

WATER PERMIT NO. 6177-3

Name of Applicant: Basin Electric Power Cooperative

Address: 1717 East Interstate Ave, Bismarck ND 58514

Phone: 701 223-0441

Amount of Water Claimed: 0.5 cfs (225 gpm)

Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: industrial use

County: Clay

Type of Waste Disposal System:

Location: 9 miles northwest of Vermillion

PRIORITY

Date Received: 2-1-2000

Fee: \$250

Corrected Application Received: 2-7-2000

Period of Annual Use: June 1 – September 30

Remarks: Water to be used at Spirit Mount station for an evaporative cooling method called inlet fogging

Diversion Point: SW ¼ SE ¼

Sec 4-T93N-R52W

Land to be Irrigated: NA

Depth of Well: 375 feet deep

Well Driller: :

Remarks:

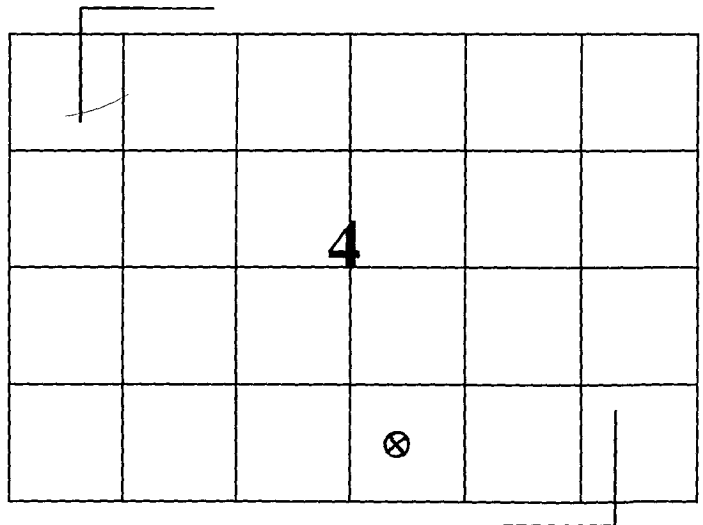
Type of Map: plat

Prepared by: Gary L Bean, RLS

Reviewed and the Number Assigned on: 2-14-00

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



SOUTH DAKOTA
WATER PERMIT NO. 6177-3

Date of first receipt of application February 1, 2000.

Date of return to applicant for corrections, amendments or changes February 2, 2000.

Date of receipt of corrected application February 7, 2000.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 6177-3 to Basin Electric Power Cooperative, 1717 East Interstate Ave, Bismarck ND 58514 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. 6177-3 appropriates 0.5 cubic feet of water per second (225 gallons per minute) from one well (Dakota Formation) 375 feet deep located in the W ½ SE ¼ Section 4-T93N-R52W.
2. The water appropriated shall be used for the purpose of supplying water for industrial use and may not exceed the amount of water needed for beneficial use in an evaporative cooling system at the Spirit Mound Station.
3. The water is to be used during the following described annual period: June 1 – September 30.
4. The date of approval of Permit No. 6177-3 is March 27, 2000.
5. The date from which applicant may claim right is February 1, 2000.
6. One-fifth of the construction is to be completed on or before September 27, 2000.
7. All construction is to be completed on or before March 27, 2005.
8. Water is to be put to beneficial use on or before March 27, 2009.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

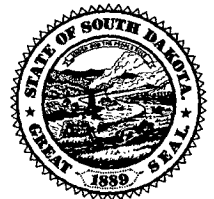
1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 6177-3 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) from the producing formation to the surface 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

APR 10 2000

date



Mail to:
Water Rights Program
Joe Foss Building
523 E. Capitol
Pierre, SD 57501-3181
(605) 773-3352

(office use only)
No. 6177-3 Hydrologic Unit 10170102
Basin Vermillion River
Newspaper Plain Talk, Vermillion, SD



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

Type of Application: X **New** **Vested Right** (Use predates Mar 2, 1955) **Future Use Reservation**
(check one) **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.)

1. Name of Applicant Basin Electric Power Cooperative Phone (701) 223-0441
(check one) ☒ Owner ☐ Tenant/lessee
- Mailing Address 1717 East Interstate Avenue Bismarck State ND 58514
(Street, RR. or Box) (Zip Code)
2. Amount of water claimed 0.5 *CFS or 225 **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply Dakota (Groundwater)
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 1 well in SW 1/4
SE 1/4 Sec 4 T93N, R52W
County Clay
5. County or counties where water will be used Clay County
6. Annual period during which water is to be used June /- September 30
7. 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)
The water will be used at the Spirit Mount Station for an evaporative cooling method called inlet fogging. A portable water treatment facility will also be on-site with any reject water pumped to an evaporation pond. The pond will be sized to hold approximately 1.0 acre/feet.

