

WATER PERMIT NO. 2466-2

Name of Applicant: Black Hills Generation, Inc.

Address: PO Box 1400, Rapid City SD 57709

Phone: 605 721-2219

Amount of Water Claimed: 0.555 cfs

Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: industrial use

County: Pennington

Type of Waste Disposal System:

Location: north of Rapid City

PRIORITY Date Received: 8-16-01

Fee: \$275

Corrected Application Received:: 8-21-01

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: SW ¼ NE ¼ Sec 22-T2N-R7E

Land to be Irrigated: NA

Depth of Well: 600 or 1400 feet deep

Well Driller: :

Remarks:

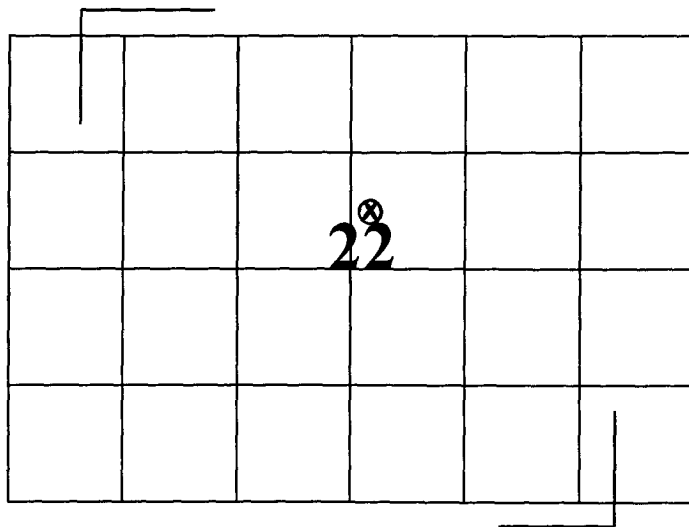
Type of Map: plat

Prepared by: Tim Rogers

Reviewed and the Number Assigned on: 8-21-01

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



FORM 2: Application for uses other than irrigation
(type or print)



Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>2466-2</u> (office use only) Hydrologic Unit <u>10/20/10</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Rapid City Journal, Rapid City</u>

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: ☒ 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.) NA

1. Name of Applicant Black Hills Generation, Inc. Phone (605) 721 2219
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address P.O. Box 1400, Rapid City State SD 57709
(Street, RR, or Box and City) (Zip Code)

2. Amount of water claimed 0.555 *CFS or 250 **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 Ground Water - 1 well

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
1 wells - W 1/2, W 1/2, NE 1/4, Section 22, T2N, R7E.
County Pennington

5. County or counties where water will be used Pennington

6. Annual period during which water is to be used January 1 to December 31

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. **Black Hills Generation Inc. will be installing two natural gas electrical generating combustion turbines at the above location. The water would be used to cool the turbines. Air quality permits have been obtained from DENR.**

STATE OF SOUTH DAKOTA)
County of Pennington 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, Tim Rogers, 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 [Signature]

Subscribed and sworn to before me this 14th day of August 20 01

[Signature]
Notary Public signature

SOUTH DAKOTA
WATER PERMIT NO. 2466-2

Date of first receipt of application August 16, 2001.

Date of return to applicant for corrections, amendments or changes August 16, 2001.

Date of receipt of corrected application August 21, 2001.

The Water Management Board approved Water Permit Application No. 2466-2 on December 5, 2001 for Black Hills Generation, Inc., PO Box 1400, Rapid City SD 57709 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. 2466-2 appropriates 0.557 cubic feet of water per second (250 gallons per minute) from one well located in the SW ¼ NE ¼ Section 22-T2N-R7E. The well will either be completed into the Minnelusa aquifer (approximately 600 feet deep), or will be completed into the Madison aquifer (approximately 1400 feet deep).
2. The water appropriated shall be used for the purpose of industrial use to cool natural gas electrical generating combustion turbines 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 from which applicant may claim right is August 16, 2001.
5. One-fifth of the construction is to be completed on or before June 5, 2004.
6. All construction is to be completed on or before December 5, 2006.
7. Water is to be put to beneficial use on or before December 5, 2010.
8. 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 authorized by Permit No. 2466-2 shall be constructed into a single water source, either the Minnelusa or Madison aquifer, but not both. At the time of licensing, the final water right will be issued for the developed water source.
2. 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.
3. The well authorized by Permit No. 2466-2 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.

(continued)

4. Applicable only if the well is constructed into the Madison Aquifer -- In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2466-2 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 2466-2 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 46-5-37, 46-5-37.1, and ARSD 74:02:01:37.

WATER MANAGEMENT BOARD

By: _____

Garland Erbele

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

JAN 15 2002

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 8 3/4" Depth 600' or 1400'
- b) Casing Type Steel Diameter 7" O.D. Thickness .312"
- c) Screen Type NA Diameter NA Thickness NA
- d) Gravel Pack NA Length of Gravel Pack NA
- e) Depth to Top of Water Bearing Material Minneluza 600' Madison 1400'
- f) Depth to Water (ground surface to water level) ~50'
- g) Distance to nearest existing domestic well: Unknown, but at least > 1/2 mile.
- On applicants property none On property owned by others > 1/2 mile

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) Evaporation Pond – no discharge.
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

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

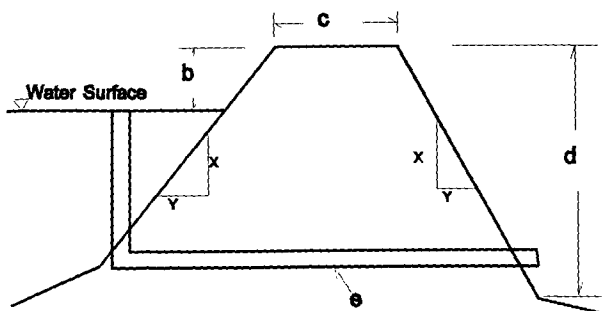
4. Water Storage Dams

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:

NA

- 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



OWNED BY
SOUTH DAKOTA STATE CEMENT PLANT COMMISSION

40 ACRES
B.H.P.



T2N, R7E, SECTION 22
PENNINGTON COUNTY

0 500' 1000'

PROPOSED
CT LOCATION

SUBSTATION SITE

69KV TO BELLE FOURCHE

69KV TRIPLE CIRCUIT TO BEN FRENCH

1/4 LINE

1/4 LINE

SECTION LINE

SERVICE
ROAD

EXIT
55

1-90

POND

SECTION LINE

69KV DOUBLE CIRCUIT

20KV TO HOT SPRINGS

BLACK HILLS POWER & LIGHT COMPANY
LANGE SUBSTATION
SITE LOCATION & PLAN

DATE 6-4-90
BY J.A.S. DATE 9/10/01
LNG-E-001

OWNED BY
SOUTH DAKOTA STATE CEMENT PLANT COMMISSION

40 ACRES
B.H.P.



T2N, R7E, SECTION 22
PENNINGTON COUNTY

0 500' 1000'

PROPOSED
CT LOCATION

Wet 2

SUBSTATION SITE

HWY TO BELLE FOURCHE

HWY TRIPLE CIRCUIT TO NEW FRENCH

1/4 LINE

1/4 LINE

SECTION LINE

SECTION LINE

SERVICE
ROAD

EXIT
55

POND

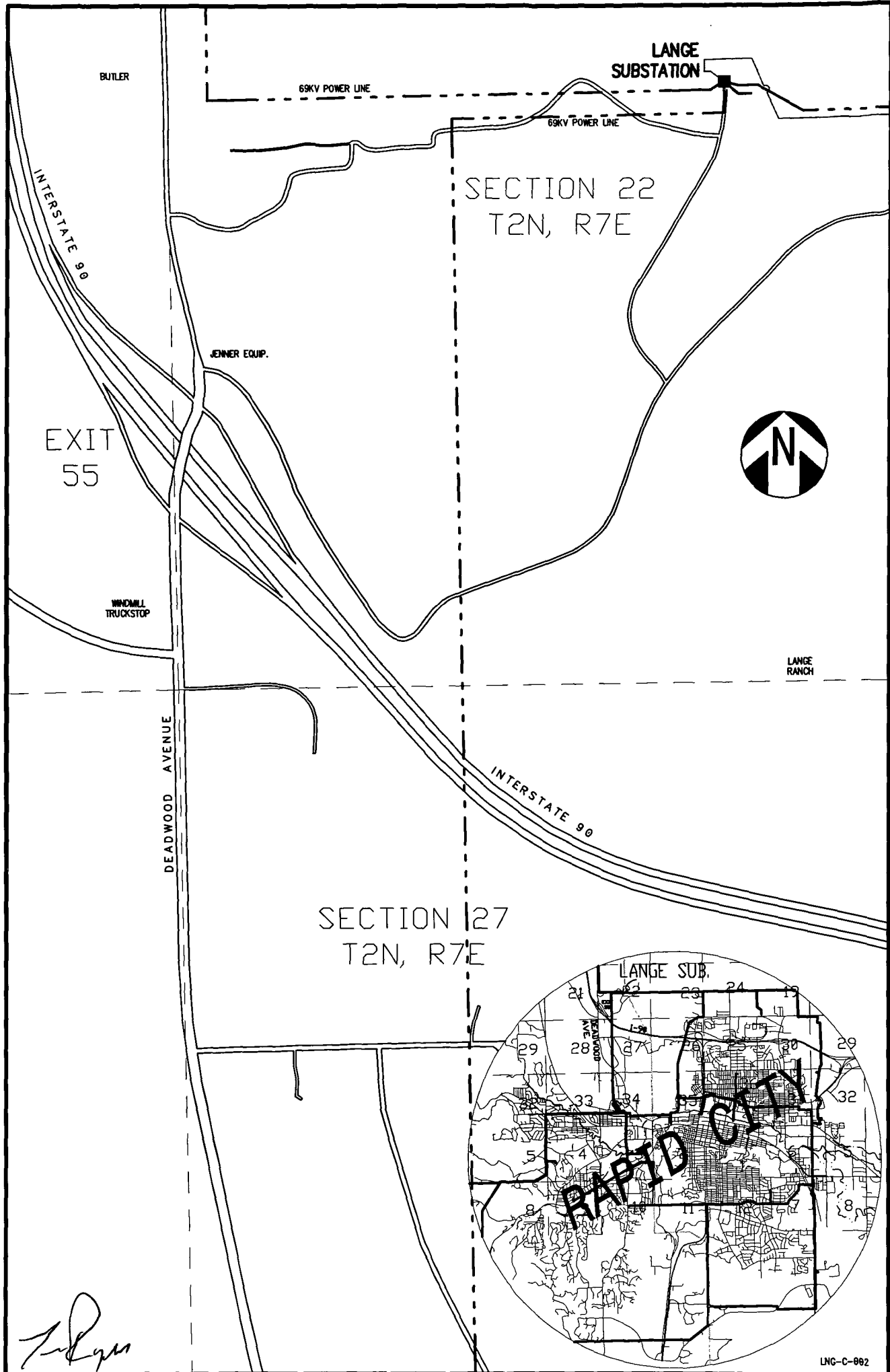
20KV TO HOT SPRING

BLACK HILLS POWER & LIGHT COMPANY
LARGE SUBSTATION
SITE LOCATION & PLAN

DATE JUN DATE 6-4-58 FILE NO. LNG-E-001

Z. Ryan

2466-2



BUTLER

69KV POWER LINE

LANGE
SUBSTATION

69KV POWER LINE

SECTION 22
T2N, R7E

JENNER EQUIP.

