

N91192.AR.001472
NIROP FRIDLEY, MN
5090.3a

2001 DNR ANNUAL REPORTING OF WATER USE AND REQUEST FOR AMENDMENT TO
PERMIT 926127 WITH TRANSMITTAL NIROP FRIDLEY MN
1/18/2002
BAY WEST

January 18, 2002

Bay West, Inc. • 24 Hours: 1-800-279-0456 • www.baywest.com
5 Empire Drive, St. Paul, MN 55103 • 651/291-0456 • FAX 651/291-0099
10620 Widmer Rd., Lenexa, KS 66215 • 913/663-2915 • FAX 913/663-3067

Minnesota Department of Natural Resources
DNR Waters Division
500 Lafayette Road
St. Paul, MN 55155-4040

RE: 2001 DNR Annual Reporting of Water Use and Request for Amendment of Permit No. 926127

Dear DNR Waters:

Bay West, Inc. (Bay West) would like to submit the attached 2001 DNR Annual Report of Water Use Installation Worksheets for Permit No. 926127 on behalf of the United States Navy for the Naval Industrial Reserve Ordnance Plant (NIROP). The installation worksheets include the pumping rate, monthly withdrawal, total withdrawal as well as the measurement method for each recovery well on site. Please note that no ground water withdrawal occurred during the month of September as the Navy was performing an aquifer recovery test. The fee calculation worksheet and the permit data verification form are also attached.

Please also accept this letter in request for an amendment to MDNR Permit No. 926127. In December, 2000 installation 2 was abandoned. During the month of May, 2001, installations 1A and 4 were abandoned. During the month of June, four additional recovery wells, installed in December, 2000 were activated as installations 7, 8, 9 and 10. These recovery wells pump at an average rate of 46 gallons per minute (gpm), 15 gpm, 145 gpm and 20 gpm, respectably. Installations 3A, 5A and 5B remained activated with average flow rates of 220 gpm, 157 gpm and 84 gpm, respectively. Bay West would like to amend the current permit to include seven total active installations as 3A, 5A, 5B, 7, 8, 9 and 10. The amendment should also include installations 1A, 2 and 4 as abandoned. The water well records for each of the newly installed wells, as well as the abandonment records for those abandoned, are attached. A site map illustrating well locations has also been included.

Please call me at 651/291-3442 if you need additional information or if you have any questions or comments regarding the annual report or submitted amendment.

Sincerely,



Megan E. Kari
Environmental Engineer

Enclosures

cc: Jeff Meyers, SouthDivNavFacEngCom
Lamar Sims, EFA Midwest (w/o enclosures)
Mark Sladic, Tetra Tech Nus, Inc.

BWJ003471
Docs#57930

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: 1A

Use: **POLLUTION CONFINEMENT**
Source Type: **GROUND WATER**
Source Name: **QBAA**

Twp: **30** Rng: **24** Sec: **27** Qtr: **DBA**

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ *Jeff Meyers*
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: **843-820-5562** _____

A. If no water was withdrawn this year indicate the reason.
____ 1. CRP/set aside ____ 2. System removed ____ 3. Water not required
____ 4. Permit suspended ____ 5. Other (specify) _____
____ 6. Water received from an alternate source (specify) _____

B. List the number of gallons withdrawn in each month. Pumping Rate (gpm): 38

January	<u>777,000</u>	July	<u>0</u>
February	<u>1,869,000</u>	August	<u>0</u>
March	<u>2,102,000</u>	September	<u>0</u>
April	<u>1,723,000</u>	October	<u>0</u>
May	<u>0-abandoned</u>	November	<u>0</u>
June	<u>0</u>	December	<u>0</u>

TOTAL 6,471,000

C. Affidavit of compliance - Measurement method (check one)

____ 1. Flow Meter
 2. Flow Rate Meter with: Totalizer or ____ Hour meter
____ 3. Timing Device: ____ Hour meter or ____ Electric meter x gpm
____ 4. Alternate method: If not already approved, enclose request for approval.
____ 5. Estimated: An approved measuring device or method is required. (describe below)

SIGNATURE *Megan Kari* DATE 1/4/02 PHONE (651) 291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: 2

Use: **POLLUTION CONFINEMENT**
Source Type: **GROUND WATER**
Source Name: **QWTA**

Twp: **30** Rng: **24** Sec: **27** Qtr: **CAA**

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ *Jeff Meyers*
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: **843-820-5562** _____

- A. If no water was withdrawn this year indicate the reason.
1. CRP/set aside 2. System removed 3. Water not required
 4. Permit suspended 5. Other (specify) _____
 6. Water received from an alternate source (specify) _____

B. List the number of gallons withdrawn in each month. Pumping Rate (gpm): 0

January	<u>0</u>	July	<u>0</u>
February	<u>0</u>	August	<u>0</u>
March	<u>0</u>	September	<u>0</u>
April	<u>0</u>	October	<u>0</u>
May	<u>0</u>	November	<u>0</u>
June	<u>0</u>	December	<u>0</u>
		TOTAL	<u>0</u>

- C. Affidavit of compliance - Measurement method (check one)
1. Flow Meter
 2. Flow Rate Meter with: Totalizer or Hour meter
 3. Timing Device: Hour meter or Electric meter x gpm
 4. Alternate method: If not already approved, enclose request for approval.
 5. Estimated: An approved measuring device or method is required. (describe below) _____

SIGNATURE Megan Kari DATE 1/4/02 PHONE (651) 291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: 3A

Use: **POLLUTION CONFINEMENT**
Source Type: **GROUND WATER**
Source Name: **QBAA**

Twp: **30** Rng: **24** Sec: **27** Qtr: **CAD**

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ *Jeff Meyers*
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: **843-820-5562** _____

- A. If no water was withdrawn this year indicate the reason.
1. CRP/set aside 2. System removed 3. Water not required
 4. Permit suspended 5. Other (specify) _____
 6. Water received from an alternate source (specify) _____

B. List the number of gallons withdrawn in each month. Pumping Rate (gpm): 220

January	<u>12,549,000</u>	July	<u>1,436,000</u>
February	<u>10,799,000</u>	August	<u>5,090,000</u>
March	<u>11,303,000</u>	September	<u>50</u>
April	<u>10,447,000</u>	October	<u>5,169,000</u>
May	<u>3,706,000</u>	November	<u>7,759,000</u>
June	<u>4,564,000</u>	December	<u>8,012,000</u>
		TOTAL	80,834,000

- C. Affidavit of compliance - Measurement method (check one)
1. Flow Meter
 2. Flow Rate Meter with: Totalizer or Hour meter
 3. Timing Device: Hour meter or Electric meter x gpm
 4. Alternate method: If not already approved, enclose request for approval.
 5. Estimated: An approved measuring device or method is required. (describe below) _____

SIGNATURE *Megan Kari* DATE 1/4/02 PHONE (651)291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: 4

Use: **POLLUTION CONFINEMENT**
Source Type: **GROUND WATER**
Source Name: **QWTA**

Twp: **30** Rng: **24** Sec: **27** Qtr: **ACB**

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ *Jeff Meyers*
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: **843-820-5562** _____

A. If no water was withdrawn this year indicate the reason.

- 1. CRP/set aside
- 2. System removed
- 3. Water not required
- 4. Permit suspended
- 5. Other (specify) _____
- 6. Water received from an alternate source (specify) _____

B. List the number of **gallons** withdrawn in each month.

Pumping Rate (gpm): 0

January	<u>0</u>	July	<u>0</u>
February	<u>0</u>	August	<u>0</u>
March	<u>0</u>	September	<u>0</u>
April	<u>0</u>	October	<u>0</u>
May	<u>0</u>	November	<u>0</u>
June	<u>0</u>	December	<u>0</u>