**STATE OF NORTH
DAKOTA)**

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)

County of Burlington

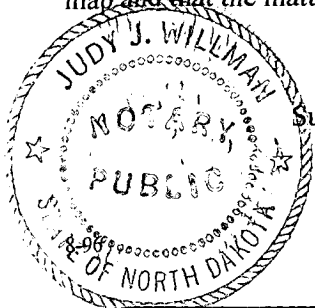
I, James A. Berg, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

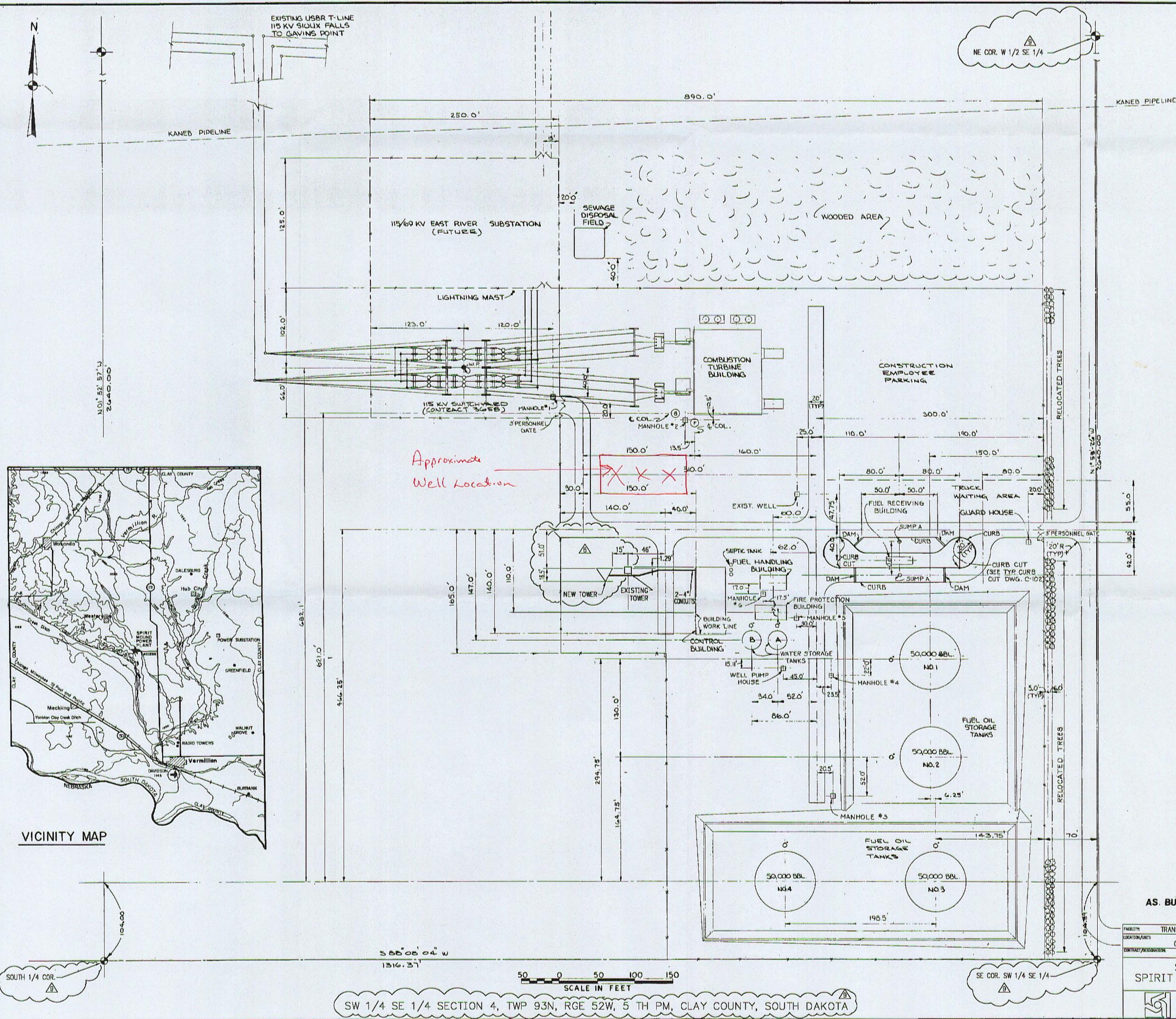
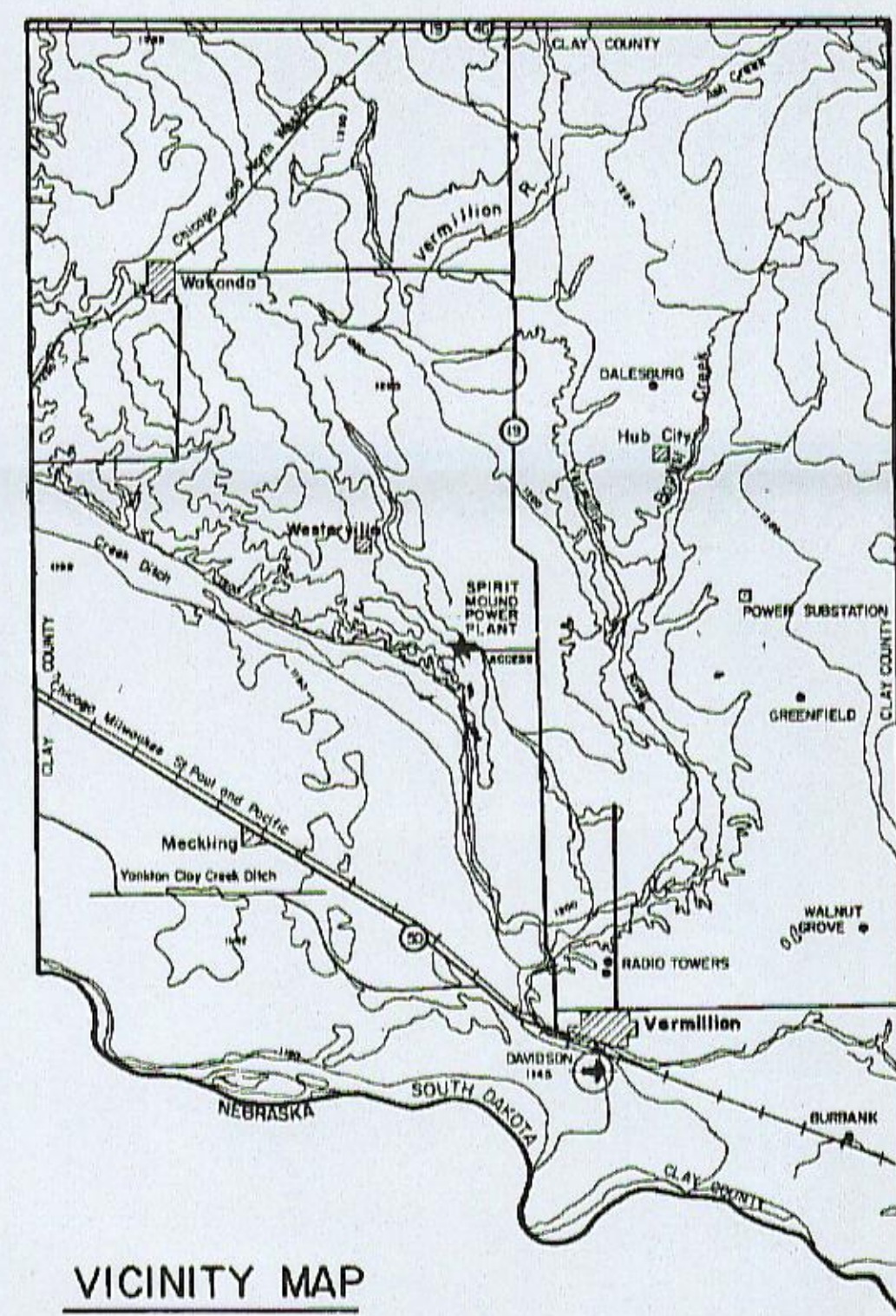
Signed

