

WATER PERMIT NO. 7887-3

Name of Applicant: Novita Aurora LLC

Address: 2301 Research Parkway, Ste 226, Brookings SD 57006

Phone: 605 610-1007

Amount of Water Claimed: 1.11 cfs

Total Acres: NA

Source of Water Supply: groundwater (two wells)

Water to be used for: industrial

County: Brookings

Type of Waste Disposal System:

Location: 2 miles east of Brookings

PRIORITY

Date Received: 8-21-13

Application/License Fee: \$ 1450

Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: N 1/2 NE 1/4 Sec 33-T110N-
R49W

Land to be Irrigated: NA

Depth of Well: 51 feet deep

Well Driller: Lacey Well Drilling

Remarks:

Type of Map:

Prepared by:

Reviewed and the Number Assigned on: 8-21-13

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

			⊗	⊗	

SD EForm - 1585LD V4

FORM 2: Application for uses other than irrigation

(type or print)

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WATER RIGHTS
PROGRAM

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>7887-3</u> (office use only) Hydrologic Unit <u>10170202</u>
	Basin <u>Sioux River</u>
	Newspaper <u>Brookings Register Box 177</u>
	<u>57006-605-692-6271</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:

(check one)

☒ New	☐ Vested Right (Use predates Mar 2, 1955)	☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____		
☐ Amendment/Correction to Permit No. _____		

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

1. Name to Appear on Water Permit Novita Aurora, LLC(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

Mailing Address 2301 Research Parkway, Ste 226

(Address)

Brookings

(City)

SD

(State)

57006

(Zip Code)

Home Phone 605-610-1007

Cell _____

Email Rick@novitalc.com2. Amount of water claimed 1.11 *CFS or 500 **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 Groundwater4. Location of point of diversion 2 wells in N 1/2 NE 1/4 Section 33 - T110N - R49W County Brookings

(example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ No

If "Yes," where will water be used? _____

(example - NW1/4 section 12-T104N-R53W)

5. County or counties where water will be used Brookings6. Annual period during which water is to be used Jan - Dec

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)

Novita Aurora, LLC will construct a plant that uses n-hexane to extract corn oil from dried distillers' grains with solubles (DDGS) received from corn ethanol plants. Corn oil will be sold off-site for further processing. De-oiled DDGS will be sold off-site as meal.

Existing irrigation well will be plugged in accordance with 74:02:04:69. Two new wells will be installed. The appropriated water will be used for steam and cooling.

Donald L. Erdman, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

2012-09

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

**SOUTH DAKOTA
WATER PERMIT NO. 7887-3**

Date of first receipt of application August 21, 2013.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 7887-3 to Novita Aurora LLC, 2301 Research Parkway, Ste 226, Brookings SD 57006 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. 7887-3 appropriates 1.11 cubic feet of water per second from two wells to be completed into the Big Sioux:Aurora Aquifer (51 feet deep) located in the N 1/2 NE 1/4 Section 33-T110N-R49W.
2. The water appropriated shall be used for the purpose of industrial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 7887-3 is November 4, 2013.
5. The date from which applicant may claim right is August 21, 2013.
6. One-fifth of the construction is to be completed on or before May 4, 2016.
7. All construction is to be completed on or before November 4, 2018.
8. Water is to be put to beneficial use on or before November 4, 2022.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 7887-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Novita Aurora LLC shall report to the Chief Engineer annually the amount of water withdrawn from the Big Sioux:Aurora Aquifer.

WATER MANAGEMENT BOARD

By: 
Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

NOV 18 2013

date



Supplemental Information

(type or print)

1. Well Information

(check one or both as applicable) ☒ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many 2 Have test holes been drilled ☐ Yes ☒ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many 1 Provide copy of log(s), if available. Drilled by Lacey Well Drillers

c) Well Depth 51' Depth to Top of Water Bearing Material 15' Depth to Water from Surface 16'

d) Distance to nearest existing domestic well:

On applicant's property None On property owned by others Approximately 1,000'

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) None/non-contact cooling surface discharge - permit applied for

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 (e.g. 3 to 1 is a typical slope)

