

WATER PERMIT NO. 7161-3

Name of Applicant: **BPI Technology, Inc.**

Address: **891 Two Rivers Drive, Dakota Dunes**

Phone: **605 217-8000**

Amount of Water Claimed: **1.0 cfs**

Total Acres: **NA**

Source of Water Supply: **groundwater (2 wells)**

Water to be used for: **commercial**

County: **Union**

Type of Waste Disposal System: **NA**

Location: **north of Sioux City**

PRIORITY

Date Received: **9-24-09**

Application/License Fee: **\$1,350**

Corrected Application Received:

Period of Annual Use: **January 1 – December 31**

Remarks: **water will be used to cool HVAC system**

Diversion Point: **NE ¼ SW ¼ Sec 23-T89N-R48W**

Land to be Irrigated: **NA**

Depth of Well: **280 feet deep**

Well Driller:

Remarks:

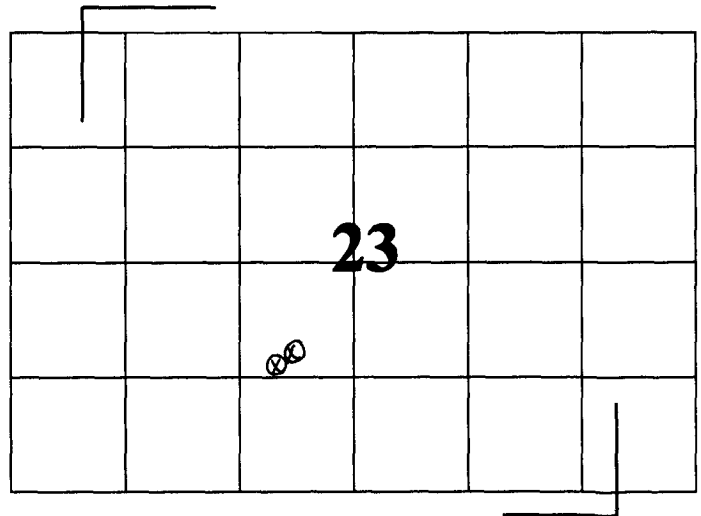
Type of Map: **aerial**

Prepared by: **Mark A Hardie PE**

Reviewed and the Number Assigned on: **9-24-09**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>7161-3</u>	(office use only) Hydrologic Unit <u>10170203</u>
	Basin <u>Sioux River</u>	
	Newspaper <u>Southern Union Co. Leader Courier</u>	
	<u>605-356-2632</u>	<u>P.O. Box 310 Elk Point SD 57025</u>

RECEIVED

SEP 24 2009

WATER RIGHTS
PROGRAM

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

- | | | | |
|---|--|--|--|
| ☐ Municipal | ☐ Suburban Housing | ☐ Recreational | ☐ Institutional |
| ☐ Rural Water System | ☒ Commercial | ☐ Fish & Wildlife | ☐ Geothermal Heat |
| ☐ Domestic (over 18 gpm) | ☐ Industrial | ☐ Other | |

Type of Application:

(check one)

☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation

☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____

☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

- Name of Applicant BPI Technology, Inc. Phone (605) 217-8000
(check one) ☒ Owner ☐ Tenant/lessee
- Mailing Address 891 Two Rivers Drive Dakota Dunes State SD 57049
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 1.0 *CFS or 450 **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Dakota Sandstone Aquifer 2 wells
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Union
2 wells in Section 23 - T89N - R48W (NE 1/4 SW 1/4)
- County or counties where water will be used Union
- Annual period during which water is to be used January through December 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

BPI Corporate Office and World Headquarters plans to drill and install two (2) water wells identified as Well #1 and Well #2 completed in the Dakota sandstone aquifer to obtain cooling water for HVAC system.