TOTAL 0

C. Affidavit of compliance - Measurement method (check one)

- 1. Flow Meter
- 2. Flow Rate Meter with: Totalizer or Hour meter
- 3. Timing Device: Hour meter or Electric meter x gpm
- 4. Alternate method: If not already approved, enclose request for approval.
- 5. Estimated: An approved measuring device or method is required. (describe below)

SIGNATURE *Megan Kari* DATE 1/4/02 PHONE (651) 291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: 5A

Use: **POLLUTION CONFINEMENT**
Source Type: **GROUND WATER**

Twp: **30** Rng: **24** Sec: **27** Qtr: **DBC**

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ *Jeff Meyers*
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: **843-820-5562** _____

- A. If no water was withdrawn this year indicate the reason.
1. CRP/set aside 2. System removed 3. Water not required
 4. Permit suspended 5. Other (specify) _____
 6. Water received from an alternate source (specify) _____

B. List the number of gallons withdrawn in each month. Pumping Rate (gpm): 157

January	<u>6,282,000</u>	July	<u>6,683,000</u>
February	<u>5,606,000</u>	August	<u>4,396,000</u>
March	<u>6,303,000</u>	September	<u>0</u>
April	<u>6,415,000</u>	October	<u>4,504,000</u>
May	<u>5,753,000</u>	November	<u>6,607,000</u>
June	<u>6,484,000</u>	December	<u>6,876,000</u>
		TOTAL	<u>65,909,000</u>

- C. Affidavit of compliance - Measurement method (check one)
1. Flow Meter
 2. Flow Rate Meter with: Totalizer or Hour meter
 3. Timing Device: Hour meter or Electric meter x gpm
 4. Alternate method: If not already approved, enclose request for approval.
 5. Estimated: An approved measuring device or method is required. (describe below) _____

SIGNATURE *Megan Kari* DATE 1/4/02 PHONE (651) 291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: 5B

Use: **POLLUTION CONFINEMENT**
Source Type: **GROUND WATER**

Twp: **30** Rng: **24** Sec: **27** Qtr: **DBC**

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ *Jeff Meyers*
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: **843-820-5562** _____

- A. If no water was withdrawn this year indicate the reason.
1. CRP/set aside 2. System removed 3. Water not required
 4. Permit suspended 5. Other (specify) _____
 6. Water received from an alternate source (specify) _____

B. List the number of gallons withdrawn in each month. Pumping Rate (gpm): 84

January	<u>3,962,000</u>	July	<u>0</u>
February	<u>3,471,000</u>	August	<u>1,660,000</u>
March	<u>2,966,000</u>	September	<u>0</u>
April	<u>3,713,000</u>	October	<u>2,389,000</u>
May	<u>3,191,000</u>	November	<u>3,553,000</u>
June	<u>1,269,000</u>	December	<u>3,506,000</u>
		TOTAL	29,680,000

C. Affidavit of compliance - Measurement method (check one)

1. Flow Meter
 2. Flow Rate Meter with: Totalizer or Hour meter
 3. Timing Device: Hour meter or Electric meter x gpm
 4. Alternate method: If not already approved, enclose request for approval.
 5. Estimated: An approved measuring device or method is required. (describe below) _____

SIGNATURE Megan Kari DATE 1/4/02 PHONE (651) 291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: ~~926127~~
Unique WLU No. 611095
Use: POLLUTION CONFINEMENT
Source Type: GROUND WATER
Source Name: QBAA

Twp: 30 Rng: 24 Sec: 27 Qtr: CAD

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ Jeff Meyers
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: 843-820-5562

A. If no water was withdrawn this year indicate the reason.

- 1. CRP/set aside
- 2. System removed
- 3. Water not required
- 4. Permit suspended
- 5. Other (specify)
- 6. Water received from an alternate source (specify)

B. List the number of gallons withdrawn in each month.

Pumping Rate (gpm): 46

January	<u>0</u>	July	<u>1,825,000</u>
February	<u>0</u>	August	<u>1,346,000</u>
March	<u>0</u>	September	<u>0</u>
April	<u>0</u>	October	<u>1,365,000</u>
May	<u>0</u>	November	<u>2,018,000</u>
June	<u>1,280,000</u>	December	<u>1,999,000</u>
		TOTAL	<u>9,833,000</u>

C. Affidavit of compliance - Measurement method (check one)

- 1. Flow Meter
- 2. Flow Rate Meter with: Totalizer or Hour meter
- 3. Timing Device: Hour meter or Electric meter x gpm
- 4. Alternate method: If not already approved, enclose request for approval.
- 5. Estimated: An approved measuring device or method is required. (describe below)

SIGNATURE Megan Kari DATE 11/4/02 PHONE (651) 291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: ~~1~~ 8

MN Unique Well No. 611098

Use: POLLUTION CONFINEMENT

Source Type: GROUND WATER

Source Name: QBAA

Twp: 30 Rng: 24 Sec: 27 Qtr: DBA

Please correct address if needed:

US NAVY

~~JOEL SANDERS~~ *Jeff Meyers*

SOUTH NAVFACENGCOM

PO BOX 190010

N CHARLESTON SC 29419-9010

Phone: 843-820-5562

A. If no water was withdrawn this year indicate the reason.

- 1. CRP/set aside
- 2. System removed
- 3. Water not required
- 4. Permit suspended
- 5. Other (specify) _____
- 6. Water received from an alternate source (specify) _____

B. List the number of gallons withdrawn in each month.

Pumping Rate (gpm): 15

January	<u>0</u>	July	<u>666,000</u>
February	<u>0</u>	August	<u>674,000</u>
March	<u>0</u>	September	<u>0</u>
April	<u>0</u>	October	<u>682,000</u>
May	<u>0</u>	November	<u>1,013,000</u>
June	<u>486,000</u>	December	<u>992,000</u>

TOTAL 4,513,000

C. Affidavit of compliance - Measurement method (check one)

- 1. Flow Meter
- 2. Flow Rate Meter with: Totalizer or Hour meter
- 3. Timing Device: Hour meter or Electric meter x gpm
- 4. Alternate method: If not already approved, enclose request for approval.
- 5. Estimated: An approved measuring device or method is required. (describe below)

SIGNATURE *Megan Karr* DATE 1/4/02 PHONE (651)291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: 926127 Installation: 29
MN Unique Well No. 611097
Use: POLLUTION CONFINEMENT
Source Type: GROUND WATER
Source Name: QWTA

Twp: 30 Rng: 24 Sec: 27 Qtr: CAA

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ — *Jeff Meyers*
SOUTH NAVFACENCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: 843-820-5562 _____

- A. If no water was withdrawn this year indicate the reason.
1. CRP/set aside 2. System removed 3. Water not required
 4. Permit suspended 5. Other (specify) _____
 6. Water received from an alternate source (specify) _____

B. List the number of gallons withdrawn in each month. Pumping Rate (gpm): 145

January	<u>0</u>	July	<u>5,900,000</u>
February	<u>0</u>	August	<u>4,108,000</u>
March	<u>0</u>	September	<u>0</u>
April	<u>0</u>	October	<u>4,092,000</u>
May	<u>0</u>	November	<u>6,051,000</u>
June	<u>2,985,000</u>	December	<u>5,939,000</u>
		TOTAL	<div style="border: 1px solid black; padding: 5px; display: inline-block;">29,075,000</div>