Subscribed and sworn to before me this 31 day of June 1920

JUDY J. WILLMAN
Notary Public, State of North Dakota
My Commission Expires March 1, 2008

Notary Public





NOTES

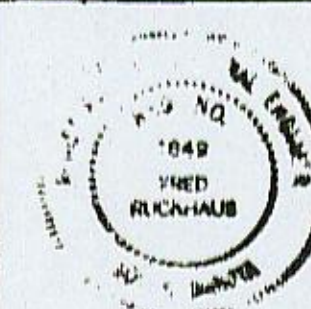
1. MANHOLES #1, #2, & #6 ARE ELECTRICAL.
ALL OTHERS ARE MECHANICAL.

9	2/11/00	ADDED SURVEY INFORMATION & CERTIFICATE L. FROELICH/G. BEAN/D. ERICKSON			
8	8/1/85	MOVED TOWER LOCATION B. NELSON/D. PRICE/D. MUGGLI			
7	8/30/85	ADDED TOWER LOCATIONS B. NELSON/D. PRICE/D. MUGGLI			
6	5/2/79	CJS	W.S	CONFORMING TO CONSTRUCTION RECORDS	
5	3/19/79	DJW	RCR	REVISED AS NOTED	
4	10/2/78	CJS	KEW	ADDED MANHOLES, SUMP A, E, WELL, PUMP HOUSE	
3	4/23/78	DJW	FEZ	GENERAL REVISIONS	
2	7/16/76	RWC	RWS	ADDED DIMENSION	
1	4/2/76	RWC	RWS	MOVED PORTION OF WEST FENCE MOVED ROAD THAT LEADS- TO SWITCHYARD ADDED DIMENSIONS MOVED SWITCHYARD FENCE CHANGED CONTROL B.L.D. CHANGED WATER TANK, CHANGED B.L.D. NOS CHANGED B.L.D. NO. 1, 2 & 4 ADDED WATER TANK	

SURVEYORS CERTIFICATE

I, GARY L. BEAN, DO CERTIFY THAT FOR THE PURPOSE OF PROPERLY IDENTIFYING THE LOCATION OF THE SUBJECT PROPERTY, I DIRECTED THE LABELING OF THE CADASTRAL CORNERS SHOWN AS REVISION NO. 9 ON THE FACE OF THIS DRAWING, AND THAT THIS LABELING DOES IDENTIFY THE CORRECT ALIQUOT PART OF THE PUBLIC LAND SURVEY SYSTEM SUBDIVISION AS SHOWN.