STATE OF SOUTH DAKOTA)

County of Union

SS

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach map and any other technical information. (see instructions)

I, Rich Tochem, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Rich TochemSubscribed and sworn to before me this 15th day of September 2009Notary Public signature [Signature]Commission Expires 06/12/2013

**SOUTH DAKOTA
WATER PERMIT NO. 7161-3**

Date of first receipt of application September 24, 2009.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7161-3 to BPI Technology, Inc., 891 Two Rivers Drive, Dakota Dunes SD 57049 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 7161-3 appropriates 1.0 cubic feet of water per second from two wells to be completed into the Dakota Aquifer (approximately 280 feet deep) located approximately 2800 feet northeast of the southwest section corner of Section 23-T89N-R48W as shown on accompanying map.
2. The water appropriated shall be used for the purpose of commercial use including water to cool the heating, ventilation and air conditioning system and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 7161-3 is December 21, 2009.
5. The date from which applicant may claim right is September 24, 2009.
6. One-fifth of the construction is to be completed on or before July 21, 2012.
7. All construction is to be completed on or before December 21, 2014.
8. Water is to be put to beneficial use on or before December 21, 2018.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 7161-3 shall be constructed by a licensed well driller and construction of the wells and installation of the pumps shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.

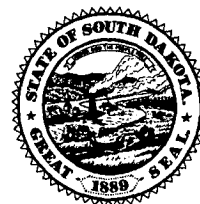
WATER MANAGEMENT BOARD

By: Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAR 10 2010

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 13" Depth 280'
- b) Casing Type Sch 80 PVC Diameter 8" Thickness 0.5
- c) Screen Type S.S. HF 50-slot Diameter 8" Thickness 0.9
- d) Gravel Pack 1/8-3/8" Higman Length of Gravel Pack 50'
- e) Depth to Top of Water Bearing Material 200'
- f) Depth to Water (ground surface to water level) 25'
- g) Distance to nearest existing domestic well:
On applicants property _____ On property owned by others >2,500'

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System

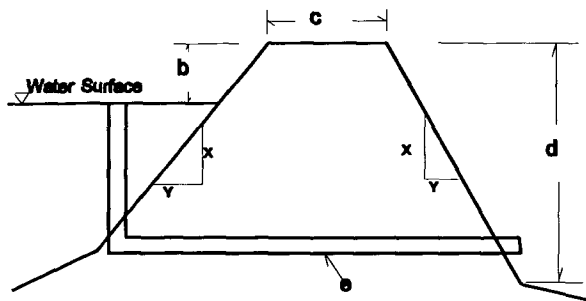
3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