EXIT
55

WHOMML
TRUCKSTOP

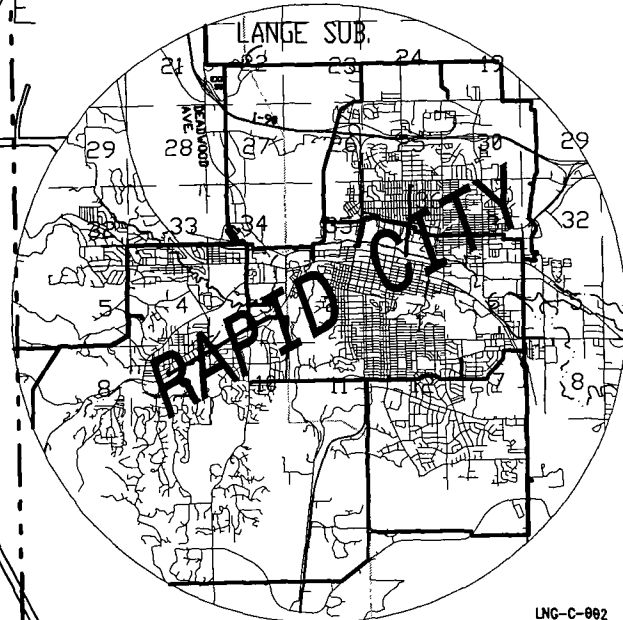
DEADWOOD AVENUE



LANGE
RANCH

INTERSTATE 90

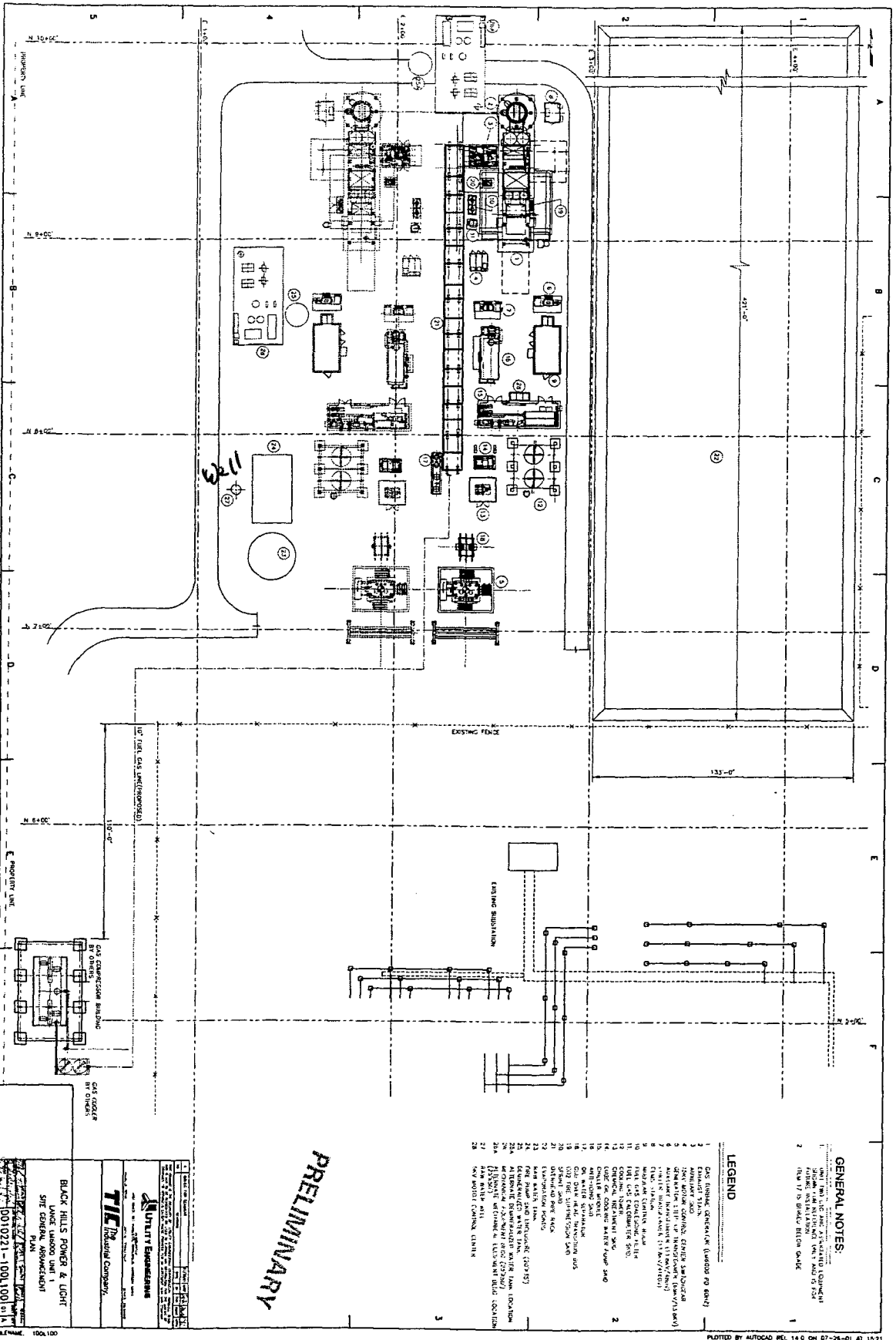
SECTION 27
T2N, R7E



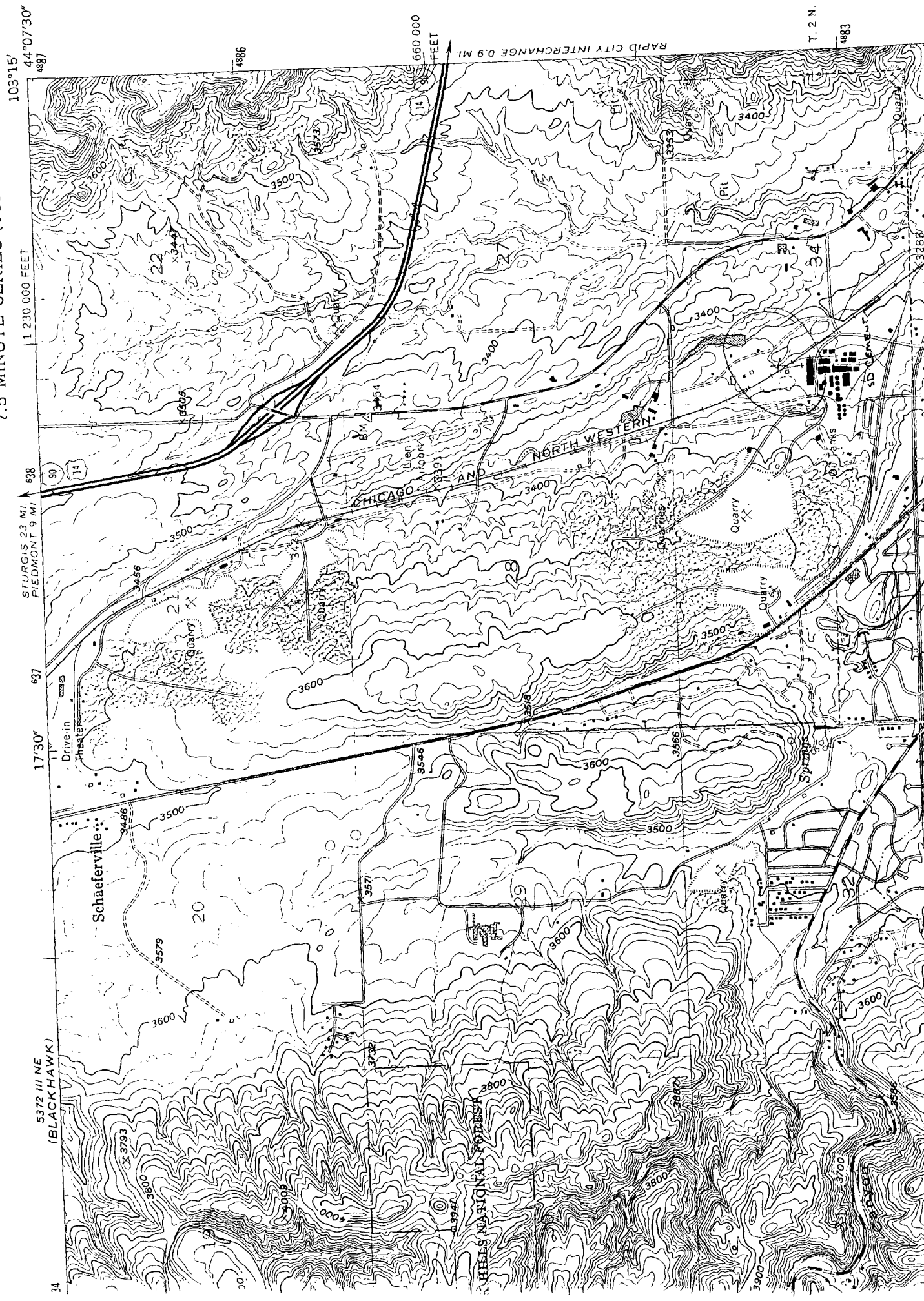
Handwritten signature

LNG-C-862

Site Plan



5372 II NW
RAPID CITY (NW)



Conditional Use Permit Request

Selador Ranches

Summit, Inc.

BHC

GCC Dacotah, Inc.