- C. Affidavit of compliance - Measurement method (check one)
1. Flow Meter
 2. Flow Rate Meter with: Totalizer or Hour meter
 3. Timing Device: Hour meter or Electric meter x gpm
 4. Alternate method: If not already approved, enclose request for approval.
 5. Estimated: An approved measuring device or method is required. (describe below) _____

SIGNATURE *Megan Kari* DATE 1/4/02 PHONE (651) 291-3442

2001 DNR - ANNUAL REPORT OF WATER USE
Installation Worksheet

Permit: **926127** Installation: A10
MN unique well No. 611096
Use: **POLLUTION CONFINEMENT**
Source Type: **GROUND WATER**
Source Name: **QWTA**

Twp: 30 Rng: 24 Sec: 27 Qtr: ACB

Please correct address if needed:

US NAVY
~~JOEL SANDERS~~ *Jeff Meyers*
SOUTH NAVFACENGCOM
PO BOX 190010
N CHARLESTON SC 29419-9010

Phone: **843-820-5562**

A. If no water was withdrawn this year indicate the reason.

- 1. CRP/set aside
- 2. System removed
- 3. Water not required
- 4. Permit suspended
- 5. Other (specify)
- 6. Water received from an alternate source (specify)

B. List the number of gallons withdrawn in each month.

Pumping Rate (gpm): 20

January	<u>0</u>	July	<u>212,077</u>
February	<u>0</u>	August	<u>703,374</u>
March	<u>0</u>	September	<u>0</u>
April	<u>0</u>	October	<u>445,386</u>
May	<u>0</u>	November	<u>874,330</u>
June	<u>0</u>	December	<u>888,470</u>

TOTAL 3,123,637

C. Affidavit of compliance - Measurement method (check one)

- 1. Flow Meter
- 2. Flow Rate Meter with: Totalizer or Hour meter
- 3. Timing Device: Hour meter or Electric meter x gpm
- 4. Alternate method: If not already approved, enclose request for approval.
- 5. Estimated: An approved measuring device or method is required. (describe below)

SIGNATURE *Megan Lane* DATE 1/4/02 PHONE (651) 291-3442

2001 DNR - FEE CALCULATION WORKSHEET

US NAVY, N CHARLESTON, SC 29419-9010

Permit: 926127 Use: 271 Permit Volume (MG/Y): 370.0 Installations: 6 County: 2

1. Enter the total volume of water pumped from all installations of this permit. If this amount is 0, skip to line 5 and enter \$50.00. 329,438,637 gallons
2. Divide line 1 by one million (1,000,000), round to the nearest thousandth, and enter here: 229.4 million gallons
(Example: 128,243,400 rounds to 128.243 million gallons)
3. Find your fee rate on the table below and enter it here: \$2.50 per million gallons

VOLUME PUMPED (from line 2)		FEE RATE (per million gallons)
Up to 50 million gallons		Minimum permit fee of \$50.00
50 to 100 million gallons		\$1.00
100 to 150 million gallons		\$1.50
150 to 200 million gallons		\$2.00
200 to 250 million gallons		\$2.50
250 to 300 million gallons		\$3.00
300 to 350 million gallons		\$3.50
350 to 400 million gallons		\$4.00
Over 400 million gallons		\$4.50

4. Multiply Line 2 by Line 3. \$ EXEMPT
For Example:

128.243 million gallons	
x 1.50 dollars per million gallons	
\$192.36 fee	

Classification	Maximum Fee	Classification	Maximum Fee
entity with 1 to 3 permits	\$35,000	entity with more than 5 permits	\$175,000
entity with 4 to 5 permits	\$50,000	city of the first class	\$175,000

5. FEE DETERMINATION:
 - a) If the amount on line 2 is less than or equal to 50 million gallons, enter the minimum fee of \$50.00 on this line.
 - b) If the amount on line 4 is greater than the maximum fee from the table below, enter the maximum fee from the table on this line.
 - c) If the amount on line 4 is less than the maximum fee and greater than the minimum fee, enter the amount from line 4. \$ EXEMPT
6. Complete the Data Verification Form. If a fee is required for a permit amendment or transfer, enter the amount on this line: \$ EXEMPT
7. Add lines 5 and 6. Enter the total on this line. This is the 2001 water appropriation fee due. Return this fee with the water use reports and any additional information required. \$ EXEMPT
Make checks payable to "DNR Waters", and mail to:
 DNR Waters
 500 Lafayette Road Box 48
 St Paul, MN 55155-4048

If you have questions please call (651) 296-0435 24 hours Do not write below this line.

2001 PERMIT DATA VERIFICATION FORM

Enter the number from line 2 of the Fee Calculation Worksheet _____ million gallons

If this number is greater than 370.0 million gallons an amendment is required along with an after-the-fact fee of \$150.00. Enter this amount on line 6 of the Fee Calculation Worksheet and enclose items c and d listed below with your water use report and fees.

If no changes are required, you do not need to submit this page.

1. **Amendment:** To change the number of permitted installations, pumping rate, or permitted volume enter \$75.00 (or \$150.00 as specified above) on line 6 of the Fee Calculation Worksheet and enclose the applicable items listed below with your report and fees.

- a. A written amendment request describing changes needed to the existing permit.
- b. A statement justifying requests to change permit limits.
- c. A site map showing the location of all wells or pumps and all lands owned/leased.
- d. A copy of the water well record for each new well (supplied by your well driller).
- e. Include the number of well/pump stations (installations), their pumping capacity, and the status of each installation (active, standby, abandoned).

2. **Transfer:** If you no longer own or rent the property, or if the property will change ownership in the coming year, fill in the information below.

a. New owner name: _____ Phone: () _____

b. New address: _____

c. Date of land sale or transfer: _____

The following items will be required from the new owner to transfer the permit.