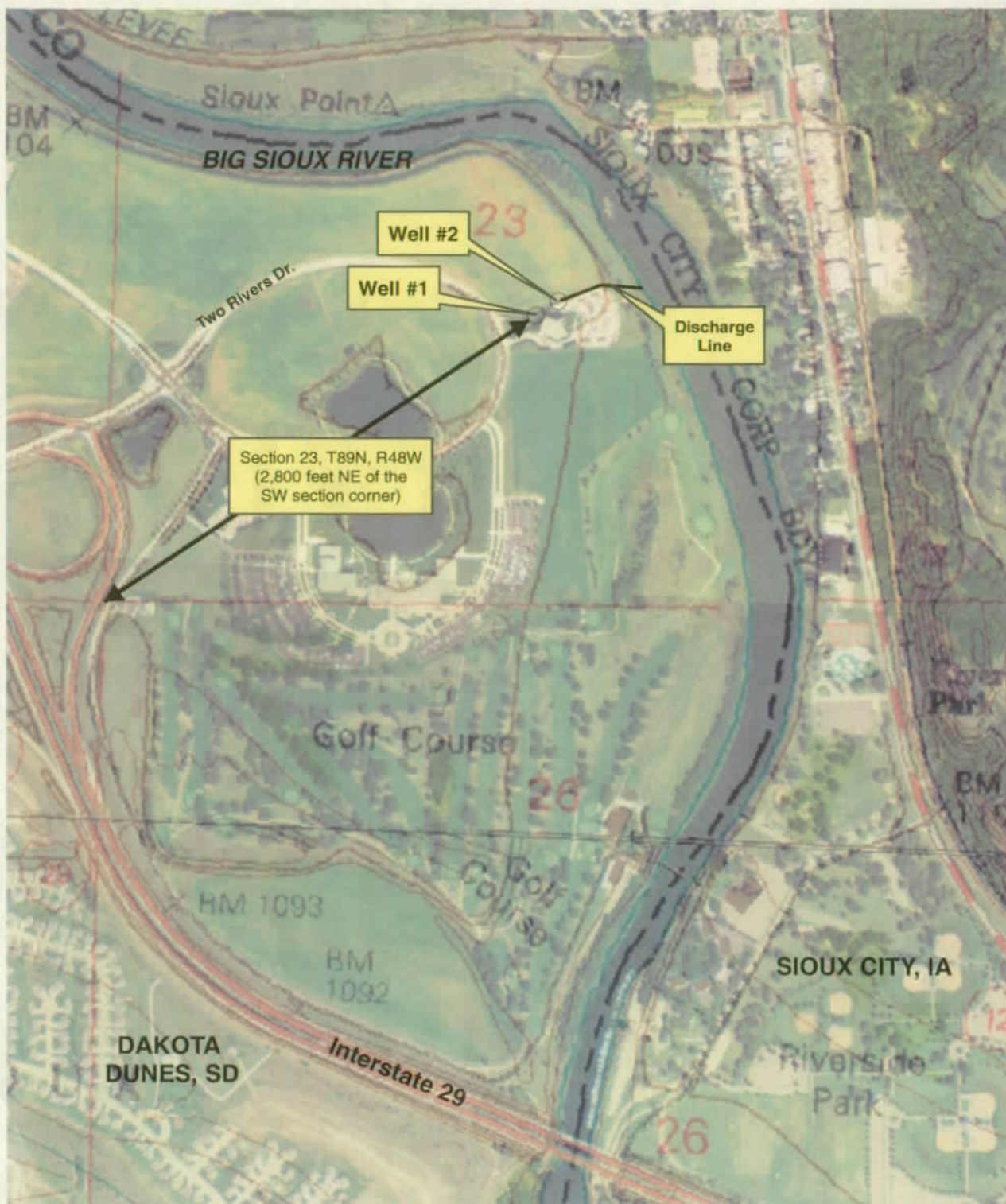
If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:



- b) Freeboard _____
- c) Crest Width _____
Crest Length _____
- d) Height _____
- e) Primary Outlet Capacity _____
If pipe, diameter _____
- f) Secondary Spillway Capacity _____
Spillway Width _____
- g) X & Y Slope _____
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres

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SEP 24 2009
WATER RIGHTS
PROGRAM

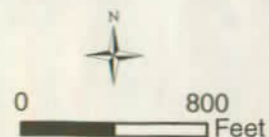


Figure

WATER WELL LOCATIONS

Beef Products Inc.
World Headquarters

Mark A. Hardie
Mark A. Hardie, P.E.
License No. 6819



RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 9/24, 20 09

RECEIVED OF BPI Technology 891 Two Rivers Dr DAKOTA DUNES SD 57049

The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>71161-3</u> to Appropriate Water, to construct and to put water to beneficial use	1150	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>71161-3</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	1350 00

No. 04215

By Harold Erbe
Chief Engineer



BPI TECHNOLOGY, INC.

September 23, 2009

RECEIVED

SEP 24 2009

**WATER RIGHTS
PROGRAM**

Fed Ex Overnight

Water Rights Program, DENR
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181
Attn: Eric Gronlund

Re: Application for Permit to Appropriate Water
Within the State of South Dakota

Dear Mr. Gronlund:

On behalf of BPI Technology, Inc., please accept in duplicate our company's application for well permitting. I am also enclosing a check in the amount of \$1,350.00 that includes the inspection fee based upon a 450 gpm rate. Based upon an earlier conversation the company outside engineer had with you, it was apparently indicated that a driller's log signed by a South Dakota licensed well driller did not need to accompany this application submission since the same would likely not be required. If that is no longer the case, please contact me and I will provide the same.

We appreciate the DENR's prompt time and attention in this permitting matter. Please feel free to contact me if you have any questions in the meantime.