Gary L. Bean Feb. 11, 2000
GARY L. BEAN, LS 3090
SOUTH DAKOTA



R. W. BECK and ASSOCIATES

ANALYTICAL AND CONSULTING ENGINEERS

Seattle, Washington Denver, Colorado

AS. BUILT

FACILITY: TRANSMISSION SYSTEM MAINTENANCE		DESIGN BY RWS	3/22
LOCATION/AREA: 061-SMS 115KV SWITCHYARD		DRAWN BY RWC	3/02
CONTRACT/REGISTRATION:		DESIGN CHK. RWS	3/02
		DRAFT CHK. RW	3/02
		APPROVED FR	3/02
SITE PLAN FOR SPIRIT MOUND POWER PLANT		SCALE: 1"=1'	AS SHOWN
 BASIN ELECTRIC POWER COOPERATIVE 1717 EAST INTERSTATE AVENUE BISMARCK, NORTH DAKOTA 58501-0064 (701) 223-2222		VENDOR DRAWING NO. 2128-G-102	REV.
		BASIN DRAWING NO. 061-060-C1-001	

Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 16 inches Depth 375 feet
- b) Casing Type PVC Diameter 8 inch Thickness Schedule 80
- c) Screen Type Slotted pipe Diameter 8 inch Thickness Schedule 80
- d) Gravel Pack yes Length of Gravel Pack 80 feet
- e) Depth to Top of Water Bearing Material 275 - 300
- f) Depth to Water (ground surface to water level) 1140 asl
- g) Distance to nearest existing domestic well:
- On applicants property X On property owned by others _____

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:

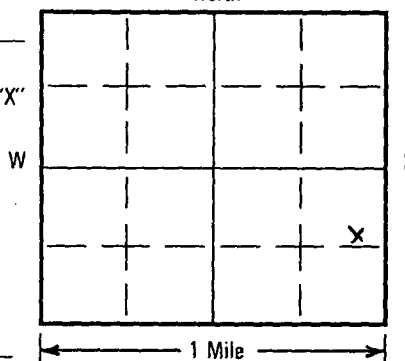
- b) Freeboard _____
- c) Crest Width _____
Crest Length _____
- d) Height _____
- e) Primary Outlet Capacity _____
If pipe, diameter _____
- f) Secondary Spillway Capacity _____
Spillway Width _____
- g) X & Y Slope _____
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____
- i) Storage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

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location NE 1/4 SE 1/4 Sec 4 Twp 93^N Rg 52^W
County Clay

Please mark well location with an "X"



Well Completion Date

5-17-00

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 150 ft. from Abandoned well (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Direct RotaryCASING DATA: ☐ Steel ☒ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>Sch 80 LB/FT</u>	<u>8 IN</u>	<u>442 FT</u>	<u>7 FT</u>	<u>13" IN</u>
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Bent GRT</u>	<u>42</u>	<u>25 lb./gal</u>	<u>20 ft</u>	<u>338 ft</u>
<u>N.C. GROUT</u>	<u>7</u>	<u>15 lb./gal</u>	<u>7 ft</u>	<u>20 ft</u>

Describe grouting procedure pressure groutedSCREEN: ☐ Perforated pipe ☒ ManufacturedDiameter 8 IN Length 100 FEETMaterial Sch 80 PVCSlot Size .040 Set From 342 Feet to 442 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: _____

_____, NO, Why Not? _____

Laboratory sent to for water quality analysis

NO stateWell Owner: Basin Electric Power Coop

Business Name: _____

Address: 1717 E. Interstate Ave
Bismark, ND 58501

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>clay, pebbly, yellow (fill)</u>	<u>0</u>	<u>39</u>
<u>chalk, yellow, some water loss</u>	<u>39</u>	<u>61</u>
<u>shale, dk grey, (Carlisle, shale)</u>	<u>61</u>	<u>252</u>
<u>limestone, gr. bn, (Greenhorn)</u>	<u>252</u>	<u>279</u>
<u>shale, dk grey, (Gardiner)</u>	<u>279</u>	<u>337</u>
<u>sandstone, white, v. fine (Dakota ss)</u>	<u>337</u>	<u>449</u>
<u>claystone, white to grey, (Dakota fm)</u>	<u>449</u>	<u>459</u>

STATIC WATER LEVEL 157.1 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ PumpedDescribe: pumped w/ Submersible☐ Bailed☐ Other _____

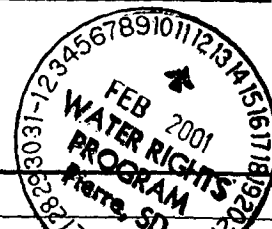
Pumping Level Below Land Surface

207 ft. After 5 Hrs. pumped 180 GPM211.6 ft. After 9.3 Hrs. pumped 160 GPMIf pump installed, pump rate 200 gpm GPM

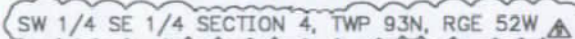
REMARKS

This well was drilled under license # 666

And this report is true and accurate.

Drilling firm Hammond-Wetmore DrillingSignature of License Representative: [Signature]Signature of Well Owner or Equitable Property Holder: Terry R JohnsonDate: 5/23/00

2-12-01

[illegible]

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

N2 416374

Pierre, Feb 1, 2000

RECEIVED OF Basin Electric Power Cooperative, 1717 E Interstate Ave, Bismarck ND 58514
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>6177-3</u> to Appropriate Water, to construct and to put water to beneficial use _____	250	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>6177-3</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	300 00

By John Hatch Garland Erberle
Chief Engineer
Garland Erberle KS

**BASIN ELECTRIC
POWER COOPERATIVE**

1717 EAST INTERSTATE AVENUE
BISMARCK, NORTH DAKOTA 58501-0564
PHONE: 701/223-0441
FAX: 701/224-5336



January 31, 2000

Mr. Eric Gronlund
SD Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181



Dear Mr. Gronlund:

Enclosed is an application plus one copy for a permit to appropriate water within the state of South Dakota. Also enclosed is a check for \$300 to cover the associated application and inspection costs.

