-810		"	"	"	Vfn/IC	Trace red shale.
	810-815		"	"	"	Vfn/C	Same
	815-820		"	"	M & C	Fn/IC	"



Bro. Co. - DePere - Water

County: Brown - *Reg. 3*  
R. 20E

Well name City of DePere, Wisconsin **Well #4**  
 Owner.... City of DePere, Wisconsin  
 Address.. DePere, Wisconsin  
 Driller.. Layne-Northwest Company  
 Engineer. Foth & Porath, Inc.,  
 Green Bay, Wisconsin

Completed... 4-65  
 Field check.  
 Altitude....  
 Use..... Municipal  
 Static w. l. 138'  
 Spec. cap... 5.4

Quad. De Pere 15'

T.			
N.			

Sec. 27

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
26"	0	96'3"				26"	Steel	1'6"+	96'3"				
23"	96'3"	260'				20"	Steel "prim"	2'2"+	259'8"				
19"	260'	500'											
15"	500'	871'											

Grout: Kind	from	to
Neat cement	0	259'8"

Samples from 0 to 871' Date received: 3-2-66 Issued: Oct., 1968  
 Examined by: J. Warren Date: 3-7-67

Formations: Drift, Platteville-Galena, St. Peter, Prairie du Chien, Jordan, St. Lawrence, Tunnel City, Elk Mound, Precambrian

Remarks: \*Located on Merrill St. De Pere, Wis. Well tested for 8 hrs. at 955 gpm with 78ft. of drawdown. Well developed at following depths with indicated shot size: Depth from top. 585-589', 20#; 600-606', 30#; 608-618', 50#; 620-630', 50#; 632-642', 50#; Con'td on Pg. #3.

LOG OF WELL:

Depth (ft)	Interval (ft)	Stratigraphic Unit	Description
0-5	5	D	Cl, pl or bn mot pl yl or, P srtg, dolic cem, mch st, tr V fn/VC dol & qtz snd
5-20	15	R	Cl, pl or bn, P srtg, dolic cem, mch st, tr V fn/M qtz snd & fn dol gvl
20-25	5	I	Cl, pl or bn, G srtg, dolic cem, hd; mch st
25-40	15	F	Cl, pl rd bn, G srtg, dolic cem, hd; mch st
40-50	10	T	Cl, pl rd bn, P srtg, dolic cem, hd; mch st, tr VC dol snd
50-80	30		Cl, pl rd bn, P srtg, dolic cem, hd; mch st, ltl V fn/M snd, tr VC, tr fn gvl
80-95	15	95	Cl, pl rd bn, P srtg, dolic cem, hd; mch st, tr Vfn/M&VC snd, tr fn gvl
95-100	5		Dol, Vpl yl bn, fn&Vfn, dns, ltl wea; ltl snd&gvl (cvd?)
100-105	5		Dol, pl yl bn mot pl yl gry, fn & V fn, dns
105-110	5		Dol, pl yl bn mot pl yl gry, fn&V fn, dns; tr pyr, ltl pl rd cl
110-120	10		Dol, pl yl bn mot pl yl gry, V fn, dns; tr pyr, ltl pl rd cl
120-125	5		Dol, V lt ol gry, V fn, dns, ltl fn, tr M; tr pl rd cl
125-130	5		Dol, V lt ol gry, V fn, dns, ltl fn, tr M, ltl mot pl yl gry; tr pl rd cl
130-135	5		Dol, V lt ol gry, V fn, dns, ltl fn, tr M; ltl pl rd cl
135-145	10		Dol, V lt ol gry, fn&V fn, dns, tr M, ltl mot pl yl gry; ltl pl rd gry cl, tr pyr
145-160	15		Dol, pl yl gry mot gry, fn, dns, ltl M, tr mot gn; tr pyr & pl rd gry cl
160-175	15		Dol, yl gry mot pl gn gry, fn, dns/V sft, ltl M; ltl gry sh?, tr pyr