Sincerely,

A handwritten signature in black ink, appearing to be 'B. Smith', with a large, stylized loop at the end.

Bruce M. Smith
Senior Counsel

BMS/bms
Enc

cc: Rich Jochum, Corp. Admin.
Craig Manker, Risk Manager
Gary Donofrio, Wachovia



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7161-3, BPI Technology, Inc.**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 7161-3, BPI Technology, Inc., c/o Bruce M. Smith, Senior Counsel, 891 Two Rivers Drive, Dakota Dunes SD 57049.

The Chief Engineer is recommending APPROVAL of Application No. 7161-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 7161-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.

See report on application for additional information.

Garland Erbele, Chief Engineer
October 27, 2009

NOTE: If you have not already done so, I encourage BPI Technology to contact Kelli Buscher with the Surface Water Quality Program of DENR at (605) 773-3352 to discuss whether a discharge permit is required to the discharge of water to the Big Sioux River.

**Report on Water Permit Application No. 7161-3
for BPI Technology Inc.
September 28, 2009**

Application No. 7161-3 proposes to appropriate 450 gallons per minute (1.00 cfs) from two wells approximately 280 feet deep located in the E ½ SW ¼ of Section 23, T89N R48W in Union County. The water is to be for commercial use including cooling the heating, ventilation, and air conditioning (HVAC) system in Section 23 in T89N R48W. The annual period during which water will be used is January 1 through December 31. Information submitted with the application indicates that the applicant did not submit a well log.

AQUIFER: Dakota Aquifer

This report will address the availability of unappropriated water from the Dakota aquifer.

WATER AVAILABILITY

Aquifer Characteristics:

The Dakota aquifer is a bedrock aquifer consisting of the sand and sandstone units of the Dakota Formation. The aquifer underlies 452 square miles and contains an estimated 7.8 million acre feet of water in storage in Union County (Hedges, 1982). The aquifer is laterally extensive throughout much of eastern South Dakota and extends into Nebraska to the south and Iowa to the east. Groundwater movement across Union County in the Dakota is basically from north to south (Niehus, 1994). The Dakota is recharged by underlying aquifers in the western part of South Dakota and possibly from the overlying Missouri Aquifer in Union County. The top of the Dakota aquifer is reported to be about 200 feet below grade and is reported to be 73 feet thick in this area. The aquifer is under confined conditions at this site. The Dakota formation in this area underlies the Missouri Elk Point aquifer which consists of sand and gravel. The two aquifers are likely hydraulically connected (Niehus, 1994). A test hold report for a nearby permit indicates that there is approximately 22 feet of separation (clay and shale) between the Dakota and Missouri aquifers at this application.

Observation Well Data:

The nearest Water Rights Program observation well, UN-98A is located approximately 3.5 miles northwest of this site. This well was installed in 1998 therefore historic water level information at this site is limited to levels since installation. The next nearest Dakota aquifer monitor well is located 30 miles northwest of this application location. Water levels for these wells show good response to climatic conditions, that is, rising water levels during wet years (recharge) and gradually declining water levels during dry years due to natural discharge and to pumping. The water level record indicates that the aquifer is capable of sustaining additional withdrawals (Water Rights, 2008).