The application is for a groundwater supply system that will be located at the Spirit Mound Station located in Clay County, South Dakota.

If you have any questions, please contact me.

Sincerely,

James A. Berg
Water Quality/Waste Management Coordinator

jab:mev

Enclosure

cc: Dawn Moore w/encl.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

February 2, 2000

Basin Electric Power Cooperative
James A Berg
1717 East Interstate Ave
Bismarck ND 58514-0564

Dear Mr. Berg:

Thank you for submitting the *Application for a Permit to Appropriate Water* for industrial use in Clay County. Enclosed is the map submitted with the application. On the map, please mark the location of the proposed well. My review of the map, only found the location of the existing well.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
.605 773-3352

enclosure

**BASIN ELECTRIC
POWER COOPERATIVE**

1717 EAST INTERSTATE AVENUE
BISMARCK, NORTH DAKOTA 58501-0564
PHONE: 701/223-0441
FAX: 701/224-5336



February 4, 2000

Ms. Karen Schlaak
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181



Dear Ms. Schlaak:

Enclosed is the map showing the approximate location of the proposed well for the Spirit Mound Station.

If you have any questions, please contact me.

Sincerely,

James A. Berg
Water Quality/Waste Management Coordinator

jab:mev
Enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

February 8, 2000

Basin Electric Power Cooperative
James A Berg
1717 East Interstate Ave
Bismarck ND 58514-0564

RE: Spirit Mound Station application

Dear Mr. Berg:

Enclosed is the map submitted with the application. When I returned the map the first time, I failed to include in my letter that the map needed to be signed by one of the following: Registered Land Surveyor, Registered Professional Engineer or by any other government employee who normally prepares maps as a part of his assigned duties. I realize the engineers stamp is on the map but our rules require a signature.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352

enclosure

**BASIN ELECTRIC
POWER COOPERATIVE**

1717 EAST INTERSTATE AVENUE
BISMARCK, NORTH DAKOTA 58501-0564
PHONE: 701/223-0441
FAX: 701/224-5336



February 11, 2000

Ms. Karen Schlaak
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181



Dear Ms. Schlaak:

Enclosed is the map of the Spirit Mound Station showing the proposed well location that is signed and sealed by a registered land surveyor.

If you have any questions, please contact me.

Sincerely,

James A. Berg
Water Quality/Waste Management Coordinator

jab:mev
Enclosure
cc: Dawn Moore

REPORT ON WATER PERMIT APPLICATION NO. 6177-3
for Basin Electric Power Cooperative
February 23, 2000

Application No. 6177-3 proposes to appropriate 0.5 cfs (225 gpm) from one well approximately 375 feet deep located in the W 1/2 SE 1/4 of Section 4, T93N-R52W in Clay County. The water is for industrial use at the Spirit Mound Station in an evaporative cooling system.

AQUIFER - DAKOTA FORMATION (DKOT)

In Clay County, the Dakota Formation consists of interbedded siltstone, sandstone, and shale and may be as much as 400 feet thick (Christensen, 1967). The aquifer is confined and under artesian conditions at this site. The Dakota Formation underlies, all of Clay County, 403 square miles and contains an estimated 5.8 million acre feet of recoverable water in storage (Hedges, 1982). The Dakota Formation forms the bedrock of a large channel in east central Clay County which is nearly filled with outwash. The outwash is named the Lower Vermillion Missouri aquifer and the Missouri Elk Point aquifer and both are hydraulically connected to the Dakota Formation. The potentiometric surface of the Dakota aquifer indicates that ground water is probably leaking upward from the Dakota into the glacial aquifers.

No test hole information is supplied with this application, however, there is an existing permitted Dakota Formation well on site and there is sufficient information from the Christensen report to evaluate the Dakota Formation as a potential water source.

The Water Rights Program does not monitor any observation wells completed into the Dakota Formation in Clay County. The nearest Dakota Formation observation well is UN-77E and is located about 12 miles southeast of this application. The water levels for this well mirror climatic conditions. The water level record indicates the aquifer is capable of sustaining additional withdrawals (Water Rights, 2000). A hydrograph for this observation well is included with this report.

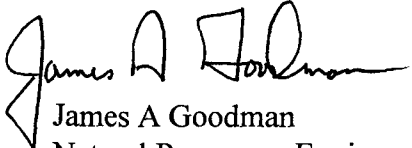
Water levels from the Dakota Formation have been declining for years, probably since the first free flowing wells were completed into the aquifer. This is especially noticeable in other regions of South Dakota. Records for Water Rights observation wells in other parts of the state indicate a present rate of decline ranging from less than one foot per year to no change at all (Water Rights, 2000). In southeastern South Dakota water level declines have occurred but are not as significant. Apparently, water levels for the Dakota aquifer are being affected by the nearness in the subsurface to the overlying glacial aquifers which are hydraulically connected to the Dakota aquifer.

REVIEW OF EXISTING WATER PERMITS/RIGHTS

There is an existing Water Right No. 2972-3, issued to the applicant, which appropriates 0.066 cfs (30 gpm) from the Dakota Formation at this site. The well for the new application will be located within 300 feet of the existing well. Interference will occur. Drawdown created by pumping will extend to the existing well and cause lowering of the water level. This effect is not expected to be adverse, however it may be necessary to lower or replace pumps.