A. Proof of ownership or control (copy of deed, tax statement, lease agreement, etc.).

B. \$75.00 transfer fee (see below for exemptions).

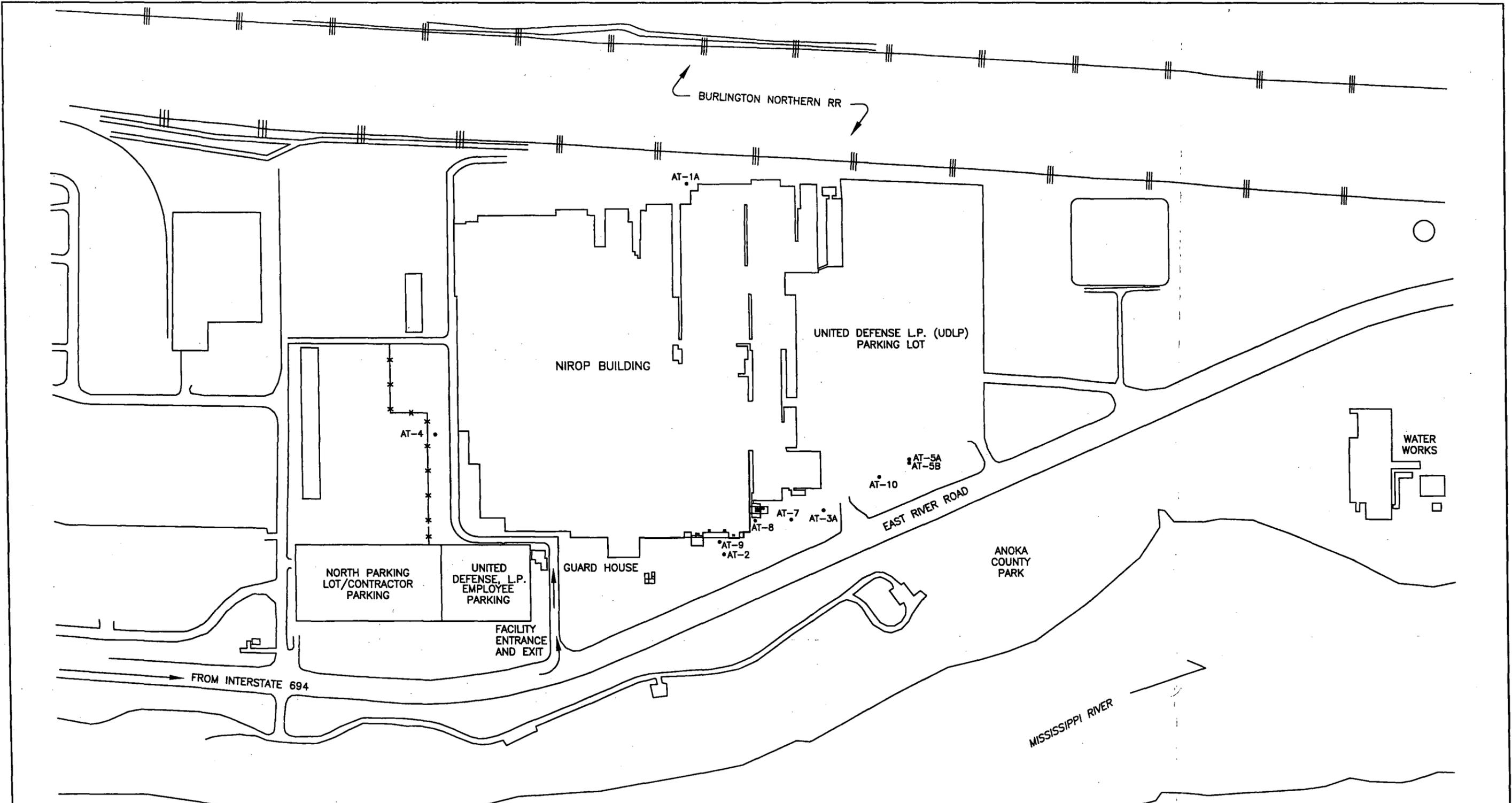
3. **Termination:** If you want to terminate the permit, indicate why it is no longer needed.

Note: the 2001 water use report and fee are still required.

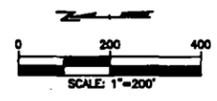
Minnesota Rules 6115.0120 Fee Exemptions

- 1. A change in mailing address or authorized agent when land ownership has not changed
 - 2. A transfer of a permit within the immediate family
 - 3. A change in pump location on surface water sources for the same operation
 - 4. A replacement well completed at the same depth in the same aquifer
 - 5. A decrease in the permitted pumping rate, amount of water authorized, or irrigated acreage
-

SIGNATURE Megan Kane DATE 1/4/02 PHONE (651) 291-3442



LEGEND:
 • MONITORING WELL LOCATION



ENGR'G M.K.	DATE		BAY WEST Inc. ENVIRONMENTAL SERVICES ST. PAUL, MN
DRAWN K.M.	1/11/02		
REV.			
PROJECT NAME NIROP			
TITLE SITE MAP			
DWG. NO.	990726-B1	SCALE 1"=400'	FIGURE # 1

JOUSY II
Cat III C
MINNESOTA UNIQUE WELL NO.

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

611095

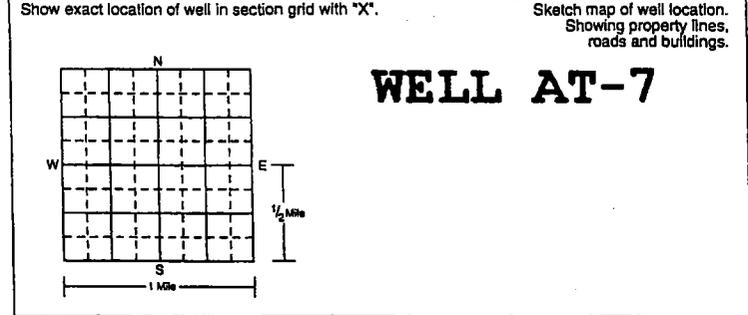
WELL LOCATION
County Name
ANOKA

Township Name **FRIDLEY** Township No. **30** Range No. **24** Section No. **27** Fraction **SW, NE SW,**

WELL DEPTH (completed) **38.5** ft. Date Work Completed **29 DEC, 2000**

House Number, Street Name, City, and Zip Code of Well Location
4800 EAST RIVER RD, FRIDLEY

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted
STARDRILL-200



DRILLING FLUID **BENTONITE/WATER** WELL HYDROFRACTURED? YES NO
FROM _____ ft. to _____ ft.

USE
 Domestic Monitoring Heating/Cooling
 Irrigation Community PWS Industry/Commercial
 Test Well Noncommunity PWS Remedial
 Dewatering

CASING Drive Shoe? Yes No
 Steel Threaded Welded
 Plastic

CASING DIAMETER **8** in. to **30.5** ft. WEIGHT **28.55** lbs./ft. **12** in. to **38.5** ft.
_____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.
_____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.

PROPERTY OWNER'S NAME
U.S. DEPT OF NAVY (NIROP)
Property owner's mailing address if different than well location address indicated above.
**NAVAL FAC. ENG. COMMAND
2155 EAGLE DRIVE
NORTH CHARLESTON, NC 29406**

SCREEN **JOHNSON** OPEN HOLE
Make **STAINLESS STEEL** from **8** ft. to **PS** ft.
Type **10-SLOT** Diam. **10 FT**
Slot/Gauze _____ Length _____
Set between **28.5** ft. and **38.5** ft. FITTINGS: **WR X PB**

WELL OWNER'S NAME
SAME

STATIC WATER LEVEL **20.6** toc ft. below above land surface Date measured **10/13/00**

Well owner's mailing address if different than property owner's address indicated above.
**ATTN: JIMMY JONES
JOEL SANDERS
(843) 820-5562**

PUMPING LEVEL (below land surface) **29.0** ft. after **3.0** hrs. pumping **40** g.p.m.

WELL HEAD COMPLETE **BAKER MONITOR** Model **7PS810**
 Pitless adapter manufacturer _____
 Casing Protection _____ 12 in. above grade
 At-grade (Environmental Wells and Borings ONLY)

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
SANDY CLAY	BROWN	S	0	2
SAND	BROWN	M	2	38.5

GROUTING INFORMATION
Well grouted? Yes No
Grout Material Neat cement Bentonite Concrete High Solids Bentonite
from **6** to **24** ft. **15.0** yds. bags
from _____ to _____ ft. _____ yds. bags
from _____ to _____ ft. _____ yds. bags

NEAREST KNOWN SOURCE OF CONTAMINATION
5 **52** feet **NORTH** direction **SEWER** type
Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
Manufacturer's name **GRUNDFOS**
Model number **60S30-5** HP **3** Volts **460V**
22.5 of **2" PVC** Length of drop pipe _____ ft. Capacity _____ g.p.m.
Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
Was a variance granted from the MDH for this well? Yes No

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.
E.H. RENNER & SONS, INC 71015
Licensee Business Name _____ Lic. or Reg. No. **12/29/00**
Authorized Representative Signature _____ Date
VICTOR PRAUGHT 12/29/00
Name of Driller _____ Date

REMARKS, ELEVATION, SOURCE OF DATA, etc.
CODE # - _____
M.G.S. QUAD NUMBER _____
ELEVATION **.0 +/- 5FT**
ENGINEER: **CH2M HILL CONSTRUCTORS**
MR. B. VENK VENKATESH (216) 623-0402
WORK COMPLETED WITH CHRIS ADAMS

PROPERTY OWNER COPY **611095**

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 103I

MINNESOTA UNIQUE WELL NO.