Well name City of DePere, Wisconsin, Well #4  
 Sample Nos. 263275 to 263449

G A L E N A		175-210	35		Dol, ol gry mot yl bn, fn, dns/sft, ltl M; tr gn sh&pyr
	150	210-240	30		Dol, lt yl bn mot gry, fn&V fn, dns/V sft, tr M
S T P E T E R		240-245	5		Dol, lt vl bn mot gry, fn&V fn, dns/V sft; ltl pl vl gry cl? tr pyr
		245-250	5		Ss, lt ol gry, M, mch F-G dol-cem, mch C&fn, ltl V fn, tr VC; mch dol, tr pyr
		250-255	5		Ss, lt ol gry, M, ltl P dol-&tr VP, pyr-cem, mch C&fn, ltl V fn&VC; ltl dol
		255-260	5		Ss, lt ol gry, M&C, rnd, P srtg, tr P dol-&pyr-cem, mch fn&VC, ltl V fn;
		260-270	10		Ss, V lt ol gry, M&fn, Srnd, P srtg, mch VP sft dol-cem, ltl C&V fn, tr VC; tr pyr, st&gry cl
		270-280	10		Ss, V lt ol gry, M, Srnd, P srtg, mch VP sft dol-cem, mch C&fn, ltl V fn, tr VC; tr pyr, st&gry cl
		280-300	20		Ss, V lt ol gry, M, Srnd, P srtg, ltl VP sft dol-cem, mch C & fn, ltl V fn, tr VC; ltl st, tr pyr&gry cl
		300-305	5		Ss, gry, M&fn, rnd, P srtg, ltl VP sft dol-cem, mch Vfn, ltl C, tr VC; ltl st
		305-310	5		Dol, V lt ol gry, fn&V fn, dns/V sft; ltl st, tr M/V fn snd, tr cl&pyr
		310-315	5		Sh, gry rd, P srtg, ltl fn/VC dol&qtz snd
95		315-320	5		Sh, gry rd, P srtg, tr mot yl gry; ltl st&fn/VC dol&qtz snd, tr fn dol gvl
		320-335	15		Sh, pl rd bn, P srtg, mch st&V fn/C dol&qtz snd, tr fn dol gvl
P U C		335-340	5		Sh, pl rd bn, P srtg, mch st&V fn/VC dol&qtz snd, ltl fn dol gvl
	30	340-350	10		Dol, yl gry, fn&Vfn, dns; mch Vfn/C snd, ltl pl rd cl, tr dk rd sh&cht
J N		350-370	20		Dol, yl gry, fn&Vfn, dns, mch V fn/C snd, ltl pl rd cl, tr dk rd sh
	10	370-375	5		Ss, pl rd, Vfn/M, Sang, P srtg, P dol-cem, ltl C, tr VC; mch sft rd sh
	375-380	5		Ss, pl rd, Vfn/M, P dol-cem, ltl C, tr VC; mch sft rd sh&xl dol	
S L		380-420	40		Dol, yl gry, fn&Vfn, dns; ltl fn/C snd, ltl V pl rd cl, tr cht
		420-425	5		Dol, yl gry, fn&Vfn, dns; mch fn/C snd, ltl pl rd cl, tr oolic cht
		425-440	15		Dol, yl gry, fn&Vfn, dns; ltl fn/C snd&V pl rd cl
	70	440-450	10		Dol, yl grv, fn&Vfn, dns; ltl V pl rd cl, tr fn/C snd
T U N E L		450-460	10		Ss, pl rd, fn, ang, P srtg, P dol-cem, mch V fn&M, tr C&VC; mch sft&dns dol, ltl pl rd cl, tr cht
		460-475	15		Dol, yl gry mot gry&dk rd, fn&Vfn, dns/sft; mch Vfn/C snd&pl rd bn cl
		475-480	5		Dol, yl gry mot gry&dk rd, fn&Vfn, dns/sft; ltl Vfn/C snd, tr gn sh
		480-485	5		Ss, Vpl rd bn M F-G dol-&qtz-cem, mch C&fn, ltl V fn; mch xln dol, ltl-
		485-490	5		Ss, pl rd bn, M&fn, P dol-&qtz-cem, mch C&Vfn; mch oolic cht, ltl rd cl
		490-495	5		Ss, pl rd bn, M&fn, P dol-&qtz-cem, mch C&Vfn; ltl dol rd cl&oolic cht
		495-500	5		Ss, pl rd bn, M&fn, P dol-&qtz-cem, ltl dol rd cl, cht, oolic cht&ools
		500-505	5		Ss, rd bn, M&fn, P dol-cem, ltl C&V fn; ltl dol, mch C&Vfn; ltl dol&rd cl
		505-510	5		Ss, rd bn, M&fn, P dol-cem, mch V fn, tr C; mch st, ltl rd bn cl &rd cl
		510-520	10		Ss, dk rd bn, fn, Sang, F srtg, P dol-cem, mch V fn, ltl M, tr C; mch st&rd bn cl, ltl glauc&gn mica sh, tr dol&pyr
I T Y		520-540	20		Ss, dk gry rd, fn & V fn, Sang, F srtg, VP dol-cem, mch M, tr C; ltl st, glauc, dol&cl, tr pyr
		540-545	5		Ss, lt bn, M&C, P dol-cem, mch VC, ltl fn, tr V fn; ltl pl rd cl&dol
		545-550	5		Ss, gry or pnk, M&C, P dol-cem, mch VC, ltl fn&Vfn; ltl st, tr dol, glauc
		550-555	5		Ss, gry or pnk, M&C, V slgt dolic cem, ltl fn & V fn, tr VC; ltl st, tr dol
		555-560	5		Ss, gry or pnk, M&C, Srnd, P srtg, V slgt dolic cem, ltl fn, Vfn&VC; ltl st