2N7E

22

Black Hills Power Corporation
Proposed Electrical
Generation Facility

LANGE RANCH RD

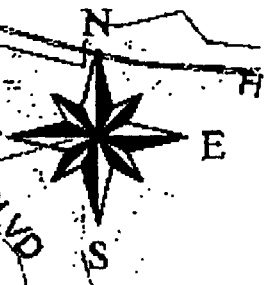
N PLAZA DR

2N7E

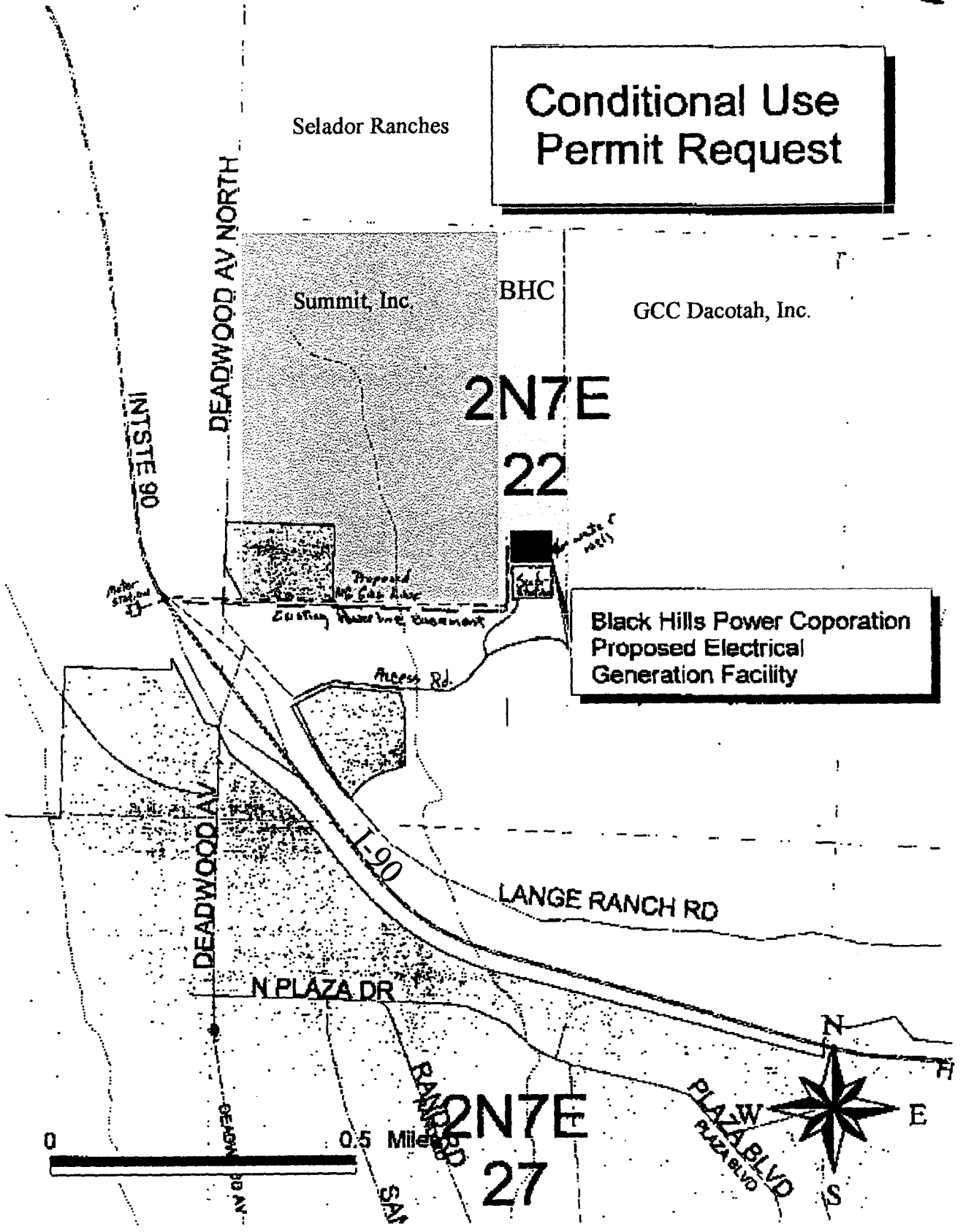
27

0

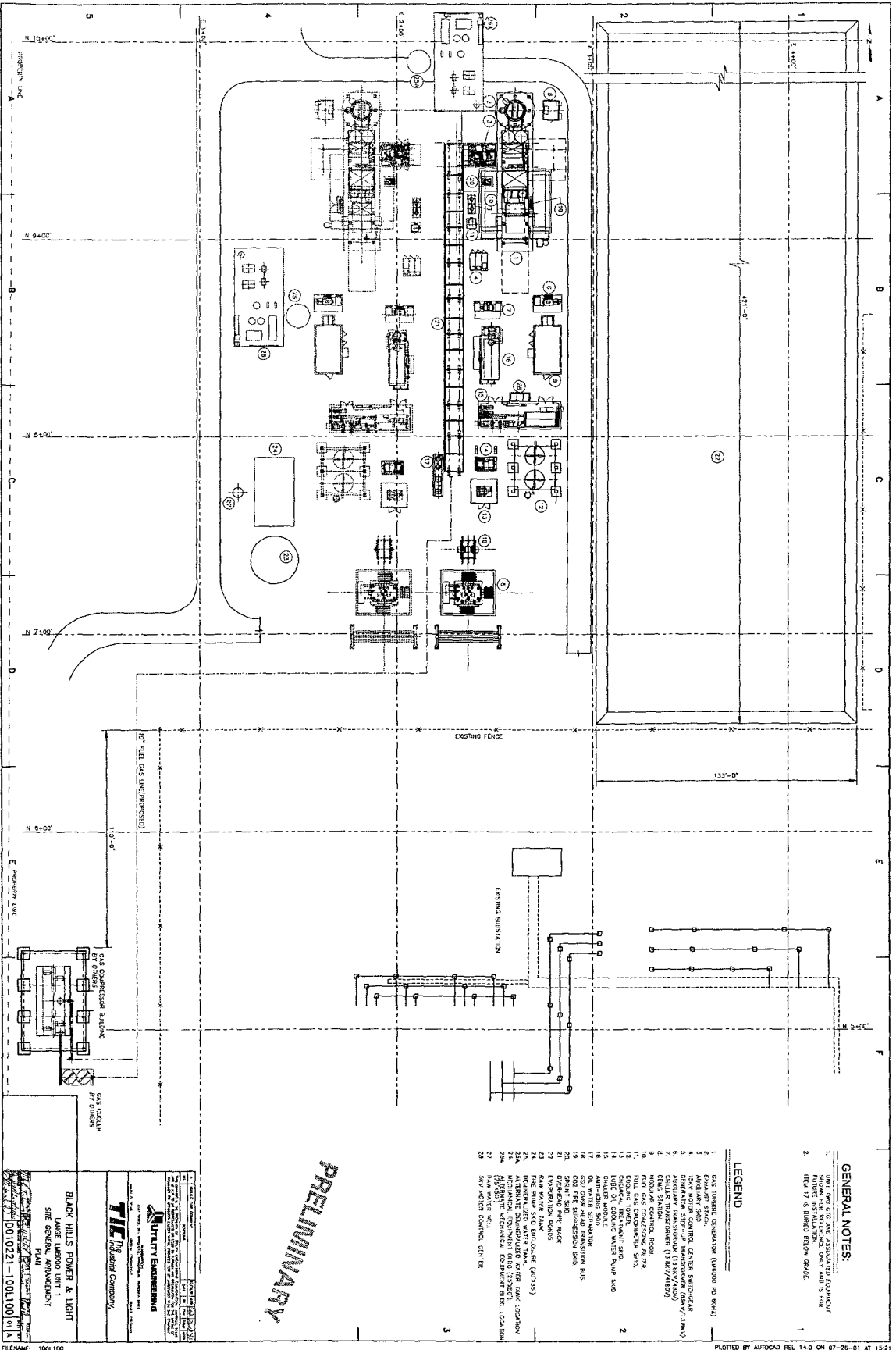
0.5 Miles



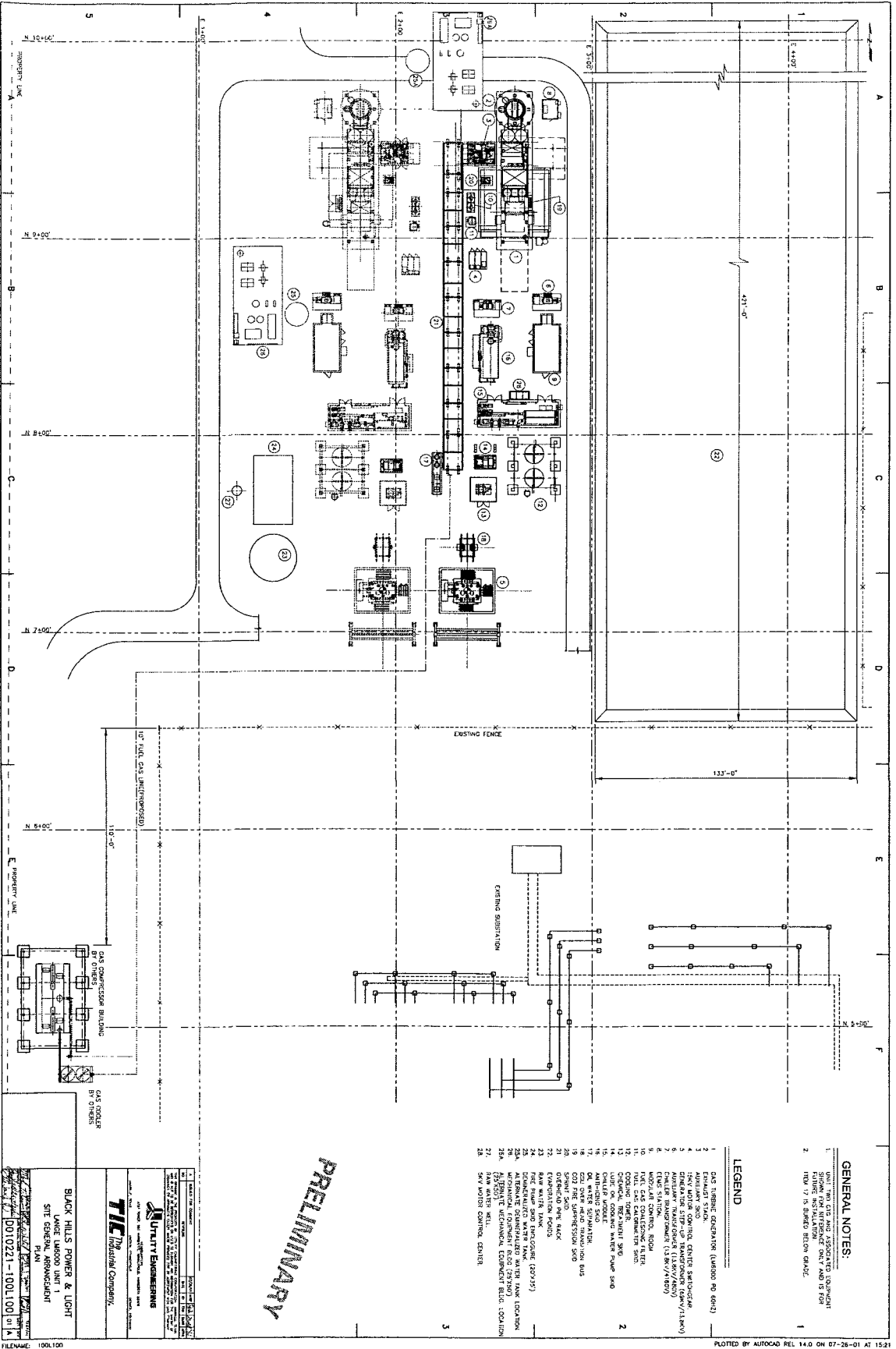
3



Site Plan



Site Plan



RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

N~~2~~ 416891

Pierre, August 16, 2001

RECEIVED OF Black Hills Power & Light Company, PO Box 1400, Rapid City SD 57709
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>2466-2</u> to Appropriate Water, to construct and to put water to beneficial use _____	275	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>2466-2</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	325 00

By

Chief Engineer

Garland Erbe

KS

SOUTH DAKOTA WATER WELL COMPLETION REPORT

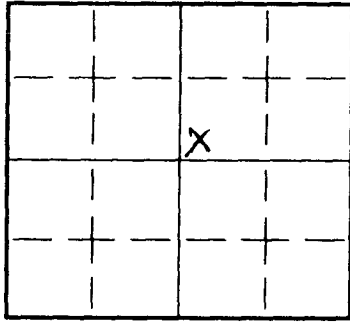
2466-2

07-92

Location SW 1/4 NE 1/4 Sec 22 Twp 2N Rg 7E

County Pennington

Please mark well location with an "X"



Lange Substation

Well Completion Date

August 20, 2001

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.) 1000 ft. from _____ (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Air Rotary

CASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>40.50 LB/FT</u>	<u>10 3/4 IN</u>	<u>0 FT</u>	<u>45 FT</u>	<u>13 1/2 IN</u>
<u>2.3 LB/FT</u>	<u>7 IN</u>	<u>0 FT</u>	<u>750 FT</u>	<u>8 3/4 IN</u>
____ LB/FT	____ IN	____ FT	____ FT	____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Cement</u>	<u>125</u>	<u>15 lb./gal</u>	<u>0 ft</u>	<u>750 ft</u>
<u>Cement</u>	<u>18</u>	<u>15 lb./gal</u>	<u>0 ft</u>	<u>45 ft</u>

Describe grouting procedure _____

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet to _____ 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 solution

____ NO, Why Not? _____

Laboratory sent to for water quality analysis _____

Well Owner: Black Hills Power & Light Co.

Business Name: Black Hills Power & Light Co.

Address: PO Box 1400

Rapid City, SD 57709

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>clay, sand & gravel</u>	<u>0</u>	<u>25</u>
<u>red siltstone & shale</u>	<u>25</u>	<u>65</u>
<u>green ss & shale</u>	<u>65</u>	<u>145</u>
<u>red siltstone some gyp</u>	<u>145</u>	<u>558</u>
<u>buff LS</u>	<u>558</u>	<u>600</u>
<u>red shale</u>	<u>600</u>	<u>730</u>
<u>red ss</u>	<u>730</u>	<u>740</u>
<u>pink to red ss</u>	<u>740</u>	<u>770</u>
<u>pink to red LS</u>	<u>770</u>	<u>787</u>

STATIC WATER LEVEL 60 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:

☐ Pumped Describe: _____

☐ Bailed Air dev.

☐ Other _____

Pumping Level Below Land Surface

700 ft. After 3 Hrs. pumped 120 GPM

____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate 100-120 GPM

REMARKS

This well was drilled under license # 331

And this report is true and accurate.

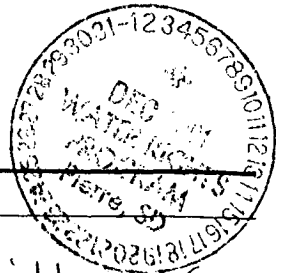
Drilling firm Taylor Drilling Co.

Signature of License Representative:

Ralph Taylor

Signature of Well Owner or Equitable Property Holder:

Date: _____



June 27, 2001

Department of Environment and Natural Resources
Joe Frost Building
523 East Capitol Avenue
Pierre, South Dakota 57501



Attention: Jim Goodman
Reference: Black Hills Generation Lange Construction Site
Subject: Request for Test Well and Construction Water Permits

Dear Mr. Goodman:

TIC is writing this request on behalf of all the associated parties, i.e.: Black Hills Generation, The Industrial Company Wyoming Inc., and Utility Engineering.