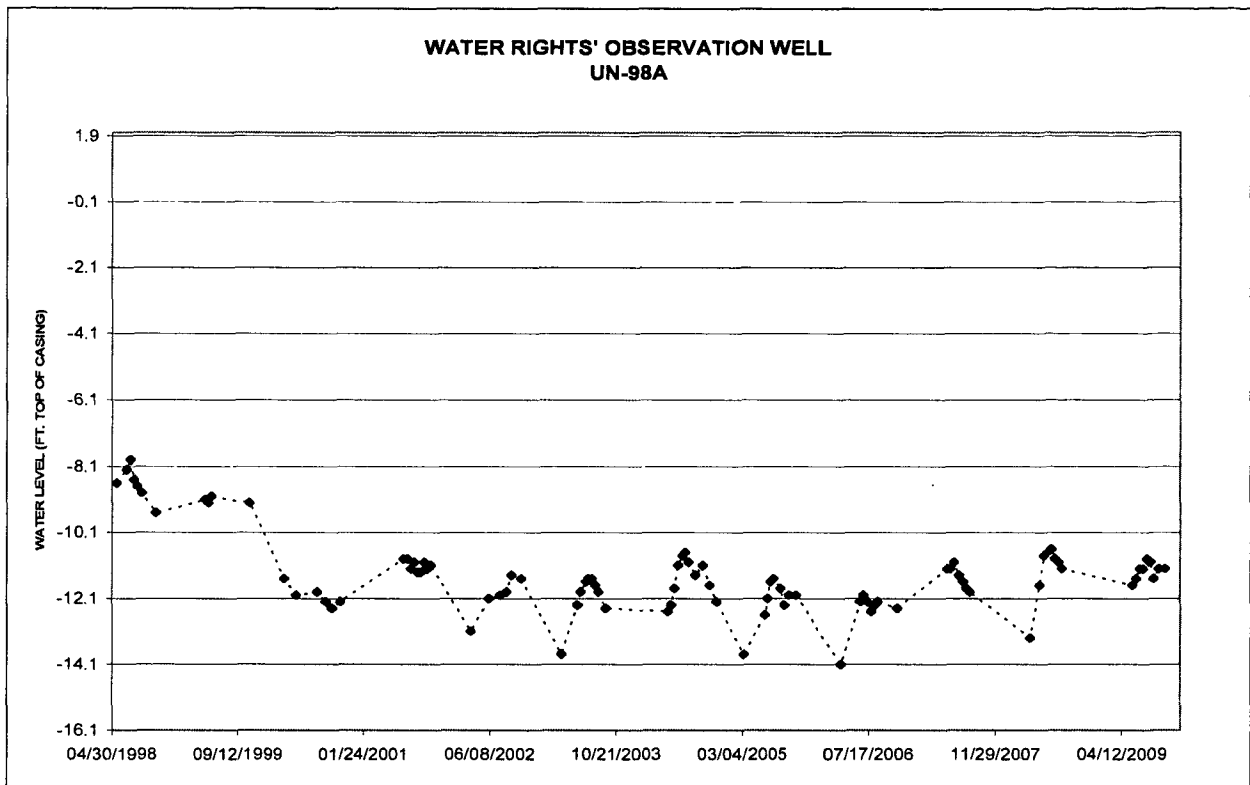


Figure 1. Hydrograph for Water Rights Observation Well UN-98A, completed into the Dakota Aquifer within four miles of 7161-3