Well name City of DePere, Wisconsin, Well #4  
 Sample Nos. 263275 to 263449

E  
L  
K  
M  
O  
U  
N  
D

560-570	10		Ss, gry or pnk, M, Sang, P srtg, V slgt dolie cem, ltl fn, V fn&C, tr VC; mch st, tr dol, glauc&rd sh
570-585	15		Ss, V pl or, M&fn, Sang, P srtg, V slgt dolie cem, ltl V fn&C, tr VC; mch st, tr dol&gn sh
585-590	5		Ss, V pl yl gry, M&fn, Sang, P srtg, V slgt dolie cem, mch Vfn&C; mch st
590-595	5		Ss, V pl yl gry, M&fn, Sang, P srtg, V slgt dolie cem, mch Vfn&C; mch st
595-600	5		Ss, V pl yl gry, M&C, Srnd, P srtg, V slgt dolie cem, mch Vfn&fn, ltl VC; mch st
600-605	5		Ss, V pl yl gry, M&C, V slgt dolie cem, mch Vfn&fn, ltl VC; mch st, tr dol
605-615	10		Ss, V pl yl gry, M&fn, Sang, P srtg, V slgt dolie cem, mch Vfn, ltl C; mch st, tr dol&pyr
615-620	5		Ss, V pl yl gry, fn&Vfn, ang, P srtg, V slgt dolie cem, ltl M, tr C&VC; mch st
620-625	5		Ss, V pl yl gry, M&fn, V slgt dolie cem, mch Vfn, ltl C&VC; mch st, tr dol
625-630	5		Ss, V pl gry or pnk, M&C, V slgt dolie cem, mch Vfn, ltl fn&VC; mch st
630-635	5		Ss, V pl gry or pnk, M&C, V slgt dolie cem, mch Vfn, fn&VC; mch st, tr dol
635-640	5		Ss, V pl or bn, M&C, rnd, P srtg, mch V fn&fn, ltl VC; mch st, tr gn sh
640-655	15		Ss, or pnk, M, Srnd, P srtg, mch V fn, fn&C, tr VC; mch st, tr rd sh
655-660	5		Ss, rd or, M, Srnd, P srtg, tr G qtz-cem, mch V fn, fn&C, tr VC; mch st, tr rd sh
660-670	10		Ss, V pl or, M, Srnd, P srtg, mch V fn, fn&C, tr VC; mch st, tr gn sh
670-695	25		Ss, gry or pnk, M&fn, Sang, P srtg, V slgt dolie cem, mch V fn, ltl C, tr VC; ltl st, tr pl or cl&dol
695-725	30		Ss, gry or pnk, M&fn, Sang, P srtg, V slgt dolie cem, mch Vfn, ltl C, tr VC; mch st, tr gn sh, pl or cl&dol & rd sh
725-740	15		Ss, gry or pnk, M&fn, Sang, P srtg, mch V fn, ltl C; mch st, tr pl or cl & dol & rd sh
740-745	5		Ss, gry or pnk, M&fn, Sang, P srtg, mch Vfn, ltl C&VC; mch st, tr pl or cl
745-750	5		Ss, gry or pnk, M&fn, Sang, P srtg, mch Vfn, ltl C, tr VC; mch st, tr pl or cl
750-755	5		Ss, gry or pnk, M&fn, Sang, P srtg, mch Vfn, ltl C, tr VC; mch st, tr cong
755-760	5		Ss, gry or pnk, M&fn, Sang, P srtg, mch Vfn, ltl C, tr VC; mch st (V fn gy tr pl or cl&gn sh
760-770	10		Ss, V pl or, M&fn, Sang, P srtg, mch V fn, tr C; mch st, tr pl or cl
770-790	20		Ss, V pl or, M&fn, Sang, P srtg, mch V fn, ltl C; mch st, tr pl or cl
790-795	5		Ss, or pnk, M&fn, Sang, P srtg, mch V fn, ltl C; mch st, ltl or pnk cl
795-820	25		Ss, V pl or, M&fn, Sang, P srtg, mch V fn, tr C; mch st, ltl or pnk cl
820-825	5		Ss, or pnk, M&fn, Sang, P srtg, mch V fn, ltl C; ltl st, tr dk rd sh
825-830	5		Ss, gry or pnk, M&fn, Sang, P srtg, VP lim-cem, mch V fn, ltl C, tr VC; mch st, tr dk rd & gry sh
830-855	25		Ss, gry or pnk, M & fn, Sang, P srtg, mch Vfn, ltl C, tr VC; mch st, tr dk
855-860	5		Ss, gry rd, M&fn, Sang, P srtg, mch Vfn, ltl C, tr VC; mch st, ltl rd sh
860-865	5		Ss, gry rd, M&fn, Sang, P srtg, mch Vfn, ltl C, tr VC; mch st&lt ltl rd c
865-870	5		Ss, gry rd, M&fn, Sang, P srtg, mch Vfn, ltl C, tr VC; mch st&lt rd rd c
870-871	1		Grn&rd, rd or, wh, bk&trans, M/VC, fresh; mch snd, rd&rd or sh cl