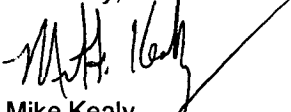
The Industrial Company Wyoming Inc. and Utility Engineering have been contracted as a Joint Venture by Black Hills Generation to provide construction and engineering services at a site near Rapid City. (Lange Substation – Section 22, T2N, R7E)

As part of the construction and engineering services, the Joint Venture would be required to drill a water well to supply 75 gpm – 125 gpm of raw water and provide water samples for analysis to determine future demineralization requirements. Additionally, the well would supply a maximum of 250 gallons of water per day for construction services. Per our conversation, we are requesting a permit to drill a test well and/or a temporary permit to supply maximum construction services water requirements.

Black Hills Generation is currently in the process of filing an application with your office for a permanent permit.

Please feel free to contact me at TIC's Casper Office (307-235-9958) or e-mail at kealym@ticus.com. You may also contact Tim Rogers at Black Hills Generation Rapid City Offices (605-721-2286), e-mail trogers@blackhillspower.com.

Sincerely,


Mike Kealy
Project Manager

Cc: Jackie Sargent, Black Hills Generation
Chris Buchholz, TIC
Chris Dressen, Black Hills Generation
Fred Carl, Black Hills Generation
Mike Lehr, Utility Engineering



2466-2

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 6, 2001

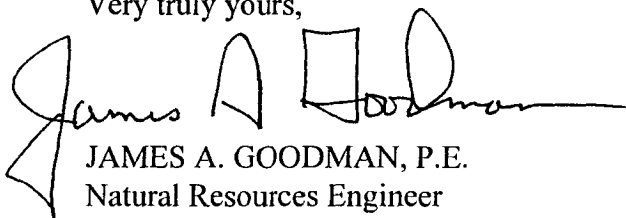
Mike Kealy
TIC
PO Box 3800
Casper, WY 82602

Dear Mr. Kealy:

As requested, pursuant to South Dakota Well Construction Standard 74:02:04:21, TIC is authorized to construct a test well for the Black Hills Generation Lange Construction Site prior to approval of a water permit. The test well is to be constructed in Section 22, T2N-R7E. The test well must be constructed in accordance with the SD Well Construction Standards. Any test holes that are abandoned must be plugged pursuant to the SD Well Construction Standards.

Also enclosed is a Temporary Permit to Use Public Waters For Construction and Testing Purposes.

Very truly yours,



JAMES A. GOODMAN, P.E.
Natural Resources Engineer
for GARLAND ERBELE, Chief Engineer
Water Rights Program
(605) 773-3352

Enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

DIVISION II

**TEMPORARY PERMIT TO USE PUBLIC WATERS
FOR CONSTRUCTION AND TESTING PURPOSES**

This temporary permit to use public waters is issued to TIC, on behalf of the Black Hills Generation, the Industrial Company Wyoming Inc. and Utility Engineering, of PO Box 3800, Casper, WY 82602 authorizing withdrawal of 44,500 gallons of water at a maximum rate of 250 gallons per day from ground water located in Section 22, T2N, R7E. The water will be used for construction and testing purposes.

- The well authorized by this temporary water use permit shall be constructed by a licensed well driller and construction shall comply with Water Management Board 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.
- The well authorized under this temporary water use permit may be located near domestic wells and other wells which may obtain water from the same aquifer. The well owners, under this temporary water permit, shall control his withdrawals so there is not a reduction of needed water supplies in other wells.

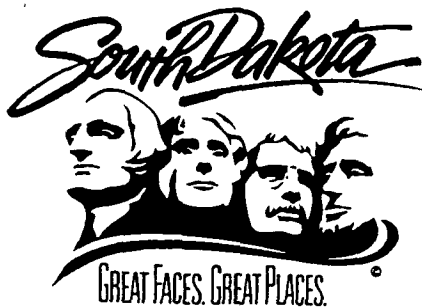
This temporary permit becomes effective July 6, 2001 and expires on December 31, 2001.

This permit does not provide necessary right-of-way. Such arrangements should be made with the proper land owner.

Issued: July 6, 2001

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





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

DIVISION II

TEMPORARY PERMIT TO USE PUBLIC WATERS
FOR TESTING PURPOSES

This temporary permit to use public waters for testing purposes is issued to Fore Runner Corporation, of 3900 S Wansworth Blvd #459, Lakewood, CO 80235 authorizing withdrawal of 19,000 gallons of water at a maximum rate of 500 gallons per minute from a holding pond located in the SW ¼ Section 22, T2N, R7E. The water will be used for hydostatic testing of a new pipeline.

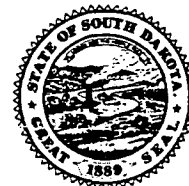
The water withdrawn from the pond will be discharged to a grassy area approximately 2.9 miles north of Rapid Creek. Any discharge of water must comply with the "*General Permit for Temporary Dewatering*" issued by this Department.

This temporary permit becomes effective October 1, 2001 and expires on October 5, 2001.

This permit does not provide necessary right-of-way. Such arrangements should be made with the proper land owner.

Issued: August 3, 2001

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



c: Chris Dressen, Black Hills Power & Light, 409 Deadwood Ave, Rapid City, SD 57702

NOTE: A temporary permit application form is now available on the internet. You may complete an application form on-line and submit the application directly to the Water Rights Program. The address of the form is www.state.sd.us/denr/des/waterrights/temp_form.htm



August 14, 2001

Eric Gronlund, Natural Resources Engineer
South Dakota Department of Environment and Natural Resources
523 East Capitol
Pierre, South Dakota 57501

RE: Lange Combustion Turbine Water Right Application

Dear Mr. Gronlund,

Black Hills Corporation is proposing to construct two natural gas combustion turbines located north and adjacent to its Lange Substation in Rapid City. This project will require the use of water as a cooling agent. Enclosed you will find an application and application fee's to appropriate water for this project.

This application is for the appropriation of 250 gpm of water in the Madison or Minnelusa aquifers. I have enclosed a site map and an area map to assist in identifying the location of the project and the well. It is identified in the application that the water source will either be the Madison or Minnelusa aquifers. We are requesting a joint source permit for this well. If the water quality and flow rates in the Minnelusa meet our needs, then the well will be developed in this formation. If they cannot, then we will proceed to drill to the Madison formation. Attached, you will also find the "Temporary Permit to Use Public Waters for Testing Purposes" issued by your office. This permit was granted to Fore Runner Corporation, the construction contractor for this project.

For your information, there is no planned water discharge for this facility. An evaporation pond has been designed for waste process water. This will be an unmanned site. Therefore, there will be no septic system or drinking water system.

If you have any questions, please feel free to contact me at (605) 721-2286.

Sincerely,

Tim Rogers
Environmental Specialist

Cc: Fred Carl, Environmental Coordinator, BHC

Enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

August 16, 2001

Black Hills Power
Tim Rogers
PO Box 1400
Rapid City SD 57709

Dear Mr. ^{Tim}~~Rogers~~:

Thank you for submitting the *Application for a Permit to Appropriate Water* for Black Hills Generation, Inc. In order to complete the application the following is required.

Enclosed is the map submitted with the application. The map is required to show the location of the well in relation to a government section corner or quarter corner. The map must 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.

Also, the application states the well is located in the W ½ W ½ NE ¼ Section 22-T2N-R7E. This description appears to be incorrect? Please make the necessary correction.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352

enclosure



August 17, 2001

Karen Schlaak
South Dakota Department of Environment and Natural Resources
523 East Capitol
Pierre, South Dakota 57501

RE: Lange Combustion Turbine Water Right Application

Dear Karen,

Thanks for the quick response on the application. Enclosed you will find a new map, actually, three maps depicting the location of the project site and well in association with section 22. The legal location I provided was correct. The new maps should represent this. I signed the maps.

Thanks again and if you have any further questions, please feel free to contact me at (605) 721-2286.

Sincerely,

Tim Rogers
Environmental Specialist

Cc: Fred Carl, Environmental Coordinator, BHC

Enclosures



September 11, 2001

Eric Gronlund, Natural Resources Engineer
South Dakota Department of Environment and Natural Resources
523 East Capitol
Pierre, South Dakota 57501

RE: Lange Combustion Turbine Water Right Application

Dear Mr. Gronlund,

As per our phone conversation on September 10, 2001, I am enclosing a map of the proposed water right request for the Lange Combustion Turbine project. A professional engineer has signed the map and provided her P.E. seal.

At this particular juncture of the project, the test well for this project has been drilled into the Minnelusa aquifer. We are conducting water quality testing at this time. Preliminary results suggest that we will remain in the Minnelusa formation. This could change if we need to obtain higher water quality from the Madison aquifer for the turbine system or possibly the wastewater discharge permit being sought which is discussed below.

The initial design of the facility was to have an evaporation pond with no discharge. The final size of the evaporation pond exceeded size requirements for the overall project. We are now pursuing a wastewater discharge permit from your department. Once we have the final design for the water/wastewater treatment systems and the wastewater water discharge itself, a copy will be submitted to your office and the Surface Water Quality Office for review.

If you have any questions, please feel free to contact me at (605) 721-2286.

Sincerely,

Tim Rogers
Environmental Specialist

Cc: Fred Carl, Environmental Coordinator, BHC

Enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2466-2, Black Hills Generation, 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. 2466-2, Black Hills Generation, Inc., c/o Tim Rogers, PO Box 1400, Rapid City SD 57709.

The Chief Engineer is recommending APPROVAL of Application No. 2466-2 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 authorized by Permit No. 2466-2 shall be constructed into a single water source, either the Minnelusa or Madison aquifer, but not both. At the time of licensing, the final water right will be issued for the developed water source.
2. 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.
3. The well authorized by Permit No. 2466-2 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.
4. Applicable only if the well is constructed into the Madison Aquifer -- In accordance with SDCL 46-1-14 and 46-2A-20, Permit No. 2466-2 is issued for a twenty year term. Pursuant to SDCL 46-2A-21, the twenty year term may be deleted at any time during the twenty year period or following its expiration. If the twenty year term is not deleted at the end of the term, the permit may either be cancelled or amended with a new term limitation of up to twenty years. Permit No. 2466-2 may also be cancelled for nonconstruction, forfeiture, abandonment or three permit violations pursuant to SDCL 46-1-12, 46-5-37, 46-5-37.1, and ARSD 74:02:01:37.

See report on application for additional information.

Garland Erbele, Chief Engineer
October 11, 2001

WATER PERMIT APPLICATION NO. 2466-2
BLACK HILLS GENERATION, INC.
SEPTEMBER 11, 2001

Water Permit Application No. 2466-2 proposes to appropriate 0.557 cubic feet of water per second from one well located in the SW¼ NE¼ Sec. 22, T2N-R7E, in Pennington County. The well will either be completed into the Minnelusa aquifer (approximately 600 feet deep), or will be completed into the Madison aquifer (approximately 1400 feet deep). The water is for industrial use to cool natural gas electrical generating combustion turbines.

WATER SOURCE: Minnelusa Formation (MNLS) or Madison Limestone (MDSN)

Minnelusa aquifer

General Information:

The Minnelusa aquifer consists of alternating beds of sandstone and dolomitic limestone with lesser amounts of shale and chert, about 560 to 640 feet thick in this area (Cattermole, 1969). The porosity of the Minnelusa formation is quite variable. Well sorted sand lenses have porosities approaching 25%, but generally the sands have porosities of 10%. The average porosity of the Minnelusa is estimated to be 10% and the effective porosity is assumed to be 5% (Rahn, 1979). The Minnelusa formation underlies virtually all of western South Dakota and contains over 755 million acre-feet of recoverable water in storage (Allen, 1984). The water quality of the aquifer is generally good near the outcrop but deteriorates considerably with distance from the recharge area. The Minnelusa formation outcrops approximately three miles west of this well site and the top of the formation is estimated to be approximately 750 feet below grade at this site (Carter and Redden, 1999a). Water in the aquifer generally moves from west to east in this area (Peter, 1985). The aquifer is under artesian conditions at this site and the static water level of a well in this area is expected to be around 150 feet below grade (Strobel and others, 2000a).

Water Availability:

The availability of unappropriated water from an aquifer can be evaluated by considering SDCL 46-6-3.1. This statute requires that an application to appropriate groundwater can not be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of average estimated annual recharge.