611098

WELL LOCATION

County Name

ANOKA

Township Name **FRIDLEY** Township No. **30** Range No. **24** Section No. **27** Fraction **SW NE SW 1/4**

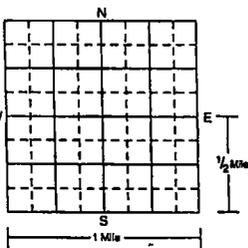
WELL DEPTH (completed) **37.5** ft. Date Work Completed **29 DEC, 2000**

House Number, Street Name, City, and Zip Code of Well Location or Fire Number
4800 EAST RIVER RD, FRIDLEY

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted
 STARDRILL-200

Show exact location of well in section grid with "X". Sketch map of well location. Showing property lines, roads and buildings.

DRILLING FLUID **BENTONITE/WATER** WELL HYDROFRACTURED? YES NO
 FROM _____ ft. to _____ ft.



WELL AT-8

USE Domestic Monitoring Heating/Cooling
 Irrigation Community PWS Industry/Commercial
 Test Well Noncommunity PWS Remedial
 Dewatering _____

CASING Drive Shoe? Yes No HOLE DIAM.
 Steel Threaded Welded
 Plastic _____

CASING DIAMETER **8** in. to **29.5** ft. WEIGHT **28.55** lbs./ft. **12** in. to **37.5** ft.
 _____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.
 _____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.

SCREEN **JOHNSON** OPEN HOLE
 Make **STAINLESS STEEL** from **8" ft. PS**
 Type **13-SLOT** Diam. **10 FT**
 Slot/Gauze **27.5** Length **37.5** **WR X PB**
 Set between _____ ft. and _____ ft. FITTINGS: _____

STATIC WATER LEVEL **20.6** **loc** ft. below above land surface Date measured **10/13/00**

PUMPING LEVEL (below land surface) **29.0** ft. after **3.0** hrs. pumping **40** g.p.m.

WELL HEAD COMPLETE **BAKER MONITOR** **8PS810**
 Pileless adapter manufacturer Model _____
 Casing Protection _____ 12 in. above grade
 At-grade (Environmental Wells and Borings ONLY)

GROUTING INFORMATION
 Well grouted? Yes No
 Grout Material Neat cement Bentonite Concrete High Solids Bentonite
 from **6** to **16** ft. **10.0** yds. bags
 from _____ to _____ ft. _____ yds. bags
 from _____ to _____ ft. _____ yds. bags

NEAREST KNOWN SOURCE OF CONTAMINATION **5** **52** feet **NORTH** direction **SEWER** type

Well disinfected upon completion? Yes No

PUMP
 Not installed " Date installed _____
 Manufacturer's name **GRUNDFOS**
16S07-8 **3/4** **460V**
 Model number **22 FT OF 1-1/4" HP** **15** Volts
 Length of drop pipe _____ ft. Capacity _____ g.p.m.
 Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
 Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
 Was a variance granted from the MDH for this well? Yes No

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

E.H. RENNER & SONS, INC **71015**

E.H. Renner License Business Name _____ Lic. or Reg. No. **12/29/00**

Authorized Representative Signature **VICTOR PRAUGHT** Date **12/29/00**

Name of Driller _____ Date _____

PROPERTY OWNER'S NAME

U.S. DEPT OF NAVY (NIROP)

Property owner's mailing address if different than well location address indicated above.

NAVAL FAC. ENG. COMMAND
2155 EAGLE DRIVE
NORTH CHARLESTON, NC 29406

WELL OWNER'S NAME

SAME

Well owner's mailing address if different than property owner's address indicated above.

ATTN: JIMMY JONES
JOEL SANDERS
(843) 820-5562

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
SAND	BROWN	S	0	33
SAND	GRAY	M	33	37

Use a second sheet, if needed

REMARKS, ELEVATION, SOURCE OF DATA, etc.

CODE # -

M.G.S. QUAD NUMBER _____
ELEVATION **.0 +/- 5FT**
ENGINEER: CH2M HILL CONSTRUCTORS
MR. B. VENK VENKATESH (216) 623-0402
WORK COMPLETED WITH CHRIS ADAMS

ROGER E. RENNER, M.D.C.
 IMPORTANT - FILE WITH PROPERTY PAPERS
 WELL OWNER COPY

611098

WELL LOCATION
County Name
ANOKA

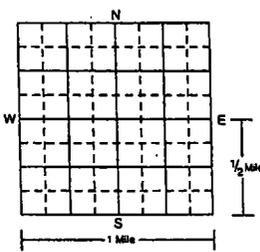
MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes Chapter 103I

MINNESOTA UNIQUE WELL NO.
611097

Township Name **FRIDLEY** Township No. **30** Range No. **24** Section No. **27** Fraction **SW_{1/4} NE_{1/4} SW_{1/4}** WELL DEPTH (completed) **51.5** ft. Date Work Completed **29 DEC, 2000**

House Number, Street Name, City, and Zip Code of Well Location
4800 EAST RIVER RD, FRIDLEY

Show exact location of well in section grid with "X". Sketch map of well location. Showing property lines, roads and buildings.



WELL AT-9

PROPERTY OWNER'S NAME
U.S. DEPT OF NAVY (NIROP)

Property owner's mailing address if different than well location address indicated above.
**NAVAL FAC. ENG. COMMAND
2155 EAGLE DRIVE
NORTH CHARLESTON, NC 29406**

WELL OWNER'S NAME
SAME

Well owner's mailing address if different than property owner's address indicated above.
**ATTN: JIMMY JONES
JOEL SANDERS
(843) 820-5562**

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
SAND	BLACK	S	0	4
SAND	BROWN	S	4	27
SAND	GRAY	S	27	48
SAND	BROWN	S	48	62
GRAVEL	BROWN	S	62	64
CLAY	BROWN	M	64	78
SAND	BROWN	S	78	82
CLAY	BROWN	M	82	84
SAND	BROWN	S	84	86

REMARKS, ELEVATION, SOURCE OF DATA, etc.
CODE # -
M.G.S. QUAD NUMBER -
ELEVATION **.0 +/- 5FT**
ENGINEER: **CH2M HILL CONSTRUCTORS**
MR. B. VENK VENKATESH (216) 623-0402
WORK COMPLETED WITH CHRIS ADAMS

IMPORTANT: FILE WITH PROPERTY PAPERS
WELL OWNER COPY
611097

DRILLING METHOD
 Cable Tool Driven Dug
 Auger Rotary Jetted
 STARDRILL-200

DRILLING FLUID **BENTONITE/WATER** WELL HYDROFRACTURED? YES NO
FROM _____ ft. to _____ ft.

USE
 Domestic Monitoring Heating/Cooling
 Irrigation Community PWS Industry/Commercial
 Test Well Noncommunity PWS Remedial
 Dewatering

CASING Drive Shoe? Yes No
 Steel Threaded Welded
 Plastic

CASING DIAMETER **8** in. to **36.5** ft. WEIGHT **28.55** lbs./ft. **12** in. to **51.5** ft.
_____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.
_____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.

SCREEN **JOHNSON** OPEN HOLE
Make **STAINLESS STEEL** from **8** ft. to **PS** ft.
Type **14-SLOT TOP 10FT** Length **17 FT**
Slot/Gauze **34.5** ft. and **51.5** ft. FITTINGS: **WR X PB**

STATIC WATER LEVEL **20.7** toe ft. below above land surface Date measured **10/18/00**

PUMPING LEVEL (below land surface) **29.0** ft. after **3.0** hrs. pumping **40** g.p.m.