CONCLUSIONS

1. Water is available from the Dakota aquifer.
2. The aquifer is confined and under artesian conditions. Drawdown will occur as a result of pumping. Interference is not expected to be a concern.
3. There is an existing Water Right No. 2972-3, located at this site. Interference will occur, however, the applicant will be able to manage withdrawals or even abandon, replace or incorporate the old right into the new one.
4. The well authorized by this application must be completed in accordance with SD Well Construction Standards.



James A Goodman
Natural Resources Engineer

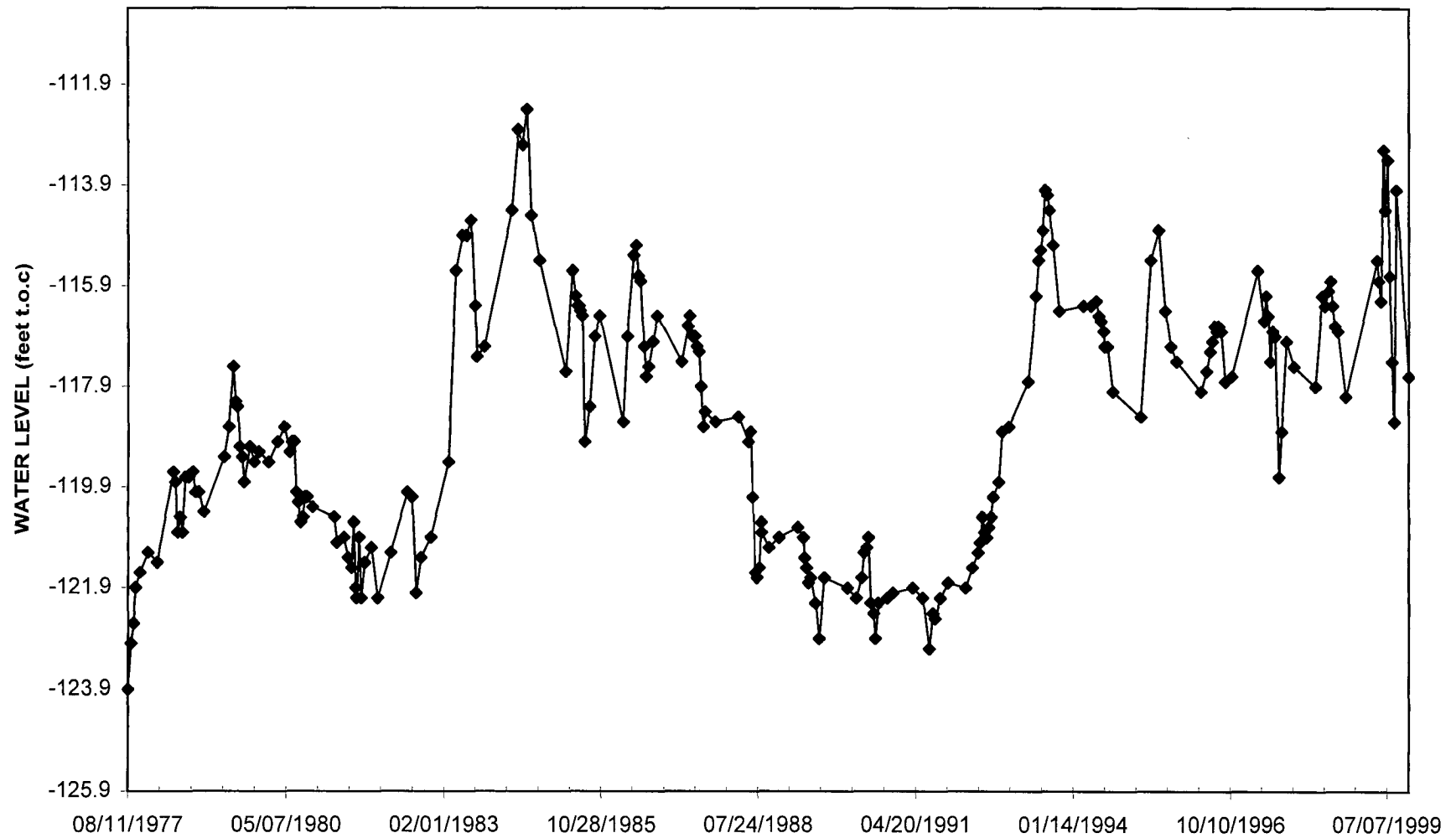
BIBLIOGRAPHY

Christensen, C.M., J.C. Stephens, 1967, Geology and Hydrology of Clay County South Dakota, Parts I and II, Bulletin 19, SD DENR, SDGS, Vermillion, SD, 57069.

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

Water Rights, 2000, Unpublished Observation Well Data for the Dakota Formation, SD DENR, Division of Environmental Services, Water Rights Program, Pierre, SD, 57501.

WATER RIGHTS' OBSERVATION WELL
UN-77E



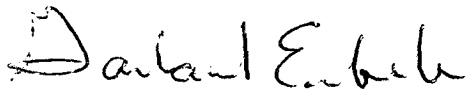
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 6177-3, Basin Electric Power Cooperative**

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. 6177-3, Basin Electric Power Cooperative, c/o James A. Berg, 1717 East Interstate Avenue, Bismarck ND 58514.

The Chief Engineer is recommending APPROVAL of Application No. 6177-3 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 well 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. 6177-3 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) from the producing formation to the surface pursuant to Section 74:02:04:28.