Recharge to the Minnelusa aquifer is primarily from infiltration of precipitation on the outcrop and stream flow losses. Average annual recharge from 1931-1998 is estimated to be approximately 112,000 acre-feet per year (Carter and others, 2001a).

There are a total of 173 appropriations from the Minnelusa aquifer in South Dakota, including two Future Use Reservations. The aquifer is used primarily for domestic, commercial, municipal, suburban housing and irrigation uses. The Future Use Permits (No. 902-1 and 969-1) reserve 1460 acre-feet annually. Water Permits and Rights

represent appropriations up to 10,649.7 acre-feet annually for irrigation use and a combined diversion rate of 26.416 cfs for non-irrigation uses. Maximum well withdrawals from the Minnelusa aquifer, assuming (1) that permits/rights with an annual withdrawal limitation (ac-ft/yr.) will use the maximum allowable; and (2) permits/rights that are limited by a diversion rate only, will use 60% of the maximum allowable (considered reasonable for water distribution systems); would be approximately 22,000 acre-feet per year. The actual amount of water used from the aquifer is considerably less than this estimate. Withdrawals from wells (domestic and appropriative) completed into the Minnelusa aquifer were estimated to be 7,268.6 acre-feet annually from 1987-1996 (Carter and others, 2001b).

The maximum potential withdrawal from the Minnelusa aquifer at the current level of appropriation is less than 22% of than average annual recharge estimated for the aquifer. Therefore, based on a simple water budget, it is clear that unappropriated water is available for this appropriation.

Observation well information also provides evidence that unappropriated water is available from the aquifer. The Water Rights Program monitors 23 observation wells completed into the Minnelusa aquifer in the Black Hills area. The Minnelusa aquifer observation well PE-64A is located approximately two miles south of this well site. The hydrograph for this well is shown in figure 1.

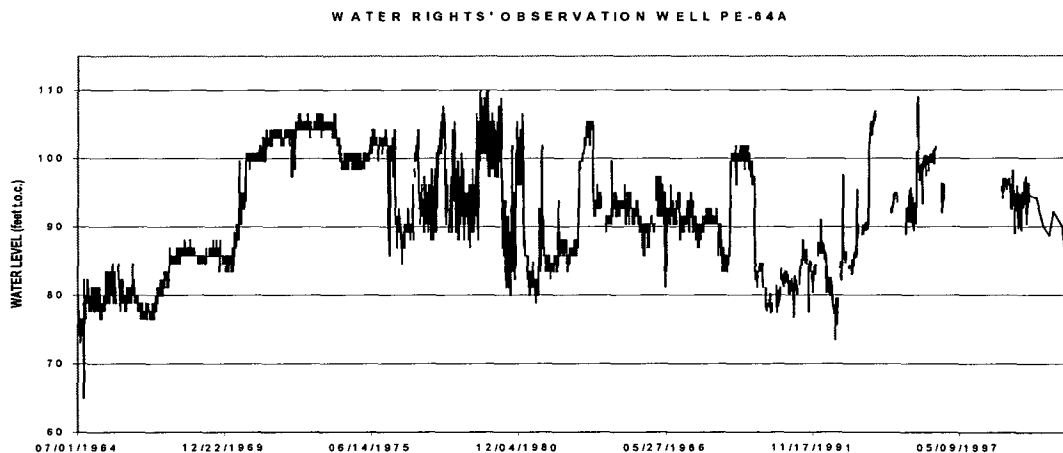


Figure 1. Water Rights' Minnelusa Observation well, two miles south of 2438-2

Minnelusa aquifer observation well PE-84B is located approximately two and one half miles west of this well site. The hydrograph for this well is shown in figure 2.

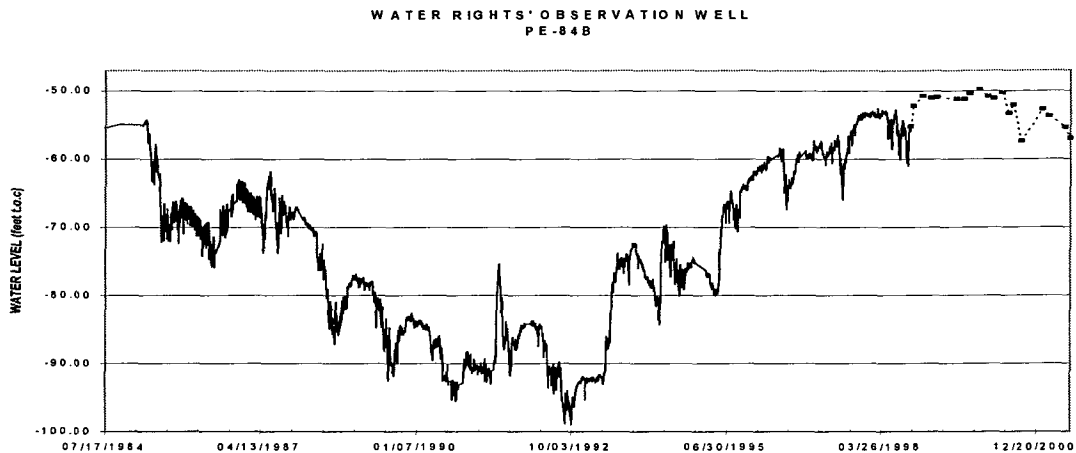


Figure 2. Water Rights' Minnelusa Observation well, 2.5 miles west of 2438-2

Water Rights Observation Well PE-89D is located approximately two and one-half miles southwest of this well site. A hydrograph of PE-89D is shown in figure 3.

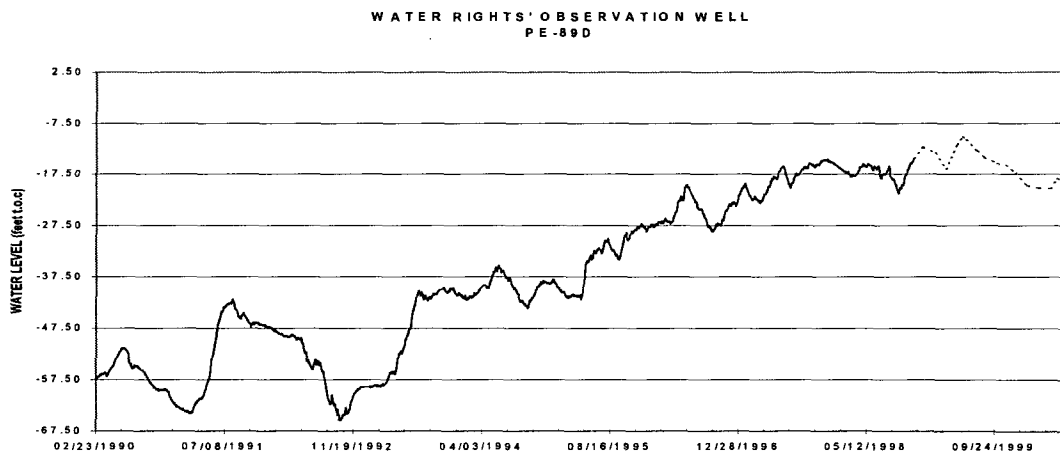


Figure 3. Water Rights' Minnelusa Observation well, 2.5 miles southwest of 2438-2

The hydrographs clearly show the Minnelusa aquifer's response to recharge and climatic conditions. They also illustrate the magnitude of fluctuation of the water level of the Minnelusa aquifer in this area (approximately 50 feet), and possibly the affects of pumping at the SD Cement Plant on PE-64A. Observation well data suggest that at the existing level of development, natural influences dominate the water level of the aquifer and the effects of pumping as yet are not obvious. Therefore, it is apparent that the aquifer is capable of sustaining additional withdrawals (Water Rights, 2001).

Affects on Existing Rights:

There are 40 water rights/permits appropriating water from the Minnelusa aquifer in Pennington County alone. There are several domestic wells on file with the Water Rights Program for this area and there are 14 Permits/Rights appropriating groundwater within one

and one-half miles of this well site. Permits/Rights not supplied by the Minnelusa aquifer should not be affected by this appropriation since the Opeche shale serves as a confining layer above the Minnelusa, and the thick carbonate sequence in the lower Minnelusa isolates the Minnelusa aquifer from lower aquifers. Future Use Permit No. 902-2 reserves water for future use from the Minnelusa aquifer approximately two miles from this well site. There are eight appropriations from the Minnelusa aquifer within one and one-half miles, they include:

Permit/Right No	Owner	Diversion Rate
1279-2	Pete Lien & Sons	0.68 cfs
1761-2	Pete Lien & Sons	0.10 cfs
1451-2	Rapid Chevrolet	0.16 cfs
2137-2	Frank Simpson	0.17 cfs
2297-2	Frank Simpson	0.1 cfs
506-2	Birdsall Sand & Gravel	0.34 cfs
716-2	Julian Staven	0.07 cfs
2438-2	Stan Houston Equipment	0.13 cfs

The nearest Minnelusa appropriation is No. 1761-2, Pete Lien & Sons, the well that supplies this Water Right is located approximately one mile south west of this well site. Drawdowns from pumping this well will theoretically affect other wells in this area. Since the Minnelusa is under artesian conditions in this area, pumping may cause a decline in the potentiometric surface over a fairly widespread area. However, the impact on area water rights/permits and domestic wells should not be significant. Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1, provide for the regulation of large capacity wells without the necessity of requiring the maintenance of artesian head pressure. Simply put, well interference that results in lower water levels in existing wells is not necessarily an adverse impact. Lower water levels may obligate nearby well owners to set the pumps lower in their wells. If this were considered an adverse impact, it could be in conflict with SDCL 46-1-4, which requires South Dakota's water resources to be put to beneficial use to the fullest extent of which they are capable.

Madison aquifer

General Information:

The Madison aquifer is a massive carbonate (limestone and dolomite) aquifer about 300-400 feet thick in this area (Cattermole, 1969). The importance of the Madison as an aquifer is largely due to randomly distributed zones of secondary porosity and permeability formed by weathering of exposed surfaces, groundwater solution, and fracturing. These zones also play an important role in determining the hydraulic behavior of the Madison aquifer and the response of the system to stress. The Madison underlies most of western South Dakota and contains at least 640 million acre-feet of recoverable water in storage in the State (Allen, 1984). The Madison outcrops along Box Elder Creek approximately three and one-half miles west of this well site and the top is estimated to be approximately 1350 feet below grade at this site (Carter and Redden, 1999b). The aquifer is under artesian conditions at

this site and the static water level of a Madison well in this area is expected to be within 30 feet of ground surface (Strobel and others, 2000b), and a Madison well may flow at this site.

Water Availability:

Recharge to the Madison aquifer occurs through streamflow losses and direct infiltration of precipitation at the outcrop area. Recharge for the entire Madison Aquifer in South Dakota has been estimated to range from 140,000 to 400,000 acre-feet per year (Woodward Clyde, 1981). Average annual recharge from 1931-1998 is estimated to be approximately 137,000 acre-feet per year (Carter and others, 2001a)

There are a total of 119 appropriations from the Madison aquifer in South Dakota, including three Future Use Permits. The Future Use Permits (No. 1833-2, No. 2086-2 and No. 369-1) reserve 5,835 acre-feet annually. Water Permits and Water Rights represent an appropriation of up to 6026.4 acre-feet annually for irrigation use and a combined diversion rate of 67.948 cfs for non-irrigation uses. Maximum well withdrawals from the Madison aquifer, assuming (1) that permits/rights with an annual withdrawal limitation (ac-ft/yr.) will use the maximum allowable; and (2) permits/rights that are limited by a diversion rate only, will use 60% of the maximum allowable (considered reasonable for water distribution systems); would be approximately 29,500 acre-feet per year. The actual amount of water used from the aquifer is considerably less than this estimate. Withdrawals from wells completed into the Madison aquifer were estimated to be 10,990.2 acre-feet annually from 1987-1996 (Carter and others, 2001b).

The maximum potential withdrawal from the Madison aquifer at the current level of appropriation is less than 27% of than average annual recharge estimated for the aquifer. Therefore, based on a simple water budget, it is clear that unappropriated water is available for this appropriation.