WELL HEAD COMPLETE **BAKER MONITOR** **7PS810**
 Pitless adapter manufacturer _____ Model _____
 Casing Protection _____ 12 in. above grade
 At-grade (Environmental Wells and Borings ONLY)

GROUTING INFORMATION
Well grouted? Yes No
Grout Material Neat cement Bentonite Concrete High Solids Bentonite
from **6** to **12** ft. **15.3** yds. yds. bags
51.5 to **86** ft. **2.0** yds. yds. bags
from _____ to _____ ft. _____ yds. yds. bags

NEAREST KNOWN SOURCE OF CONTAMINATION
102 feet **NORTH** direction **STORAGE** type
Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
Manufacturer's name **GRUNDFOS**
150S75-4 **7.5** HP **460V**
Model number **307** Length of drop pipe **40 FT OF 2"** ft. Capacity **150** g.p.m.
Type: Submersible L.S. Turbine Reciprocating Jet

ABANDONED WELLS
Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
Was a variance granted from the MDH for this well? Yes No

WELL CONTRACTOR CERTIFICATION
This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.
E.H. RENNER & SONS, INC **71015**

Licensee Business Name Lic. or Reg. No.
12/29/00
Authorized Representative Signature Date
VICTOR PRAUGHT **12/29/00**
Name of Driller Date

WELL LOCATION

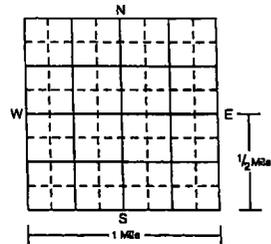
County Name

ANOKA

Township Name **FRIDLEY** Township No. **30** Range No. **24** Section No. **27** Fraction **SW 1/4 NE SW 1/4**

House Number, Street Name, City, and Zip Code of Well Location **4800 EAST RIVER RD, FRIDLEY** or Fire Number

Show exact location of well in section grid with "X". Sketch map of well location. Showing property lines, roads and buildings.



WELL AT-10

PROPERTY OWNER'S NAME

U.S. DEPT OF NAVY (NIROP)

Property owner's mailing address if different than well location address indicated above.

**NAVAL FAC. ENG. COMMAND
2155 EAGLE DRIVE
NORTH CHARLESTON, NC 29406**

WELL OWNER'S NAME

SAME

Well owner's mailing address if different than property owner's address indicated above.

**ATTN: JIMMY JONES
JOEL SANDERS
(843) 820-5562**

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
SANDY	BROWN	S	0	34
CLAY-TILL	GRAY	M	34	65
SAND	BROWN	S	65	81
CALY	BROWN	M	81	84.5

REMARKS, ELEVATION, SOURCE OF DATA, etc.

Use a second sheet, if needed

CODE # - - -
M.G.S. QUAD NUMBER
ELEVATION .0 +/- 5FT
ENGINEER: CH2M HILL CONSTRUCTORS
MR. B. VENK VENKATESH (216) 623-0402
WORK COMPLETED WITH CHRIS ADAMS

IMPORTANT FILE WITH PROPERTY PAPERS
 WELL OWNER COPY

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 103I

MINNESOTA UNIQUE WELL NO.

611096

WELL DEPTH (completed) **83.83** ft. Date Work Completed **29 DEC, 2000**

DRILLING METHOD
 Cable Tool
 Auger
 STARDRILL-200
 Driven
 Rotary
 Dug
 Jetted

DRILLING FLUID **BENTONITE/WATER** WELL HYDROFRACTURED? YES NO
 FROM _____ ft. to _____ ft.

USE
 Domestic
 Irrigation
 Test Well
 Monitoring
 Community PWS
 Noncommunity PWS
 Dewatering
 Heating/Cooling
 Industry/Commercial
 Remedial

CASING Drive Shoe? Yes No
 Steel Threaded Welded
 Plastic

HOLE DIAM.

CASING DIAMETER **8** in. to **70.83** ft. WEIGHT **28.55** lbs./ft. **12** in. to **70.83** ft.
 _____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.
 _____ in. to _____ ft. _____ lbs./ft. _____ in. to _____ ft.

SCREEN **JOHNSON** OPEN HOLE
 Make **STAINLESS STEEL** from **8** ft. to **PS** ft.
 Type _____ Diam. **15 FT**
 Slot/Gauze **10-SLOT** Length _____
 Set between **68.83** ft. and **83.83** ft. FITTINGS: **WR X PB**

STATIC WATER LEVEL **24.4** to c ft. below above land surface Date measured **10/22/00**

PUMPING LEVEL (below land surface) **48.0** ft. after **3.0** hrs. pumping **30** g.p.m.

WELL HEAD COMPLETION **BAKER MONITOR** Model **8PS810**
 Pitless adapter manufacturer
 Casing Protection _____ ft. above grade
 At-grade (Environmental Wells and Borings ONLY)

GROUTING INFORMATION
 Well grouted? Yes No
 Grout Material Neat cement Bentonite Concrete High Solids Bentonite
 from **6** to **12** ft. **12.5** yds. bags
 from _____ to _____ ft. _____ yds. bags
 from _____ to _____ ft. _____ yds. bags

NEAREST KNOWN SOURCE OF CONTAMINATION **375** feet **NORTH** direction **STEWER** type
 Well disinfected upon completion? Yes No

PUMP
 Not installed Date installed _____
GRUNDFOS
 Manufacturer's name _____
 Model number **25S10-7** **1.0** Volts **460V**
40 FT OF 1.5" ft. Capacity _____ g.p.m.
 Length of drop pipe _____ ft.
 Type: Submersible L.S. Turbine Reciprocating Jet _____

ABANDONED WELLS
 Does property have any not in use and not sealed well(s)? Yes No

VARIANCE
 Was a variance granted from the MDH for this well? Yes No

WELL CONTRACTOR CERTIFICATION
 This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

E.H. RENNER & SONS, INC 71015

Licensed Business Name

Lic. or Reg. No.

12/29/00

Authorized Representative Signature

Date

VICTOR PRAUGHT

12/29/00

Name of Driller

Date

611096

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING SEALING RECORD
 Minnesota Statutes, Chapter 1031

Minnesota Well and Boring Sealing No.
 Minnesota Unique Well No. or W-series No.
 (Leave blank if not known)

H 177391
462987

WELL OR BORING LOCATION
 County Name
ANOKA

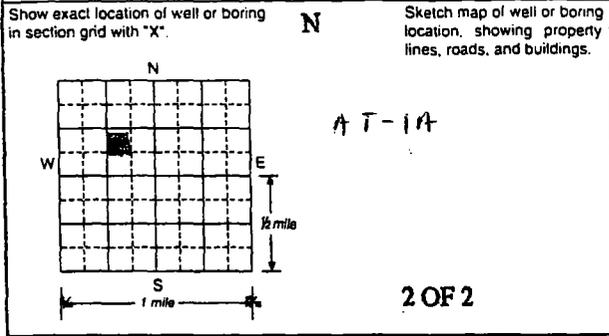
Township Name **FRIDLEY** Township No. **30** Range No. **24** Section No. **27** Fraction (sm. → lg.) **NW SE₄ NW₄**

Date Sealed **MAY 9, 2001**

Date Well or Boring Constructed **5/5/92**

Numerical Street Address or Fire Number and City of Well or Boring Location
4800 EAST RIVER ROAD

Depth Before Sealing **65'** ft. Original Depth **65.2** ft.