See report on application for additional information.



Garland Erbele, Chief Engineer
March 1, 2000

NOTE: The facility will be required to modify its air quality operating permit. It is my understanding that Brian Gustafson with DENR's Air Quality Program has been in contact with James Berg of Basin Electric Power Cooperative to explain this requirement. In addition, I encourage you to contact Kelli Buscher with DENR's Surface Water Quality Program at (605) 773-3351 to discuss whether any permitting issues may be necessary for the evaporation pond.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

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

March 2, 2000

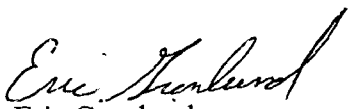
Basin Electric Power Cooperative
%James A. Berg
1717 East Interstate Ave.
Bismarck, ND 58514

Dear Mr. Berg:

Water Permit Application No. 6177-3 for industrial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Plain Talk printed at Vermillion, SD (Ph # (605) 624-2695). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,


Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

March 2, 2000

Plain Talk
Box 256
Vermillion, SD 57069-0256

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 6177-3 to Appropriate Water to be published twice. Please publish the first notice on March 10, 2000, with the second publication 7 days later.

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 Basin Electric Power Cooperative, %James A. Berg, 1717 East Interstate Ave., Bismarck, ND 58514 (Ph # (701) 223-0441).

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
Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CU T HERE-----

No. 6177-3

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

Date _____

We are in receipt of your letter of March 2, 2000, enclosing Notice of Hearing to Appropriate Water by Application No. 6177-3 which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper

Instruction to Newspaper - Publish first Notice on March 10, 2000, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 6177-3 to Appropriate Water

Notice is given that Basin Electric Power Cooperative, 1717 East Interstate Ave, Bismarck ND 58514 has filed an application for a water permit to appropriate 0.5 cubic feet of water per second (225 gallons per minute) from one well (Dakota Formation) 375 feet deep located in the W ½ SE ¼ Section 4-T93N-R52W. Water is for industrial use at the Spirit Mound Station in an evaporative cooling system.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6177-3 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 the 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 the 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 March 27, 2000.

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 or 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. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

**PROOF OF PUBLICATION**

STATE OF SOUTH DAKOTA)
) SS
 County of Clay)

I, Kim Crady

certify that the attached printed Notice was
 taken

from the Plain Talk

printed and published in Vermillion

County of Clay and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

March 10, 2000

March 17, 2000

Cost of Printing \$35.21

Kim Crady
 (Signature)

Secretary
 (Title)

3/16/00
 (Date Signed)

NOTICE OF APPLICATION NO. 6177-3 TO APPROPRIATE WATER

Notice is given that Basin Electric Power Cooperative, 1717 East Interstate Ave., Bismarck, ND 58514 has filed an application for a water permit to appropriate 0.5 cubic feet of water per second (225 gallons per minute) from one well (Dakota Formation) 375 feet deep located in the W 1/2 SE 1/4 Section 4-T93N-R52W. Water is for industrial use at the Spirit Mound Station in an evaporative cooling system.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6177-3 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 the 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 the 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 March 27, 2000.

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 or 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. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

Publish: March 10 & 17, 2000



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

APR 10 2000

Basin Electric Power Cooperative
%James A. Berg
1717 East Interstate Ave.
Bismarck, ND 58514

Dear Mr. Berg:

Enclosed is Water Permit No. 6177-3 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,

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

enclosures

**BASIN ELECTRIC
POWER COOPERATIVE**

1717 EAST INTERSTATE AVENUE
BISMARCK, NORTH DAKOTA 58503-0564
PHONE 701-223-0441
FAX: 701/224-5336



March 19, 2001

Mr. Eric Gronlund
Water Rights Program
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

Dear Mr. Gronlund:

Enclosed is a completed Notice of Completion of Works and Application of Water to Beneficial Use, Form 10 for Water Permit Number 6177-3. Also enclosed is a copy of the well completion report.

If you have any questions, please contact me.

Sincerely,

James A. Berg
Water Quality/Waste Management Coordinator

jab:mev

Enclosure

cc: Dawn Moore
Dave Erickson



**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

Date March 19, 2001

TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181



FROM: Basin Electric Power Cooperative
(name)
1717 East Interstate Avenue
(address)
Bismarck, ND 58504
(city, state, zip) (701) 223-0441
(phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

Water Permit No. 6177-3 states that the water use system is to be constructed by
March 27, 2005 , and water is to be put to beneficial use by March 27, 2009
(date) (date)

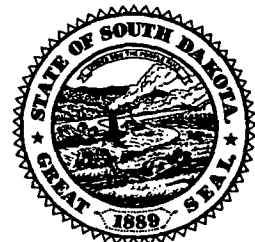
The water use system was completed on May 23, 2000
(date)

Applying the water to beneficial use was completed on July 17, 2000
(date)

You may schedule an investigation so that the water license may be issued.

James A. Berg

(signature)



Permit No. 6177-3
Vermillion River - Water District

Report Of Examination Of Works And/Or Application of Water To Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, August 24, 2004, made a thorough examination of the water use system constructed by Basin Electric Power Cooperative of 1717-3 holder of Permit No. 6177-3, bearing the priority of February 1, 2000 authorizing the diversion of 0.50 cu. ft. per second of the waters of the Dakota Formation for industrial purposes, in clay County.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

A 460 foot Dakota Formation well with a 20 HP Grundfos submersible pump

B. Works used to transport water to place of use:

Water is diverted 80,000 gallon storage tanks

C. Works used to apply water to beneficial use:

Water is diverted as needed for evaporative cooling at the Spirit Mound Station.