Observation well information also provides evidence that unappropriated water is available from the aquifer. The Water Rights Program monitors 26 observation wells completed into the Madison aquifer in the Black Hills area. Three of these observation wells are within approximately three and one-half miles of this well site. Madison aquifer observation well PE-89C is located approximately two and one-half miles south west of this well site. The hydrograph for this well, figure 4, demonstrates the amplitude of fluctuation in water levels in the Madison in the Rapid City area. The water levels in this well are probably fairly representative of natural conditions of the aquifer and do not appear to be affected by pumping of nearby wells.

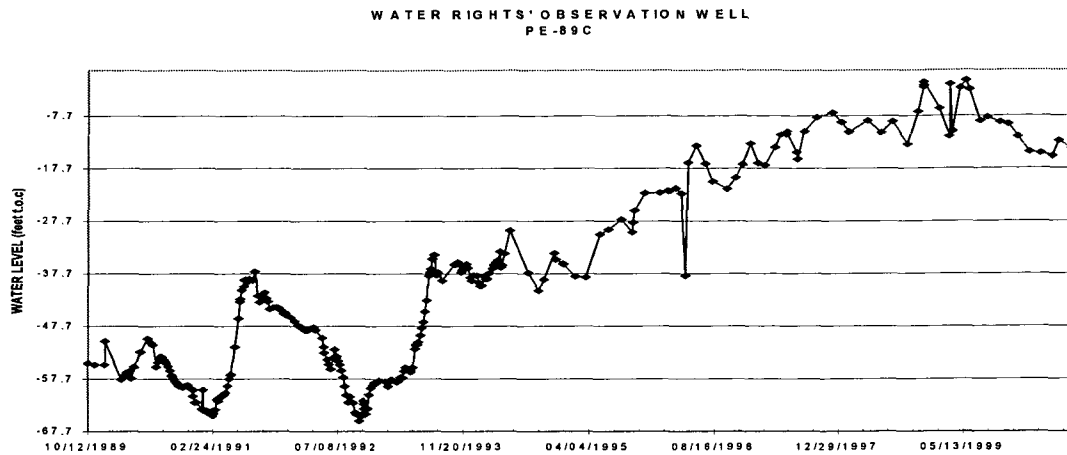


Figure 4. Water Rights' Madison Observation well, 2.5 miles south west of 2438-2

Water Rights Observation Well PE-65A is located approximately three miles south of this well site. The hydrograph for this well, figure 5, contains a long-term record of water levels in the Rapid City area. The affects of pumping a high capacity municipal well located approximately 1700 feet from the observation well, beginning in 1990 are obvious.

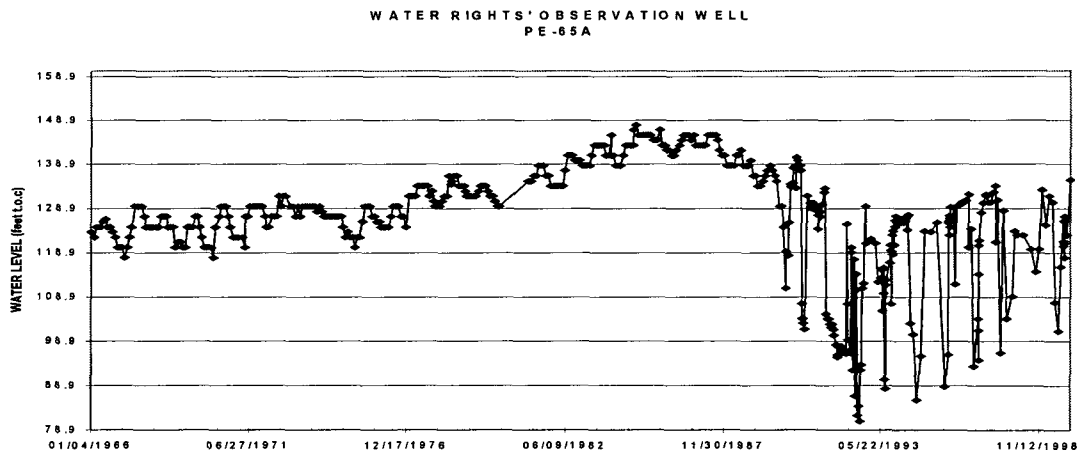


Figure 5. Water Rights' Madison Observation well, three miles south of 2438-2

Water Rights' Observation Well PE-89E is located just less than three miles south of this proposed well site. A hydrograph of PE-89E, Figure 6, shows the affects a large capacity municipal well located 685 feet away.

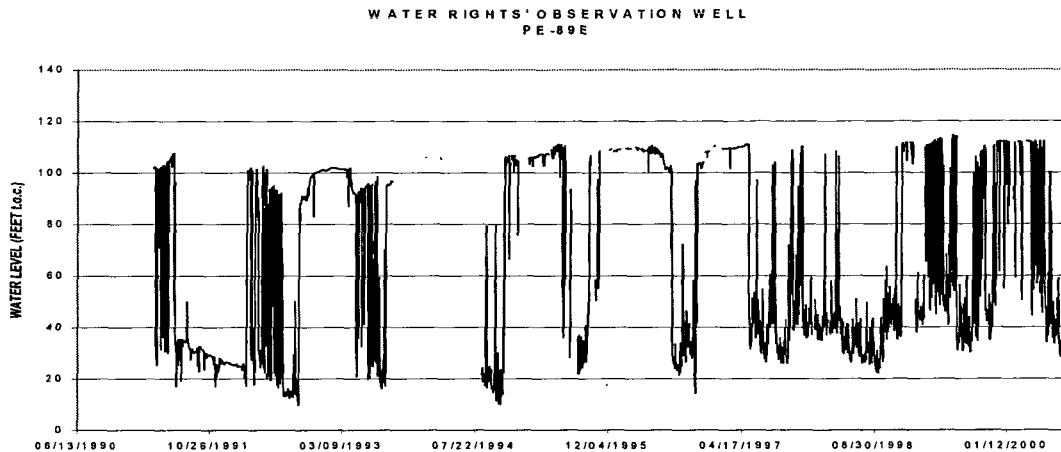


Figure 6. Water Rights' Madison Observation well, three miles south of 2438-2. Although the affects of pumping are documented in figure 5 and figure 6, there is no apparent downward trend of the water levels in these observation wells or any other Madison observation well. Data from the Water Rights' Observation Well Network indicates that water is available for appropriation from the Madison aquifer in this area.

Affects on Existing Rights

The Madison aquifer is confined, above by the lower portion of the Minnelusa Formation and below by the Englewood Formation, therefore wells supplied by aquifers other than the Madison should not be affected by this proposed appropriation. There are 31 Water Permits/Rights appropriating water from the Madison aquifer in Pennington County. Future Use Permit No. 2086-2 reserves water from the Madison aquifer approximately one-half mile south west of this well site. Five Madison aquifer Water Rights are located within approximately one and one-half miles of this well site, they include:

Permit/Right No	Owner	Diversion Rate
2124-2	Rapid City	1.79 cfs
2275-2	Rapid City	3.80 cfs
2313-2	Coca-Cola Bottling	0.33 cfs
2256-2	Fisher Sand & Gravel	0.50 cfs
2286-2	Don Konechne	0.10 cfs

Since the Madison is under artesian conditions in this area, well interference is possible. The nearest Madison Water Right is No. 2313-2, Coca-Cola Bottling, is located approximately one mile south of this well site. At this time, it is not practical to attempt to quantify the specific affect this well may have on the Coca-Cola well, or other area wells, since aquifer characteristics have not been determined at this well site, and the aquifer characteristics of the Madison can vary considerably within a short distance.

An example of the variability of the hydraulic characteristics of the Madison aquifer is documented in the Rapid City area. Two constant discharge aquifer tests were conducted within approximately one and one-half miles in Rapid City in 1990. City well #6 was pumped continuously for four days at a rate of 680 gallons per minute (gpm). The resultant drawdown in the production well was 426.4 feet. Approximately 3,000 feet from the production well, the maximum drawdown in an observation well was reportedly 1.5 feet. In a second test, City well #5, pumped for seven days at 1,700 gpm, resulted in maximum drawdown of 212.8 feet in the production well. Maximum drawdown in an observation well 11,700 feet from the production well was 1.4 feet. The hydraulic properties of the Madison aquifer calculated from these aquifer tests were $T = 1,600 \text{ ft}^2/\text{d}$ to $40,000 \text{ ft}^2/\text{d}$ and $S = 1 \times 10^{-4}$ to 2×10^{-3} (Greene, 1993). In addition, Greene concluded that the transmissivity of the Madison is not equal in all directions (anisotropic), therefore the drawdown cone will extend farther in one direction than another.

Although the impact of this appropriation cannot be quantified precisely, it is still possible to address whether this appropriation can be made without adversely affecting existing water rights, including domestic wells. As was stated previously in this report, the lowering of water levels in nearby wells does not necessarily constitute an adverse impact. It is unlikely that this appropriation would result in the adverse impact of existing water rights or domestic wells due to the distance between wells and the likelihood that proper pump sizing and placement in an adequate well should ensure sufficient water for the well owner's needs or water permit/water limit.

TERM LIMITATION:

SDCL 46-2A-20 requires that "... no water permit for construction of works to withdraw water from the Madison formation in Butte, Fall River, Custer, Lawrence, Meade and Pennington counties may be issued for a term of more than twenty years, unless the water management board determines, based upon the evidence presented at the hearing that:

- (1) Sufficient information is available to determine whether any significant adverse hydrologic effects on the supply of water in the Madison formation would result if the proposed withdrawal were approved; and
- (2) The information, whether provided by the applicant or by other means, show that there is a reasonable probability that issuance of the proposed permit would not have a significant adverse effect on nearby Madison formation wells and springs."

Evidence is not available to justify issuing this permit without a term limitation of 20 years.

CONCLUSIONS:

1. The Minnelusa and Madison aquifers are viable aquifers in this area, and water is available from either aquifer for this appropriation.

2. The Minnelusa and Madison aquifers are under confined in this area. Drawdown will occur as a result of this diversion. Pumping is not expected to adversely affect existing water rights. Well interference should not be a problem in this area.
3. Any well constructed for this appropriation must be comply with the SD Well Construction Standards, including ARSD 74:02:04:34.01 which requires production from a single aquifer. If this permit is approved, it will be an appropriation from either aquifer. Upon licensing, a final Water Right will be issued limiting the water source to either the Minnelusa aquifer or the Madison aquifer.



Ken Buhler
Natural Resources Engineering Specialist

approved by



for James A. Goodman, P.E.
Natural Resources Engineering Director

REFERENCES:

- Allen, J.C., D.Iles, A.Petres, 1984, Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota, Task 3 & 4: Groundwater Resources Inventory, US Army Corps of Engineers Contract DAWC 45-82-C-015, SD DENR-Division of Geological Survey, Vermillion SD
- Carter, J.M., and Redden J.A., 1999a, Altitude of the Top of the Minnelusa Formation in the Black Hills Area, South Dakota, Hydrologic Investigations Atlas HA-744-C, U.S. Geological Survey, Rapid City, SD
- Carter, J.M., and Redden J.A., 1999b, Altitude of the Top of the Madison Limestone in the Black Hills Area, South Dakota, Hydrologic Investigations Atlas HA-744-D, U.S. Geological Survey, Rapid City, SD
- Carter, J.M., Driscoll, D.G., and Hamade, G.R., 2001a, Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years 1931-98, Water-Resources Investigations Report 00-4278, U.S. Geological Survey, Rapid City, SD
- Carter, J.M., Driscoll, D.G., Hamade, G.R., and Jarrell, G.J., 2001b, Hydrologic Budgets for the Madison and Minnelusa Aquifers, Black Hills of South Dakota and Wyoming,

Water Years 1987-1996, Water-Resources Investigations Report 01-4119, U.S. Geological Survey, Rapid City, SD

Cattermole, J.M., 1969, Geologic Map of The Rapid City West Quadrangle, Pennington, County, South Dakota: U.S. Geological Survey Geologic Quadrangle Map GQ-828, U.S. Geological Survey, Washington, D.C.