AQUIFER(S)
 Single Aquifer Multiaquifer
 WELL/BORING
 Water Supply Well Monit. Well
 Env. Bore Hole Other _____

STATIC WATER LEVEL
 Measured Estimated
20' ft. below above land surface

PROPERTY OWNER'S NAME
U.S. NAVY / SOUTHERN DIVISION
NAVAL FACILITY ENG. COMMAND
2155 EAGLE DRIVE
N. CHARLESTON, SC 29406

CASING TYPE(S)
 Steel Plastic Tile Other _____

CASING(S)
 Diameter **6"** Depth **44.5** ft. Set in oversized hole? Yes No Annular space initially grouted?
 _____ in. from _____ to _____ ft. Yes No Yes No Unknown
 _____ in. from _____ to _____ ft. Yes No Yes No Unknown
 _____ in. from _____ to _____ ft. Yes No Yes No Unknown

SCREEN/OPEN HOLE
44.5 **65.3**
 Screen from _____ to _____ ft. Open Hole from _____ to _____ ft.

WELL OWNER'S NAME
SAVIE
 Well owner's mailing address if different than property owner's address indicated above.

OBSTRUCTIONS
 Rods/Drop Pipe Check Valve(s) Debris Fill No Obstruction
 Type of Obstructions (Describe) _____
 Obstructions removed? Yes No Describe _____

PUMP **SUBMERSIBLE**
 Type _____
 Removed Not Present Other _____

GEOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
CLASS V	BROWN		0	1
FILL	BLACK		1	8
SAND	BROWN		8	19
SAND/GRAVEL	BROWN		19	31
COARSE SAND	BROWN		31	40
SAND/GRAVEL	BROWN		40	42
GRAVEL	BROWN		42	47
CLAY	BLUE/GRAY		47	47.17

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:
 No Annular Space Exists
 Annular space grouted with tremie pipe
 Casing Perforation/Removal
 _____ in. from _____ to _____ ft. Perforated Removed
 _____ in. from _____ to _____ ft. Perforated Removed
 Type of perforator _____
 Other _____

ROUTING MATERIAL(S) (One bag of cement = 94 lbs., one bag of bentonite = 50 lbs.)
 Grouting Material **PORTLAND** from **65** ft. to _____ ft. _____ yards **8** bags
 _____ from _____ to _____ ft. _____ yards _____ bags
 _____ from _____ to _____ ft. _____ yards _____ bags
 _____ from _____ to _____ ft. _____ yards _____ bags

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING
 REMARKS:
 GEOLOGY FROM: UNQ #462952
 WATER LEVEL IN ABOVE WELL: 20
 DATE WATER LEVEL TAKEN: 5/5/92
 MAP CODE: **21**
SEALED
 According to MN State Regulations

OTHER WELLS AND BORINGS
 Other unsealed and unused well or boring on property? Yes No How many? _____
 LICENSED OR REGISTERED CONTRACTOR CERTIFICATION

This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.
E. H. RENNER & SONS, INC. 71015
 Contractor Business Name License or Registration No.
 Authorized Representative Signature *Roger E. Renner* Date **May 14, 2001**
ROGER E. RENNER/ KEVIN SCHEFFERLEIN
 Name of Person Sealing Well or Boring

H 177391

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING SEALING RECORD
 Minnesota Statutes, Chapter 103I

Minnesota Well and Boring Sealing No.
 Minnesota Unique Well No. or W-series No.
(Leave blank if not known)

H 173140
462989

WELL OR BORING LOCATION
 County Name
ANOKA

Township Name **FRIDLEY** Township No **30** Range No **24** Section No **27** Fraction (sm → lg) **SW 26 27**

Date Sealed **65**

Date Well or Boring Constructed **52-30-87**

Numerical Street Address or Fire Number and City of Well or Boring Location
4800 East River Rd, Fridley, MN 55433

Depth Before Sealing **65** ft

Original Depth **65** ft

Show exact location of well or boring in section grid with "X"

Sketch map of well or boring location showing property lines, roads, and buildings

AQUIFER(S)
 Single Aquifer Multi-aquifer

STATIC WATER LEVEL
 Measured Estimated

WELL/BORING
 Water Supply Well Monit. Well
 Env. Bore Hole Other

34 ft below above land surface

CASING TYPE(S)
 Steel Plastic Tile Other

CASING(S)	Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
	10 in. from SWC to 35 ft.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	_____ in. from _____ to _____ ft.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	_____ in. from _____ to _____ ft.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

SCREEN/OPEN HOLE
 Screen from **35** to **65** ft. Open Hole from _____ to _____ ft.

OBSTRUCTIONS
 Rods/Drop Pipe Check Valve(s) Debris Fill No Obstruction
 Type of Obstructions (Describe) _____
 Obstructions removed? Yes No Describe _____

PUMP
 Type **submersible**
 Removed Not Present Other _____

PROPERTY OWNER'S NAME
U.S. NAVY-SOUTHERN DIVISION
 Property owner's mailing address if different than well location address indicated above
NAVAL FACILITY ENGINEERS
2155 Eagle Drive
H Charleston, SC 29406

WELL OWNER'S NAME
SAME
 Well owner's mailing address if different than property owner's address indicated above
(843) 820-5562
Jimmy Sames
Joel Sanders

LITHOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
TOP SOIL	BLACK		0	5
SAND & GRAVEL	BROWN		5	40
GRAVEL/CANKLES	MIX		40	41
SANDY CLAY	BROWN		41	65

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:
 No Annular Space Exists
 Annular space grouted with tremie pipe
 Casing Perforation/Removal
 _____ in. from _____ to _____ ft. Perforated Removed
 _____ in. from _____ to _____ ft. Perforated Removed
 Type of perforator _____
 Other _____

GROUTING MATERIAL(S) (One bag of cement = 94 lbs., one bag of bentonite = 50 lbs.)
 Grouting Material **HEAT** from **SWC** to **65** ft. _____ yards **63** bags
 _____ from _____ to _____ ft. _____ yards _____ bags
 _____ from _____ to _____ ft. _____ yards _____ bags
 _____ from _____ to _____ ft. _____ yards _____ bags

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING

SEALED
 According to MN State Regulations

OTHER WELLS AND BORINGS
 Other unsealed and unused well or boring on property? Yes No How many? _____

LICENSED OR REGISTERED CONTRACTOR CERTIFICATION
 This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge
E. H. HOFFER & SONS, INC. **71015**
 Contractor Business Name License or Registration No.

 Authorized Representative Signature **1/10/01**
 Date
1/10/01
 Name of Person Sealing Well or Boring

WELL CONTRACTOR COUNTY **H173140**

County Name ANOKA

Minnesota Statutes 156A.01-08

for Water Sample

Township Name FRIDLEY Township Number 30 Range Number 24 Section No. 27 Fraction SW NE NW

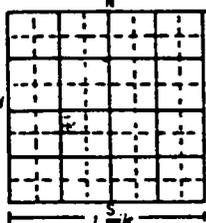
4. WELL DEPTH (completed) 65 ft. Date of Completion 12-30-87

Numerical Street Address and City of Well Location or Distance from Road Intersection.

5. DRILLING METHOD
Cable Tool Reverse Driven Dug
Hollow Rod Air Bored
Rotary Jetted Power Auger

4800 EAST RIVER ROAD

exact location of well in section grid with "X." Sketch map of well location.