The system is in the following condition good. The point of diversion is Well is located **approximately 1910 feet west and 606 feet north of the SE corner (SW 1/4 SE 1/4) Section 4, T93N, R52W (Lat/Lon N42.89727 W-096.99049)**. The works are capable of diverting and conveying to the place of use 0.45 cu. ft. per second of water which is to be used for industrial use. Water has been put to beneficial use to the maximum extent and the license should be issued for 0.45 cfs

Applicable permit qualifications have been complied with: Yes X

Exceptions to compliance are: none Date Report Completed: January 26, 2005



Eric Gronlund

Natural Resources Engineer

DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR PERMIT NO. 6177-3

DATE OF INVESTIGATION:	
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	Terry Johnson Operation Supervisor @ Plant
NAME & ADDRESS OF PERMIT HOLDER	Basin Electric Cooperative c/o James Berg 1717 East Interstate Avenue Bismarck ND 58514
DIVERSION POINT LEGAL LOCATION	Well is located approximately 1910 feet west and 606 feet north of the SE corner (SW 1/4 SE 1/4) Section 4, T93N, R52W Lat/Lon N42.89727 W-096.99049

Other permit(s) associated with the project: Water Right No. 2972-3 exists at the site. The well authorized by No. 2972-3 is used for standby purposes.

WELL INFORMATION:

1) Well Drilling Firm: Hammond-Wetmore

Drilling

2) No. of Wells 1

3) Depth(s) 459 feet

4) Well log is available Yes

5) Comment:

Casing:

1) Diameter 8 inches

2) Length 342 feet

3) Type

Screen:

1) Type PVC Sch 80

2) Length 100 feet

3) Static water level 157.1 feet

Motor:

1) Make

2) Model No.

3) Horsepower rating 20 hp

Pump:

1) Make Grundfos

2) Model 230S

3) Size

4) Capacity 200 GPM

PERMIT QUALIFICATIONS:

- 1) Special qualifications to permit being abided by Yes
- 2) All structures, wells and lands on map Yes
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period not applicable

Water Right No. 2972-3 also exists for this facility. The water right appropriates 0.066 cfs from a 366 foot deep well for domestic and fire protection purposes at the Spirit Mound Station. Since the potable water is provided by Clay Rural Water System, this well is maintained for back-up purposes. It is my opinion that Water Permit No. 6177-3 and Water Right No. 2972-3 should not be incorporated into one water license.

Specifics on the location of the well authorized by Water Right No. 2972-3 are:

Well is located approximately 1850 feet west and 382 feet north of the SE corner (SW 1/4 SE 1/4) Section 4, T93N, R52W -- Lat/Lon N42.89663 W-096.99017 (coordinates obtained use a Garmin Etrex)

WATER PERMIT No. 6177-3, Basin Electric Cooperative



Primary well with storage in background



Secondary well (authorized by Water Right No. 2972-3 and used only for emergency purposes)

Water Permit No. 6177-3, Basin Electric Power Cooperative

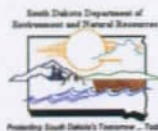


0 375 750 1,500 2,250 3,000 Feet

Well is located approximately 1910 feet west and 606 feet north of the SE corner (SW 1/4 SE 1/4) Section 4, T93N, R52W
Lat/Lon N42.89727 W-096.99049



South Dakota



Eric Gronlund
Eric Gronlund
Water Rights Program, DENR
Licensing Investigation - August 24, 1004

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 6177-3

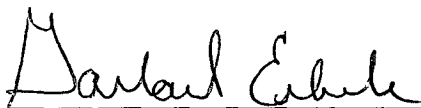
(1) Basin Electric Power Cooperative, 1717 E Interstate Ave, Bismarck ND 58514 made Application No. 6177-3, February 1, 2000 for a water permit to divert 0.5 cubic feet of water per second from groundwater (one well), Clay County, South Dakota for industrial use purposes. Permit No. 6177-3, with a priority date of February 1, 2000 was approved March 27, 2000 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 27, 2005 and for the application to beneficial use of water on or before March 27, 2009.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 6177-3 is issued a license, bearing a priority date of February 1, 2000 to appropriate 0.45 cubic feet of water per second from groundwater (one well) for industrial use at the Spirit Mound Station in an evaporation cooling system.

The diversion point is located: 1,910 feet west and 606 feet north of the southeast (SW ¼ SE ¼) Section 4-T93N-R52W.

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 6177-3 including the following now applicable qualifications:

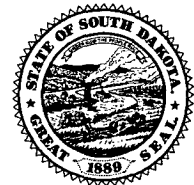
- The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The well authorized by Permit No. 6177-3 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) from the producing formation to the surface pursuant to Section 74:02:04:28.



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

APR 19 2005

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

APR 19 2005

6177-3

Basin Electric Power Cooperative
% James Berg
1717 E Interstate Ave
Bismarck ND 58514

Dear Mr. Berg:

Enclosed is Water License No. 6177-3. This is the final water right document completing your process of obtaining a Water Right.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

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

enclosures