END OF WELL

Con'td from Page #1. 644-654', 50#; 655-661', 30#; 662-668', 30#; 672-678', 30#; 682-688', 30#; 692-698', 30#; 702-706', 20#; 710-716', 30#; 724-730', 30#; 734-740', 30#; 742-752', 50#; 754-764', 50#; 770-776', 60#; 780-790', 100#; 820-830', 100#; 824-834', 30#; 834-844', 100#.

18" SLEEVE

CEMENT  
GROUT

12" CASING

**GRANT STREET WELL**

DEPERE, WIS.

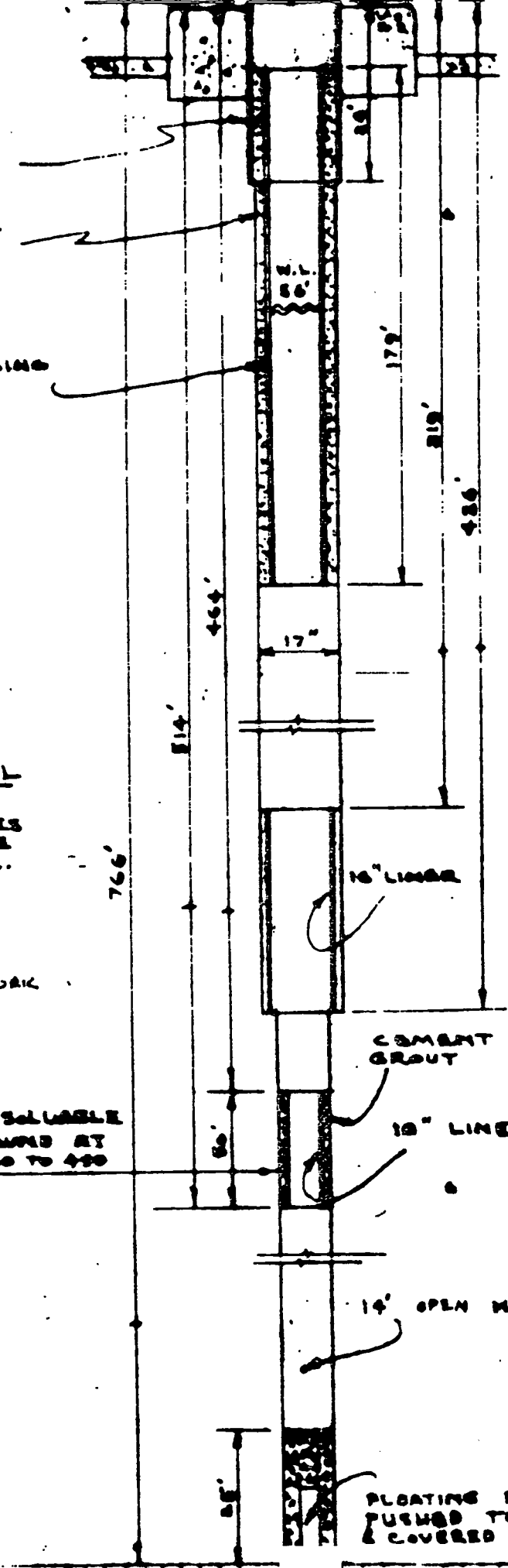
CONSTRUCTIONAL FEATURES  
SEPT. 6, 1960 - NO SCALE  
FOTH AND PORATH INC.