Greene, E.A. 1993, Hydraulic Properties of the Madison Aquifer System in the Western Rapid City Are, South Dakota, U.S. Geological Survey Water-Resources Investigations Report 93-4008, U.S. Geological Survey, Rapid City, SD

Peter, K.D., 1985, Availability and Quality of Water from the Bedrock Aquifers in the Rapid City Area, South Dakota, Water-Resources Investigations Report 85-4022, US Geological Survey, Rapid City, SD

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Strobel, M.L., Galloway, J.M., Hamade, G.R., and Garrell, G.J., 2000a, Potentiometric Surface of the Minnelusa Aquifer in the Black Hills Area, South Dakota, Hydrologic Investigations Atlas HA-745-C, U.S. Geological Survey, Rapid City, SD

Strobel, M.L., Galloway, J.M., Hamade, G.R., and Garrell, G.J., 2000a, Potentiometric Surface of the Madison Aquifer in the Black Hills Area, South Dakota, Hydrologic Investigations Atlas HA-745-D, U.S. Geological Survey, Rapid City, SD

Water Rights Program, 2001, "Domestic Well Log Files, Observation Well Files, and Water Permit Files", DENR-Water Rights Program, Joe Foss Building, Pierre, SD



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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.

October 12, 2001

Black Hills Generation, Inc.
Attn: Tim Rogers
PO Box 1400
Rapid City, SD 57709

Tim
Dear Mr. Rogers:

Water Permit Application No. 2466-2 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 Rapid City Journal printed at Rapid City, SD (Ph # 605-394-8300). You will need to contact the newspaper and authorize publication of this notice. 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. Upon receiving authorization, 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 also 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
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 57501-3182
www.state.sd.us/denr

October 12, 2001

Rapid City Journal
PO Box 450
Rapid City, SD 57709-0450

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 2466-2 to Appropriate Water to be published twice. Please publish the first notice on October 24, 2001 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 Black Hills Generation, Inc., Attn: Tim Rogers, PO Box 1400, Rapid City, SD 57709 (Ph # 605-721-2219).

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-----

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

No. 2466-2

Date _____

We are in receipt of your letter of October 12, 2001 enclosing Notice of Hearing to Appropriate Water by Application No. 2466-2 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 October 24, 2001 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 2466-2 to Appropriate Water

Notice is given that Black Hills Generation, Inc., PO Box 1400, Rapid City SD 57709 has filed an application for a water permit to appropriate 0.557 cubic feet of water per second (250 gallons per minute) from one well located in the SW ¼ NE ¼ Section 22-T2N-R7E. The well will either be completed into the Minnelusa aquifer (approximately 600 feet deep), or will be completed into the Madison aquifer (approximately 1400 feet deep). The water is for industrial use to cool natural gas electrical generating combustion turbines.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2466-2 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.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to 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 November 23, 2001. 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.

The Water Management Board will consider this application at 10:00 A.M. on December 5, 2001 in the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The December 5, 2001 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by November 23, 2001.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by November 23, 2001, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SSCounty of Pennington)I, Patricia K. Van Pattencertify that the attached printed Notice was
takenfrom the Rapid City Journalprinted and published in Rapid CityCounty of Pennington and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

October 24, 2001October 31, 2001Cost of Printing One hundred twenty-sevendollars and ninety-two cents (\$127.92)Patricia K. Van Patten
(Signature)Legal Advertising Representative
(Title)10/31/01
(Date Signed)

Oct. 24, 31 L1013619

NOTICE OF HEARING
ON APPLICATION NO. 2466-2
TO APPROPRIATE WATER

Notice is given that Black Hills Generation, Inc., P.O. Box 1400, Rapid City, SD 57709, has filed an application for a water permit to appropriate 0.557 cubic feet of water per second (250 gallons per minute) from one well located to the SW¼ NE¼ Section 22-22N-77E. The well will either be completed into the Minnelusa aquifer (approximately 400 feet deep), or will be completed into the Madison aquifer (approximately 1400 feet deep). The water is for industrial use to cool natural gas electrical generating combustion turbines.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2466-2 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.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to 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 November 23, 2001. 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.

The Water Management Board will consider this application at 10:00 a.m. on December 5, 2001, in the Floyd Matthew Training Center, Joe Foss Building, 523 E. Capitol Avenue, Pierre, S.D. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The December 5, 2001 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by November 23, 2001.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Broadland by November 23, 2001, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing-impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-8; 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-31; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

October 12, 2001

Daniel Bjerke, Public Works Director
City of Rapid City
300 6th Street
Rapid City SD 57701-2724

Dear Mr. Bjerke:

I am writing regarding Water Permit Application No. 2466-2 filed by Black Hills Generation. This application proposes to appropriate water for industrial use to cool natural gas electrical generating combustion turbines. The location is north of I-90 approximately ½ mile northeast of the Deadwood Avenue interchange.

Enclosed is a copy of the recommendation, report and notice of hearing on this application. The notice is to be published in the Rapid City Journal on October 24 and 31, 2001 scheduling a December 5th hearing before the Water Management Board.

This information is being sent to you to keep you informed of water right permitting issues in close proximity to Rapid City.

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

October 12, 2001

Robert Borgmeyer
Selador Ranches, Inc.
6770 North Longfellow Drive
Tucson, AZ 85718-2420

Dear Mr. Borgmeyer:

I am writing regarding Water Permit Application No. 2466-2 filed by Black Hills Generation. This application proposes to appropriate water for industrial use to cool natural gas electrical generating combustion turbines. The location is north of I-90 approximately ½ mile northeast of the Deadwood Avenue interchange near Rapid City, South Dakota.

Enclosed is a copy of the recommendation, report and notice of hearing on this application. The notice is to be published in the Rapid City Journal on October 24 and 31, 2001 scheduling a December 5th hearing before the Water Management Board.

This information is being sent to you because of the interest you expressed in this application

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

JAN 15 2002

Black Hills Generation, Inc.
Attn: Tim Rogers
PO Box 1400
Rapid City, SD 57709

Dear Mr. Rogers:

Enclosed is Water Permit No. 2466-2 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

Water Rights Program - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: Water Permit No. 2466-2, Black Hills Generation, Inc.

ADDRESS: PO Box 1400, Rapid City SD 57709 COUNTY: Pennington

DATE: January 6, 2004 TELEPHONE:

RE: Licensing Investigation of Water Permit No. 2466-2

COMMENTS:

On October 30, 2003, I conducted a licensing investigation of Water Permit No. 2466-2. This permit appropriates 0.557 cfs from one well located in the SW ¼ NE ¼ Section 22, T2N, R7E. The well was to be completed into either the Minnelusa or Madison Aquifer. The water permit was approved December 5, 2001. The time to complete works is December 5, 2006. The licensing investigation was conducted prior to the time to complete works because it was my belief that project was completed.

Tim Rogers and Fred "?" accompanied to the Lange Station. Mr. Rogers informed me that they constructed on well into the Minnelusa Formation (copy on file). Mr. Rogers indicated that the water quality from the Minnelusa Formation is of lesser quality than the Madison Formation and therefore requires more treatment.

The maximum production from the well is 150 gpm. The pump is a Grundfos Model 150S300 with a 30 HP 460 volt 3 phase Hitachi motor. The coordinates for the well taken by my personal Garmin GPS are: Longitude 44 degree 7.242 minutes Latitude 103 degrees 15.689 minutes.

While discussing this project with these gentleman I became aware that this combustion unit was just the first phase of an two phase project. The original plan called for a second combustion unit. Neither gentleman knew whether the second unit would be constructed – that is a decision made by the top officials with the company. It appears to be premature to license the water permit prior to the time to complete works when there is a possibility that there could be additional water use at the facility.

I had a brief discussion with them regarding if they drill an additional well, Black Hills Generation would need to get authorize through the Water Rights Program. This may be done pursuant to SDCL 46-5-13.1, may require an amendment to the existing permit or potentially a new permit will be required depending on a number of factors.

See attached page for orthographic map of the site location and a picture.

NAME: Eric Handlund

Water Permit No. 2466-2, Black Hills Generation



Picture taken looking north



2466-2

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

March 7, 2006

No. 565-1
454-2
515-2
2466-2

Black Hills Corporation
c/o Tim Rogers
PO Box 1400
Rapid City SD 57709

Dear Tim:

Thank you for returning the 2005 Water Use Questionnaires. From the forms it appears that an ownership/name change has occurred. Enclosed are "Notice of Transfer" forms for use in filing an ownership/name change.

The transfer forms should be checked over for accuracy and signed by the new owner. Upon completion, return the forms to our office with a required filing fee of \$2.50 each (\$10.00 total).

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352
email: karen.schlaak@state.sd.us

enclosure



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

May 16, 2006

No. 565-1
454-2
515-2
2466-2

Black Hills Corporation
c/o Tim Rogers
PO Box 1400
Rapid City SD 57709

Dear Tim:

On March 7, 2006, I wrote you concerning several permits listed in the name of Black Hills Power and Light. This is a reminder that we have not received the *Notice of Transfer of Ownership* forms.

Enclosed are another set of partially completed *Notice of Transfer of Ownership* forms. The transfer forms should be completed, checked over for accuracy and **signed by the new owner.** Upon completion, return the form to our office with a required filing fee of \$2.50 (\$10.00 total)

It is important to us to keep our records current. If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Environmental Scientist
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date May 23, 20 06

RECEIVED OF Black Hills Power, PO Box 1400, Rapid City SD 57709

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

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use		
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. _____		
Fee for Filing Transfer Form <u>246602</u>		2 50
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	2.50

No.

2456

By

Darland E. White
Chief Engineer *gm*

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

No. 2466-2

Date: _____

I/We request that Water Permit No. 2466-2

formerly owned by: Black Hills Generation

be transferred to: (name & address) Black Hills Corporation
PO Box 1400, Rapid City SD 57709

Telephone No. 605 721-2286

Title to the following described land(s)/property has been transferred as described above:

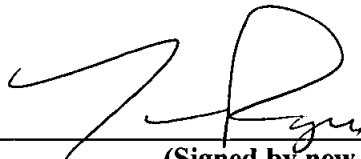
SW ¼ NE ¼ Section 22-T2N-R7E

I/We understand that the validity of Water Permit No. 2466-2 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Two Dollars and Fifty Cents (\$2.50) is required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.

I/We Black Hills Corporation, the new owner, certify that the above information is true and correct.



(Signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse
3. For a third violation of a condition of a water permit/right.

RECEIVED
MAY 23 2006
WATER RIGHTS
PROGRAM



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

May 24, 2006

Tim Rogers
Black Hills Corporation
PO Box 1400
Rapid City SD 57709

RE: Water Right Nos. 565-1, 454-2, 515-2 and Water Permit No. 2466-2

Tim:

The transfer of Water Right Nos. 565-1, 454-2, 515-2 and Water Permit No. 2466-2 has been completed. The water rights formerly listed in the name of Black Hills Power and Light and the permit listed in the name of Black Hills Generation are now listed in the name of "Black Hills Corporation".

Enclosed are Receipt Nos. 02453, 02454, 02455 and 02456 in the amounts of \$2.50 each. You may keep these for your records.

If you have any questions, please contact me.

Sincerely,

Genny McMath
Environmental Scientist
Water Rights Program
(605) 773-3352
email: genny.mcmath@state.sd.us

enclosures

2466-2

Gronlund, Eric

To: trogers@bh-corp.com
Subject: RE: Lange Water Right

Tim

I am writing in response to your inquiry on Water Permit No. 2466-2 which authorizes water use for cooling at the Lang Station.

WP No. 2466-2 approved in 2001 appropriates 250 gallons per minute from one well. The time to complete construction of works is December 5, 2006 with a time to put water to beneficial use of December 5, 2010. The maximum production from the well in 2003 when I visited the plant was 150 gpm. However, the time to complete construction of works had not expired and there was the possibility of a second plant being constructed so the permit was not licensed. When we talked on the phone recently you indicated the status of the well had not changed from 2003

You have asked whether development of the well up to the 250 gpm can be extended until the 2010 or whether BH Corp is bound by the December 6, 2006 time to complete construction of works. I believe the water permit is limited to the production capability of the well at the time works are to be completed. If the well is equipped with a pump and appurtenances to supply 150 gpm, the water right become limited to that amount. However, if the well is equipped and able to divert 250 gpm (this was not the case during my 2003 visit), then the 2010 date to place water to beneficial use comes into play.