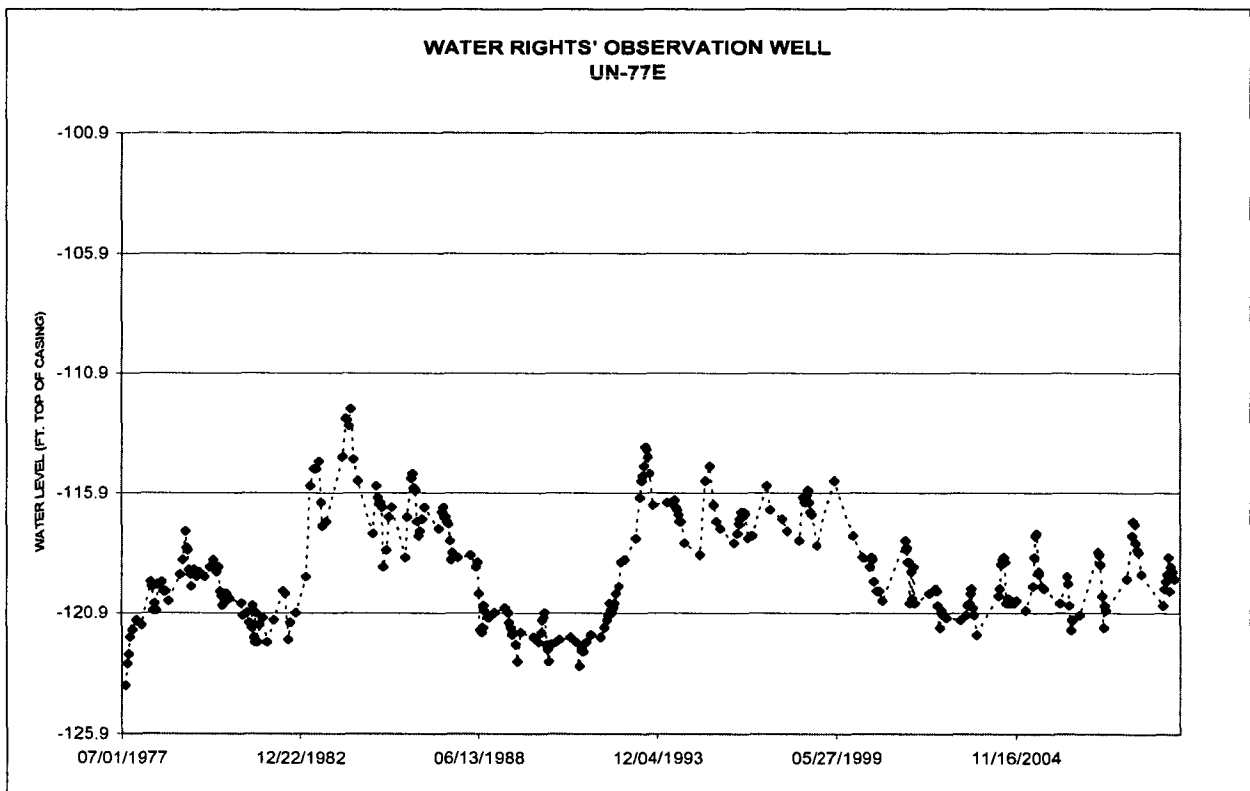


Figure 2. Hydrograph for Water Rights Observation Well UN-77E, completed into the Dakota Aquifer within thirty miles of 7161-3

In general, the hydrographs show that over the period of record, withdrawals have not exceeded recharge and water levels respond to climatic conditions.

Review of Existing Water Permits/Rights/Water Use:

The nearest Dakota formation well to this application location is License 6110-3 with two wells, one approximately 1,200 feet west-southwest, and the other around 1,720 feet southwest. Another permit located approximately 1,000 feet south of the application location is a Missouri Elk Point aquifer well. Water levels do fluctuate as a result of area pumping but this does not affect the availability of water from the aquifer.

Conclusions:

1. Water is available from Dakota Formation aquifer.
2. The aquifer is under confined conditions and is potentially hydraulically connected to the Missouri Elk Point aquifer at this location. Drawdown may result from pumping. Interference is not expected to be a problem.
3. If the well covered by this Permit depletes the domestic supplies or interferes with prior water rights, restrictions, to the extent necessary, of the capacity of the well or periods of operation or other arrangements may be required to protect these water supplies.
4. This well must be constructed in accordance with SD Well Construction Standards and complete well driller's logs must be submitted to the Water Rights Division. This is especially important since the Missouri Elk Point aquifer will be encountered during well construction.
5. A discharge permit will be required for the discharge line. The applicant must contact Kelli Buscher with the Surface Water Quality Program at (605)-773-3351 for information on the discharge permit process.



Hayes Haas
Natural Resources Engineer

Bibliography:

Hedges, L.S. et al, 1982, Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa, for the U.S. Army Corps of Engineers, SD DENR, SDGS, Vermillion, SD 57069

Niehus, C.A., 1994, Water Resources of Lincoln and Union Counties, South Dakota, USGS WRI Report 93-44195, United States Geological Survey, Rapid City, SD 57702

Water Rights, 2009, Unpublished Observation Well Records for Union County, SD DENR, Division of Water Rights, Pierre, SD, 57501

RECEIVED

DEC 23 2009

WATER RIGHTS
PROGRAM

Form 8

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of _____ Union)