Addition Name
Block Number
Lot Number

6. DRILLING FLUID UNKNOWN

7. USE
Domestic Monitoring Heat Pump
Irrigation Public Industry
Test Well Municipal Commercial
Air Conditioning EXTRACTION

2. PROPERTY OWNER'S NAME
DEPT OF NAVY
NIROP

Mailing Address if different than property address indicated above.
U.S. NAVAL BASE
BUILDING 77-1
PHILADELPHIA, PA. 19112

8. CASING
Black Throated
Galv. Welded
Plastic
HEIGHT: Above/Below Surface 2.00 ft.
Drive Shoe? Yes No
10 in. to 35 ft. Weight 34.24 lbs./ft. 16.85 ft.
in. to ft. Weight lbs./ft. in. to ft.
in. to ft. Weight lbs./ft. in. to ft.

3. FORMATION LOG COLOR HARDNESS OF FORMATION FROM TO

Table with 5 columns: Formation Log, Color, Hardness of Formation, From, To. Rows include: ORGANIC TOP SOIL (BLACK, 0-5), FINE TO COARSE SAND, & ROUNDED GRAVEL (BROWN, 5-48), SAND & GRAVEL; I.G., GRAVEL & COBBLES (40-41), SANDY SILTY CLAY, and /LITTLE TO SOME GRAVEL BRN. (41-85).

9. SCREEN
Make UNKNOWN
Type STAINLESS STEEL Diam. 10"
Slot/Gauge 40 SLOT Length 30
Set between 35 ft. and 65 ft.
Or open hole from ft. to ft.
FITTINGS:

10. STATIC WATER LEVEL
24.22 ft. below land surface
Date Measured 2-17-88

11. PUMPING LEVEL (below land surface)
30.40 ft. after 3 hrs. pumping 75 g.p.m.
42.21 ft. after 8 hrs. pumping 150 g.p.m.

12. HEAD WELL COMPLETION
Pitless adapter manufacturer BAKER Model MONITOR
Basement of fact At least 12" above ground
Plastic casing protection

13. WELL GROUTED? Yes No
Neat Cement Bentonite UNKNOWN
Grout material 6-7gal/BAG 26 to SURF cu. yds. 2
BENTONITE 28 26

14. NEAREST SOURCES OF POSSIBLE CONTAMINATION
0 feet E direction INDUSTRIAL type
Well disinfected upon completion? Yes No UNKNOWN

15. PUMP
Date installed MARCH 13, 1992 Not installed
Manufacturer's name edg
Model number TSP27-3 HP 5 Volts 460
Length of drop pipe 49.17 ft. Capacity g.p.m.
Material of drop pipe SCHEDULE 80 PVC
Type Submersible L.S. Turbine Reciprocating
Jet Centrifugal

16. ABANDONED WELLS
Unused well on property? Yes No
Sealed Permanent Temporary Not sealed

17. REMARKS, ELEVATION, SOURCE OF DATA, etc.
SITE I.D. #: EXTRACTION WELL AT-8 E-214 843
INSTALLED BY RMT IN 12-30-87; RENNER
REDEVELOPED WELL, TEST PUMPED, INSTALLED
TLESS U& PUMP.
WELL VIDEO-TAPED & AS-BUILT ALTERED
ACCORDINGLY

18. WATER WELL CONTRACTOR CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
E.H. RENNER & SONS, INC. 71015
License Business Name License No.
Address 15688 JARVIS ST. NW, ELK RIVER
Signed Authorized Representative Date 8-27-92
Name of Driller UNKNOWN Date

J010133
Cat IV D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING SEALING RECORD
Minnesota Statutes, Chapter 1031

Minnesota Well and Boring Sealing No.
Minnesota Unique Well No. or W-series No.
(Leave blank if not known)

H **177390**
462952 *RS*

WELL OR BORING LOCATION
County Name
ANOKA

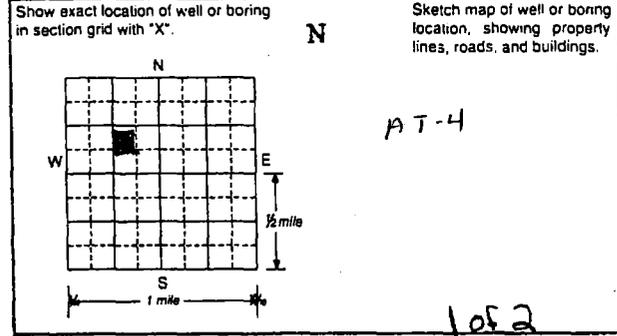
Township Name **FRIDLEY** Township No. **30** Range No. **24** Section No. **27** Fraction (sm. → lg.) **NW SE, NW**

Date Sealed **MAY 9, 2001**

Date Well or Boring Constructed **5/5/92**

Numerical Street Address or Fire Number and City of Well or Boring Location
4800 EAST RIVER ROAD

Depth Before Sealing **47'** ft. Original Depth **47.17** ft.



AQUIFER(S)
 Single Aquifer Multiaquifer
WELL/BORING
 Water Supply Well Monit. Well
 Env. Bore Hole Other _____

STATIC WATER LEVEL
 Measured Estimated
20' ft. below above land surface

PROPERTY OWNER'S NAME
**U.S. NAVY / SOUTHERN DIVISION
NAVAL FACILITY ENG. COMMAND
2155 EAGLE DRIVE
N. CHARLESTON, SC 29406**

CASING TYPE(S)
 Steel Plastic Tile Other _____

CASING(S)
Diameter **8"** Depth **11.5** ft. Set in oversize hole? Yes No Annular space initially grouted? Yes No Unknown
_____ in. from _____ to _____ ft. Yes No Yes No Unknown
_____ in. from _____ to _____ ft. Yes No Yes No Unknown

WELL OWNER'S NAME
SAME

SCREEN/OPEN HOLE
Screen from **11.5** to **47.15** ft. Open Hole from _____ to _____ ft.

Well owner's mailing address if different than property owner's address indicated above.

OBSTRUCTIONS
 Rods/Drop Pipe Check Valve(s) Debris Fill No Obstruction
Type of Obstructions (Describe) _____
Obstructions removed? Yes No Describe _____

WELL OWNER'S NAME
SAME

PUMP
Type **SUBMERSIBLE**
 Removed Not Present Other _____

GEOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
CLASS V	BROWN		0	1
FILL	BLACK		1	8
SAND	BROWN		8	19
SAND/GRAVEL	BROWN		19	31
COARSE SAND	BROWN		31	40
SAND/GRAVEL	BROWN		40	42
GRAVEL	BROWN		42	47
CLAY	BLUE/GRAY		47	47.17

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:
 No Annular Space Exists
 Annular space grouted with tremie pipe
 Casing Perforation/Removal
_____ in. from _____ to _____ ft. Perforated Removed
_____ in. from _____ to _____ ft. Perforated Removed
Type of perforator _____
 Other _____

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING
REMARKS:
GEOLOGY FROM: UNQ #462952
WATER LEVEL IN ABOVE WELL: 20
DATE WATER LEVEL TAKEN: 5/9/01
MAP CODE: 3-1
SEALED
According to MN State Regulations

GROUTING MATERIAL(S) (One bag of cement = 94 lbs., one bag of bentonite = 50 lbs.)
Grouting Material **PORTLAND** from **47** to _____ ft. _____ yards **15** bags
_____ from _____ to _____ ft. _____ yards _____ bags
_____ from _____ to _____ ft. _____ yards _____ bags
_____ from _____ to _____ ft. _____ yards _____ bags

OTHER WELLS AND BORINGS
Other unsealed and unused well or boring on property? Yes No How many? _____
LICENSED OR REGISTERED CONTRACTOR CERTIFICATION

This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.
E. H. RENNER & SONS, INC. 71015
Contractor Business Name License or Registration No.
Roger E. Renner
Authorized Representative Signature Date
ROGER E. RENNER/ KEVIN SCHEITERLEIN
Name of Person Sealing Well or Boring
May 14, 2001