An example of when the time to place water to beneficial use is used is a suburban housing development. A well is drilled and equipped with a pump and infrastructure capable of supplying 250 gpm, however, at the end of the 5-year construction period the development is only using 150 gpm because it has not realized full "build out" of the homes. The development is afforded 4 years to attain full build out. The intent of the 4 years to place water to beneficial use is not to allow additional time completion of the water works infrastructure but to allow intended beneficial use of water to be reached. It is not to provide a "future use" permit for potential future development

Sorry for the long email – I'm just trying to make sure I cover the bases.

Eric

-----Original Message-----

From: trogers@bh-corp.com [mailto:trogers@bh-corp.com]
Sent: Tuesday, June 20, 2006 4:25 PM
To: Gronlund, Eric
Subject: Lange Water Right

Eric,

I discussed our conversation with the powers to be. A couple of questions. But first - our PSD AQ construction permit expired to construct the second combustion turbine at this site. With that said, our company officials like to keep all doors open with many options as possible.

1. Is it imperative that we lock into the 150 gallons at this particular time, is there a regulatory requirement that we have too, or can we let this drag out to December 2010 until we lock in?

06/21/2006

As development moves north up Deadwood Avenue - we have concerns that trying to apply and re-appropriate water in the future may be difficult. I know that you do not have a crystal ball, but that is our reasoning for making this request. Is it rational for use to think that it will be difficult to appropriate water in the future in this area?

Tim Rogers
Black Hills Corporation - Environmental Services
(605) 721-2286

2466-2



Black Hills Corporation

Tim Rogers

Environmental Specialist
trogers@bh-corp.com

PO Box 1400, 625 Ninth Street
Rapid City, South Dakota 57709
P (605) 721-2286
F (605) 721-2568

November 13, 2006

RECEIVED

NOV 14 2006

WATER RIGHTS
PROGRAM

Eric Gronlund
SD DENR
523 East Capitol
Pierre, South Dakota 57501

RE: Lange Combustion Turbine Water Right Application

Dear Eric,

Please find enclosed Black Hills Corporation's "Notice of Completion of Works and Application of Water to Beneficial Use" for its Lange Power Plant located in Rapid City.

We had anticipated constructing two combustion turbines at this location, but only one combustion turbine was constructed. Our initial water usage request was for 250 gpm based upon the construction of two combustion turbines, but with one combustion turbine constructed the water use of only 150 gpm is needed.

Black Hills Corporation appreciates all the assistance you provided in obtaining this water use permit. Thank you.

If you have any questions, please feel free to give me a call at (605) 721-2286.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tim Rogers'.

Tim Rogers
Environmental Department

Cc: Ron Kocourek (email)
Eric Eatherton (email/hard copy)
Mark Lux (email)
Fred Carl (email)

Enclosure

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

Date 11-13-06

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

RECEIVED**NOV 14 2006**WATER RIGHTS
PROGRAM

FROM: Tim Rogers
(name)
P.O. Box 1400
(address)
Rapid City, SD 57701
(city, state, zip)

605-721-2286
(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. 2466-2 states that the water use system is to be constructed by

December 5, 2006, and water is to be put to beneficial use by December 5, 2010.
(date) 2006 (date)

The water use system was completed on May 10, 2002.
(date)

Applying the water to beneficial use was completed on May 10, 2002.
(date)

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

T. Rogers
(signature)



Permit No. 2466-2
White 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, **October 30, 2003**, made a thorough examination of the water use system constructed by **Black Hills Generation, Inc., PO Box 1400. Rapid City SD 57701** holder of Permit No. **2466-2**, bearing the priority of **August 16, 2001** authorizing the diversion of **0.557** cu. ft. per second of the waters of **Minnelusa Aquifer** for **industrial use** purposes, in **Pennington** County.

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

A. Works used to divert the water:

A Minnelusa well cased to 750 feet (see picture)

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

Water is diverted by pipeline from the well on-site to cool the natural gas electrical generating station

C. Works used to apply water to beneficial use:

The system is in the following condition **excellent**. The point of diversion is located **in the SW ¼ NE ¼ Section 22, T2N, R7E. Lat/Lon N44.1207 W-103.261483**. The works are capable of diverting and conveying to the place of use **0.33** cu. ft. per second of water for **industrial use**. Water is capable of being put to beneficial use to the maximum extent and the license should be issued for **0.33** cfs

Applicable permit qualifications have been complied with: **YES** (there has been no overland flow out of the low area.

Exceptions to compliance are: **none** Date Report Completed: **December 7, 2006**



Eric Gronlund
Natural Resources Engineer
DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR PERMIT NO. 2466-2

DATE OF INVESTIGATION:	October 30, 2003
NAME OF PERMIT HOLDER	Black Hills Generation, Inc. PO Box 1400 Rapid City SD 57701
NAME & ADDRESS OF CONTACT	Tim Rogers
DIVERSION POINT LEGAL LOCATION	in the SW ¼ NE ¼ Section 22, T2N, R7E. Lat/Lon N44.1207 W-103.261483

Other permit(s) associated with the project: none

WELL INFORMATION:

- 1) Well Drilling Firm: Taylor Drilling
- 2) No. of Wells 1
- 3) Depth(s) 787 feet
- 4) Well log is available Yes
- 5) Comment: see below

Casing:

- 1) Diameter 10 ¾ & 7 inches
- 2) Length 0 to 45 & 45 to 750 feet
- 3) Type Steel

Screen:

- 1) Type none
- 2) Length _____ feet
- 3) Static water level 60 feet

Pump: Submersible

- 1) Make Grundfos
- 2) Model 150S300
- 3) Size
- 4) Capacity 150 GPM

Motor:

- 1) Make
- 2) Model No.
- 3) Horsepower rating 30 hp

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

COMMENT: The licensing investigation was conducted in October 2003. However, at that time Black Hills Generation was within their construction period and still may have constructed Phase II of the project. However, they did not and in November 2006 they filed a Notice of Completion of works for the level of development equating to 150 gpm. Based on this Water Rights should license the water right.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2466-2

(1) Black Hills Generation Inc, PO Box 1400, Rapid City SD 57709 made Application No. 2466-2, August 16, 2001 for a water permit to divert 0.557 cubic feet of water per second (250 gallons per minute) from ground water (one well – Minnelusa or Madison Aquifer), Pennington County, South Dakota for industrial purposes. Permit No. 2466-2, with a priority date of August 16, 2001 was approved December 5, 2001 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 5, 2006 and for the application to beneficial use of said water on or before December 5, 2010.

On May 23, 2006, Water Permit No. 2466-2 was transferred from Black Hills Generation Inc to Black Hills Corporation.

On November 14, 2006, the permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" which stated the water use system was completed and water placed to beneficial use in May, 2002.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.33 cubic feet of water per second for beneficial use (150 gallons per minute). The Minnelusa well is located:

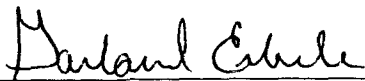
- approximately 2,500 feet west and 1,800 feet south of the NE corner of Section 22, T2N, R7E (SW $\frac{1}{4}$ NE $\frac{1}{4}$)

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use for cooling the natural gas electrical generating combustion turbines.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Black Hills Corporation, PO Box 1400, Rapid City SD 57709 the holder and owner of Water Right No. 2466-2 is issued a license to appropriate water, the right to use 0.33 cubic feet of water per second from ground water (one well – Minnelusa Aquifer) with a priority date of August 16, 2001 from the location specified in (2) of this license for industrial purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 2466-2 and subject to the following 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. 2466-2 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) from the producing formation to the surface pursuant to Section 74:02:04:28. (*The well, as constructed, meets standards*).

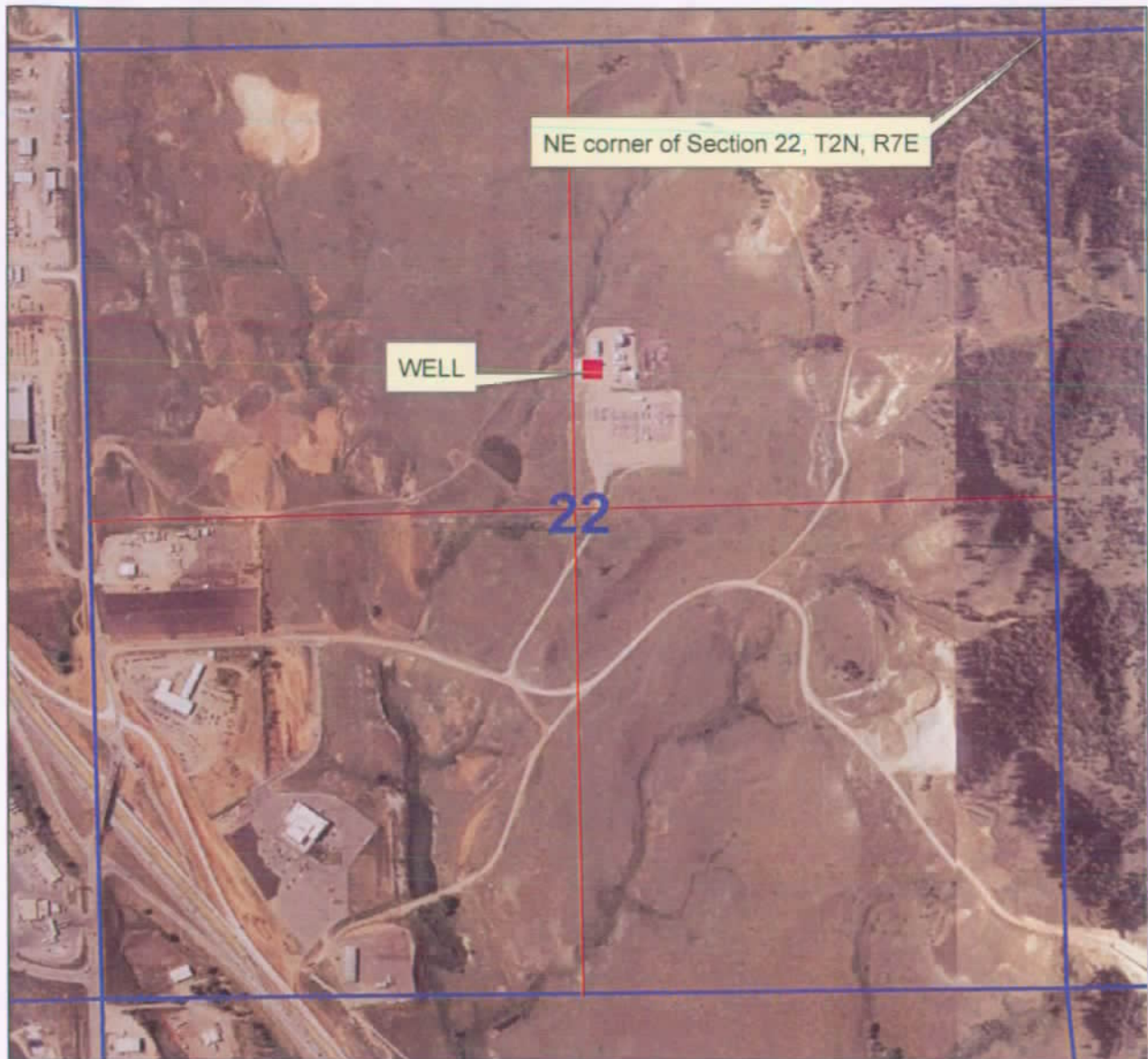


Garland Erbe, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

APR 20 2007

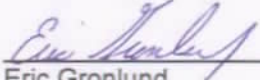
date





1,800 900 0 1,800 Feet

Well is located in the SW 1/4 NE 1/4 Section 22, T2N,R7E
LAT 44.1207 Lon - 103.261483
approximately 2,500 feet west and 1,800 feet south of the NE corner Section 22, T2N, R7E


Eric Gronlund
Water Rights Program, DENR
Date of Investigation - October 30, 2003



APR 20 2007

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

2466-2

Tim Rogers
Black Hills Corporation
PO Box 1400
Rapid City SD 57709

Dear Mr. Rogers:

Enclosed is Water License No. 2466-2. This is the final water right document completing the process of obtaining a Water Right.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 2466-2, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

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

enclosures