I, _____ Susan Odson _____

certify that the attached printed Notice was
taken

from the _____ Southern Union County _____

_____ Leader-Courier _____

printed and published in _____ Elk Point _____

County of _____ Union _____ and

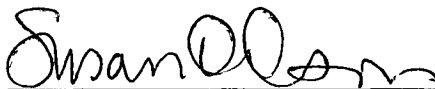
state of South Dakota. The notice was
published

in the newspaper on the following two dates:

December 3, 2009

December 10, 2009

Cost of Printing _____ \$48.21 _____



(Signature)

Affidavits Coordinator

(Title)

December 21, 2009

(Date Signed)

NOTICE OF APPLICATION NO. 7161-3 TO APPROPRIATE WATER

Notice is given that BPI Technology, Inc., 891 Two Rivers Drive, Dakota Dunes SD 57049 has filed an application for a water permit to appropriate 1.0 cubic feet of water per second from two wells to be completed into the Dakota Aquifer (approximately 280 feet deep) located approximately 2800 feet northeast of the southwest corner of Section 23-T89N-R48W for commercial use including water to cool the heating, ventilation and air conditioning system.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7161-3 because 1) unappropriated water is

available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E. Capitol, Pierre, SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by December 21, 2009.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application.

Steven M. Pirner, Secretary,
Department of Environment and
Natural Resources.

Publish December 3 and 10, 2009
Published twice at the total approximate cost of \$48.21
49-8-72



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

November 23, 2009

Southern Union Co Leader-Courier
PO Box 310
Elk Point SD 57025

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7161-3 to Appropriate Water to be published twice. Please publish the first notice on December 3, 2009 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is BPI Technology Inc. c/o Rich Jochum, 891 Two Rivers Dr., Dakota Dunes SD 57049 (Ph # 605-217-8000).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

No. 7161-3

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of November 23, 2009 enclosing Notice to Appropriate Water by Application No. 7161-3 which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

November 23, 2009

Bruce M Smith Sr Counsel
BPI Technology Inc
891 Two Rivers St
Dakota Dunes SD 57049

Dear Mr. Smith:

Water Permit Application No. 7161-3 for commercial use was sent to the Publisher of the Southern Union Co. Leader-Courier to be published on November 5 and 12, 2009. The Leader-Courier indicated that you did not contact them to authorize publication and arrange for payment. Consequently, the notice is being resent to the paper to be published December 3 and 10, 2009.

As stated in our previous letter dated October 28, 2009, be sure to contact the Leader-Courier at (605 356-2632) to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the applications.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
eric.gronlund@state.sd.us

enclosures

Instruction to Newspaper - Publish first Notice on December 3, 2009 with the second publication 7 days later. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

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Published twice at the total approximate cost of _____.



MAR 10 2010

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

BPI Technology Inc
c/o Bruce Smith
891 Two Rivers Dr
Dakota Dunes SD 57049

Dear Mr. Smith:

Enclosed is Water Permit No. 7161-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

A handwritten signature in black ink, appearing to read "Garland Erbele".

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

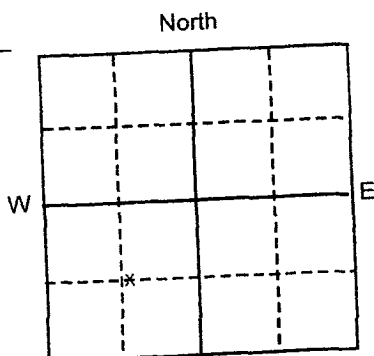
SOUTH DAKOTA WATER WELL COMPLETION REPORT

7161-3
11-02

ation ne 1/4 SW 1/4 Sec 23 Twp 89n Rg 48W

inty Union

Please mark well location with an "X"



Well Completion Date

7/18/10

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 2,200 ft. from UNKNOWN (identify source)

PROPOSED USE:

Domestic/Stock Irrigation ☐ Municipal Industrial ☐ Business Institutional ☒ Test holes Monitoring well ☐

METHOD OF DRILLING:

Rotary

casing DATA:

other describe ☐ Steel ☒ Plastic ☐ Other
PEWEIGHT DIAMETER FROM TO HOLE DIAMETER
LB/FT 8.00 IN 6.0 FT 224.0 FT 13.00 IN
LB/FT IN FT FT IN
LB/FT IN FT FT IN

ROUTING DATA:

Grout Type No. of Sacks Grout Weight From To
Bentonite 22 9.6 Lb/gal 0.0 Ft 215.0 Ft
Lb/gal Ft Ft

Describe grouting procedure

Remie

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 8.00 Inches Length 44.0 Feet
Material stainless, johnson
Slot Size 0.50 Set From 224.0 Feet to 268.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No
If so, what material?
Describe packer(s) and location

DISINFECTION:

Was well disinfected upon completion?
☒ Yes, How? chlorine liquid
☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: BPI Technology Inc

Business Name:

Address: 891 Two Rivers Drive

City, State, Zip: Dakota Dunes sd 57049

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Clay, brown, silty	0	21
Sand, fine, silty,	21	35
gravel, medium, w/ coarse sand	35	117
Siltstone, gray to lt gray, clayey	117	124
siltstone, light gray w/ abundant ss	124	218
Sandstone, fine	218	272
Sandstone w/ siltstone beds	272	302

STATIC WATER LEVEL 24.0 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other GPM

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:
☐ Bailed
☐ Other

Pumping Level Below Land Surface

46.0 Ft. After 6.0 Hrs. pumped 310.0 GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: 450.0 GPM

REMARKS

Well #2

This well was drilled under license # 666 and this report is true and accurate.

Drilling firm: Hammond Wetmore drilling

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 8/17/2010

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WATER RIGHTS PROGRAM

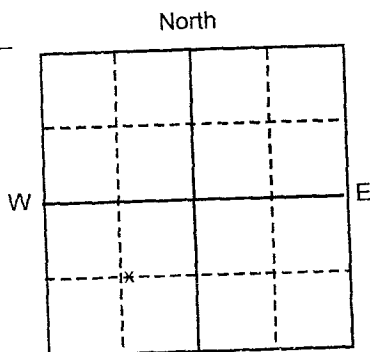
SOUTH DAKOTA WATER WELL COMPLETION REPORT

7161-3
11-02

Section ne 1/4 sw 1/4 Sec 23 Twp 89n Rg 48w

County Union

Please mark well location with an "X"



Well Completion Date

7/16/10

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
2,000 ft. from UNKNOWN (identify source)

PROPOSED USE:

Domestic/Stock Irrigation ☐ Municipal ☐ Industrial ☐ Business Institutional ☒ Test holes ☐ Monitoring well ☐

METHOD OF DRILLING:

Rotary

PIPE DATA:

Other describe ☐ Steel ☒ Plastic ☐ Other

WEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	8.00 IN	6.0 FT	256.0 FT	13.00 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

ROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	19	9.6 Lb/gal	0.0 Ft	240.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure

Tremie

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 8.00 Inches Length 44.0 Feet

Material stainless, johnson

Lot Size 0.50 Set From 256.0 Feet to 300.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION:

Was well disinfected upon completion?

☒ Yes, How? chlorine liquid

☐ No, Why Not?

Lab to which water

quality sample sent for analysis

Well Owner: BPI Technology Inc

Business Name:

Address: 891 Two Rivers Drive

City, State, Zip: Dakota Dunes sd 57049

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Clay, brown, silty	0	21
Sand, fine, silty,	21	35
gravel, medium, w/ coarse sand	35	117
Siltstone, gray to lt gray, clayey	117	124
siltstone, light gray w/ abundant ss	124	228
Sandstone, fine	228	303

STATIC WATER LEVEL

22.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:

☐ Bailed

☐ Other

Pumping Level Below Land Surface

44.0 Ft. After 6.0 Hrs. pumped 310.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: 450.0 GPM

REMARKS

Well #1

This well was drilled under license # 666 and this report is true and accurate.

Drilling firm: Hammond Wetmore drilling

Signature of License Representative:

[Signature]

Signature of Well Owner or Equitable Property Holder:

Date: 8/17/2010

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