LAYNE-NORTHWEST CO.

CONTRACTOR  
FOR

RECONSTRUCTION WORK

RED WATER SOLUBLE  
MATERIALS FOUND AT  
430 TO 435



16" LINER

CEMENT  
GROUT

10" LINER

14' OPEN HOLE

FLOATING PLUG  
PUSHED TO BOTTOM  
& COVERED WITH ROCK

GRANITE

R.C.V.



# FRONT ST. WELL - WEPERE

JOHN KERSTEN + SON, CONTRACTOR, 1949.

DRIFT	29	0 - 29			20" O.D. CASING - 29'
LIMESTONE	185.5	29 - 185.5			SHOE 17" HOLE 12" WELDED JOINT CASING - 199'-5" NEAT CEMENT GROUT PLACED FROM BOTTOM THRU PLACER PIPE BETWEEN CASING AND DRILL HOLE
SANDSTONE	282	185.5 - 282			199'-5"
MARL	292	282 - 292			16" O.D. LINER. 23'-7"
MAC. LIME	305	292 - 305			
MARL & SANDSTONE	450	305 - 450			12" LINER - 192' 14" HOLE
SANDSTONE	466	450 - 466			
SANDSTONE	812	466 - 812			12" HOLE 866# DYNAMITE IN SANDSTONE AT 20' INTERVALS.

GRANITE

STATIC WATER LEVEL 100'

825 G.P.M. AT 200' LEVEL

ALONGER BEING BOUND OR HYDRA

Well Site Survey

4. Geologic or Hydrologic Investigations

None

5. Proposed Site

A. Dimensions

300' x 150'

B. Elevation in Relation to Other High Capacity Wells in Area

Approximately the same

C. Aquifer to be Utilized

Sandstone

D. Desired Well Capacity.

1200 GPM

E. Location of Present Distribution System

1/2 mi east

F. Location of Present Storage Facilities

1 1/2 mi NE (elevated)

G. Other Data

6. Comments

Site appears to be adequate. I think that the State should possibly be taking

7. Pictures

a stand concerning the drilling of wells in the Brown Co. area. They are probably going to face a severe water crisis in the not so distant future.

WELL SITE SURVEY

Entity De Pere

Date 6/5/78

Well No. #6

Site Location North side of Scheuring Rd.  
SE 1/4, SW 1/4, Sec 29, T23N, R20E - Brown Co.

1. Map - Indicating Site

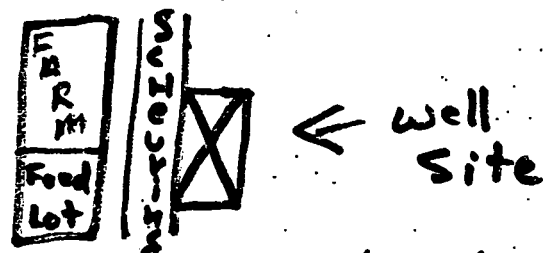
on plans

A. High Capacity Wells in Area

None

B. Sanitary Hazards

None apparent, except cattle feed lot 50yd south



2. Physical Features

A. Buildings

300 yd west (house), Farm 50yd south

B. Drainage

Slightly westward

C. Sanitary Sewers

None

D. Storm Sewers

None

> Both proposed for immediate future.

E. Other Municipal Wells

1 mi. NE closest (Grant St. well)

F. Municipal STP

N/A

G. Private Sewage Disposal

300 yd west, 50 yd south

H. Refuse Disposal Sites

None

I. Fuel Storage

None

J. Low Areas or Marsh

None

K. Lakes and Streams

None

L. Area Zoning

Proposed residential with commercial + light industry

M. Others

3. Proposed or Future Facilities

Residential expansions

De Pere MW.

REPORT OF WELL GROUTING

Location of Well Scheuring Road (CT H "F") SE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 29 T23N R20E

Owner City of DePere Well # 6

Date 6/27/79 Observed By RP Barnum / Mark Corbett  
Lake Michigan District

Engineer Robert E. Lee & Associates

Well Driller Ralph Mileager

Grout Supplier Holland Well Service Co. of Brookfield, Ill.

Well Information:

Hole Sizes and Lengths 24" to 97'23" to 180'

Total Depth 180'

Casing Information:

Outer 24" to 97'

Inner 20" to 180'

Depth of Plug or Packer 180'

Static Water Level:

Grouting Operation:

Bentonite Circulation Yes

Method Down inner casing

Length and Diameter of Grout Pipes 3" to 178'

Neat Cement Mix 1:6 Gal.

Calculated Bag Req. 125 bags = 11,750#

Actual Bags Used 18,500#

Applied Under Pressure Yes

Continuous Operation Yes

Comments:

Well #4

1. County Brown Town  De Pere  
Village  Check one and give name  
City

2. Location NE 1/4; SE 1/4; NE 1/4; Section 27; T23N; R20E.  
Name of street and number of premise or Section, Town and Range numbers

3. Owner  or Agent  CITY OF DE PERE  
Name of individual, partnership or firm

4. Mail Address De Pere, Wisconsin  
Complete address required

5. From well to nearest: Building \_\_\_\_\_ 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: municipality.

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
26"	0	95'3"	19"	250	500
23"	95'3"	260	15"	500	671

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
26"	Steel	2'6"	95'3"
20"	Steel "Prime"	2'2"	259'6"

9. GROUT:

Kind	From (ft.)	To (ft.)
Heav	0	259'6"

11. MISCELLANEOUS DATA:

Yield test: 3 Hrs. at 955 GPM.

Depth from surface to water-level: 138 ft.

Water-level when pumping: 216 ft.

Water sample was sent to the state laboratory at:  
April 20, 1965  
 City \_\_\_\_\_ on \_\_\_\_\_ 19\_\_\_\_

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Clay and rock	0	95
Limestone	95	244
Shale, limestone & sandy limestone	244	385
Gray limestone	385	450
Gray ls with red shale	450	484
SS with red shale streaks	484	550
Tan sandstone	550	845
Red sandstone	845	870
Granite	870	871

SEE REVERSE SIDE

Construction of the well was completed on:  
April 19 1965

The well is terminated 26 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 [Signature]  
 P. E. Leont Registered Well Driller  
 Field Man. and Geologist

LAYNE-NORTHWEST COMPANY  
 6005 N. Martin Drive, Milwaukee, Wis.  
 Complete Mail Address  
 TEL/S April 27, 1965

Rec'd \_\_\_\_\_ No. \_\_\_\_\_

Anal'd \_\_\_\_\_

Interpretation  
43% DIST #6 ✓  
FILE  
STATE GEOLOGICAL SURVEY

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.	_____	_____	_____	_____	_____
48 hrs.	_____	_____	_____	_____	_____
Confirm	_____	_____	_____	_____	_____
E. Coli	_____	_____	_____	_____	_____

Examiner \_\_\_\_\_

DEPAG-WATER

WEL-6

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

Madison, Wisconsin 53701

1. COUNTY **BROWN** CHECK ONE  Town  Village  City NAME **DE PERE**

2. LOCATION (Number and Street or 1/4 section, section, township and range. Also give subdivision name, lot and block numbers when available.)  
**WELL #5 Enterprise Dr., Industrial Park, De Pere**

3. OWNER AT TIME OF DRILLING  
**CITY OF DE PERE**

4. OWNER'S COMPLETE MAIL ADDRESS  
**208 N. Broadway - City Hall - De Pere, Wis.**

5. 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)  
**150**

CLEAR WATER DRAIN SEPTIC TANK PRIVY SEEPAGE PIT ABSORPTION FIELD BARN SILO ABANDONED WELL SINK HOLE  
C.I. TILE  
OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

6. Well is intended to supply water for: **Municipal**

7. DRILLHOLE						10. FORMATIONS		
Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)	Kind	From (ft.)	To (ft.)
24	Surface	105	19	265	865	Glacial Drift	Surface	105
23	105	265				Platteville Dolomite	105	265
8. CASING, LINER, CURBING, AND SCREEN								
Dia. (in.)	Kind and Weight		From (ft.)	To (ft.)				
24	Steel- 3/8" 95#/ft.		Surface	105		St. Peter Sandstone	265	400
20	Steel- 3/8" -79#/ft.		0	265		Tunnel City Sandstone	400	550
	ASTM-53-B					Elk Mound Sandstone	550	863

RECEIVED  
AUG 6 1970  
DNR Region 121

9. GROUT OR OTHER SEALING MATERIAL  
Kind From (ft.) To (ft.)  
**Neat Cement Surface 265**

11. MISCELLANEOUS DATA  
Yield test: **24** Hrs. at **1130 GPM** Well is terminated **18** inches  above  below final grade  
Depth from surface to normal water level **140** ft. Well disinfected upon completion  Yes  No  
Depth to water level when pumping **348** ft. Well sealed watertight upon completion  Yes  No  
Water sample sent to **Madison** laboratory on: **May 26 1970**

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.

SI FURE *[Signature]* Registered Well Driller COMPLETE MAIL ADDRESS  
**MILAEGER WELL AND PUMP CO. INC.**  
**1245 N.62nd St., Milwaukee, Wis. 53213**

Please do not write in space below

COLIFORM TEST RESULT	GAS - 24 HRS.	GAS - 48 HRS.	CONFIRMED	REMARKS
<b>0</b>				

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

COUNTY <b>Brown</b>		CHECK ONE <input type="checkbox"/> Town <input type="checkbox"/> Village <input checked="" type="checkbox"/> City		NAME	
LOCATION - 1/4 Section <b>SW</b>		Section <b>29</b>		Township <b>23N</b>	
		Range <b>20E</b>		3. OWNER AT TIME OF DRILLING <b>City of De Pere</b>	
Grid or street no. <b>North side of Scheuring Road</b>		Street name		ADDRESS <b>335 S. Broadway</b>	
- If available subdivision name, lot & block no.				POST OFFICE <b>De Pere, WI 54115</b>	
Distance in feet from well to nearest: (Record answer in appropriate block)		BUILDING <b>500 ft.</b>		SANITARY SEWER C. I. TILE	
		FLOOR DRAIN C. I. TILE		FOUNDATION DRAIN SEWER CONNECTED INDEPENDENT	
				WASTE WATER DRAIN C. I. TILE	
SURFACE WATER DRAIN C. I. 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.)					

Well is intended to supply water for:  
**City of De Pere (Well #6)**

DRILLHOLE						9. FORMATIONS		
3. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)	Kind	From (ft.)	To (ft.)
24	Surface	184	16	500	787	Glacial drift Galena-Platteville Dolomite	Surface	88 178
20	184	500				St. Peter sandstone	178	250
CASING, LINER, CURBING, AND SCREEN						Prairie du Chien Group		
3. (in.)	Kind and Weight		From (ft.)	To (ft.)			From (ft.)	To (ft.)
2	Steel, 94.62#/ft. ASTM A53B, welded		Surface	98		Trempealeau formation	440	470
20	Steel, 78.60#/ft. ASTM A53 B, welded		surface	187		Franconia sandstone	270	724
16	Steel, 62.58#/ft. ASTM A 53 B, welded		250	500		Dresbach sandstone	724	785
						PreCambrian granite	785	787

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 <input type="checkbox"/> Rotary - air w/drilling mud <input type="checkbox"/> Rotary - hammer with drilling mud & air <input type="checkbox"/> Jetting with Air <input type="checkbox"/> Water
Neat cement		Surface	184		Well construction completed on <b>November 1 19 79</b>
Neat cement		250	500		
MISCELLANEOUS DATA			Well is terminated <b>18</b> inches <input checked="" type="checkbox"/> above <input type="checkbox"/> below final grade		
Flow test:		<b>24</b> Hrs. at	<b>800</b> GPM		Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth from surface to normal water level		<b>125</b> ft.		Well sealed watertight upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Depth to water level when pumping		<b>230</b> ft.			

Water sample sent to **Marquette University Laboratory on: Nov. 13 1979**

Driller's opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, 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.

DATE <b>Ralph E. Milaeger</b> Registered Well Driller		COMPLETE MAIL ADDRESS <b>20950 Enterprise Ave., Brookfield, WI 53005</b>	
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Please do not write in space below

FORM TEST RESULT <b>FILE</b>	GAS - 24 HRS. <b>SGS</b>	GAS - 48 HRS.	CONFIRMED	REMARKS
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3-71 **DLT**