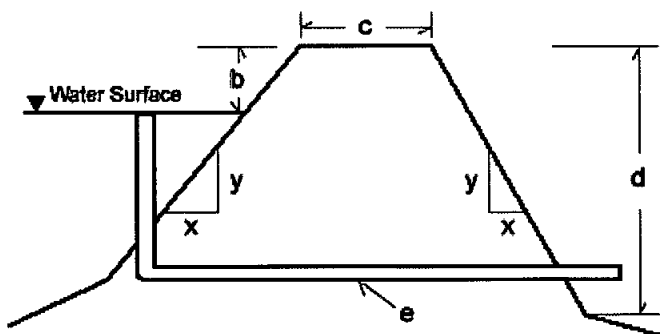
Upstream _____

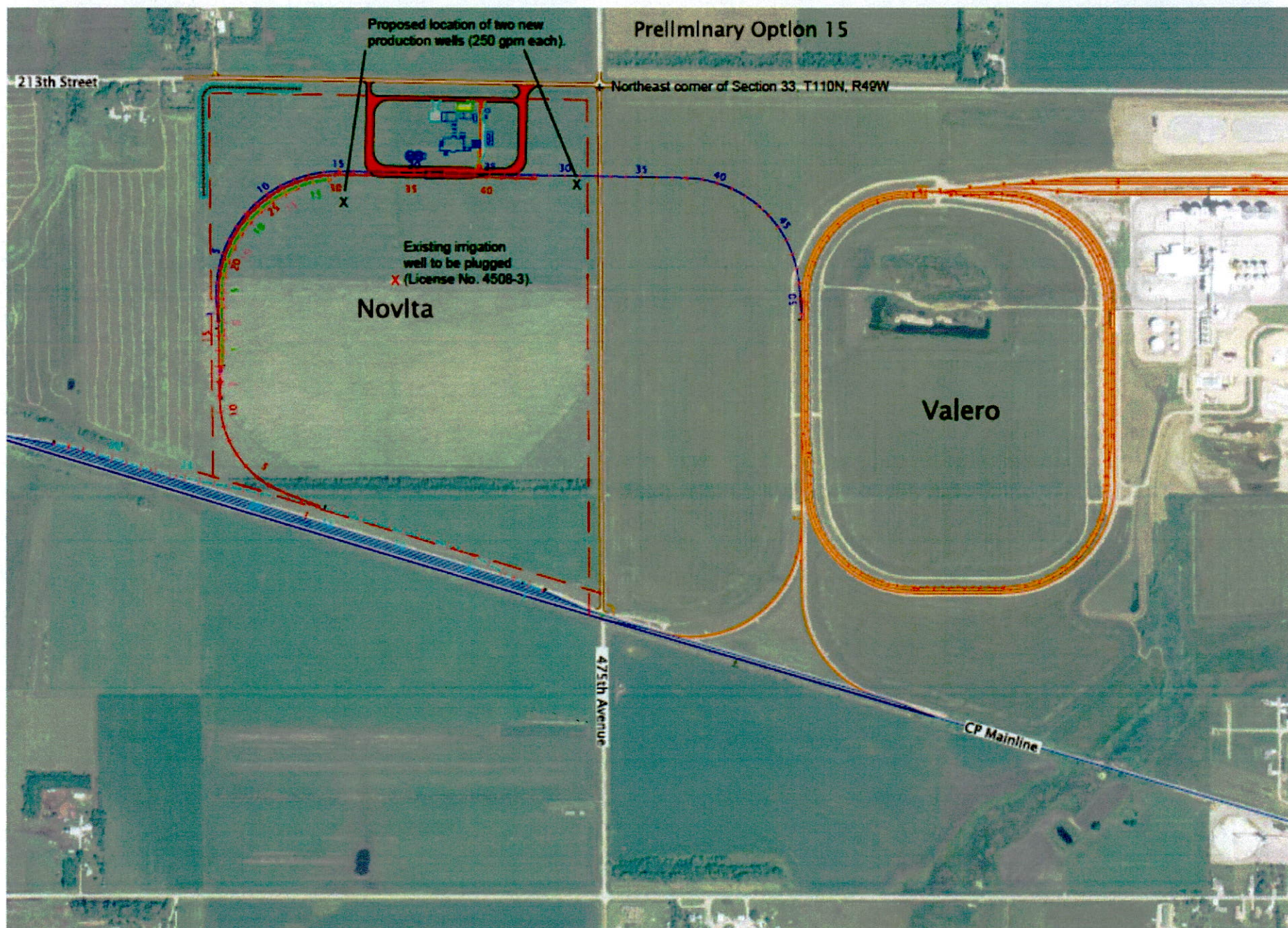
Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres





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WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 8/21, 20 13

RECEIVED OF Novita LLC 2301 Research Prkwy #226 Brookings SD 57006

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

Fee for Application for Permit No. <u>7887-3</u> to Appropriate Water, to construct and to put water to beneficial use	1250	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>788733</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	1450 00

No. 06414

By J. Lammie Goodman eg
Chief Engineer

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resourceful. naturally.
engineering and environmental consultants

BARR

August 19, 2013

PMB 2020

South Dakota Department of Environment and Natural Resources – Water Rights
523 East Capitol Avenue
Pierre, South Dakota 57501-3182

**Re: Application for Permit to Appropriate Water Within the State of South Dakota
Novita Aurora, LLC – Aurora Plant**

Novita Aurora, LLC (Novita) is proposing to construct a plant that uses n-hexane to extract corn oil from dried distillers' grains with solubles (DDGS) received from corn ethanol production plants. Corn oil will be sold off-site for further processing. De-oiled DDGS will be sold off-site as meal.

On behalf of Novita, Barr Engineering Company is submitting one copy of the enclosed Application For Permit to Appropriate Water Within the State of South Dakota. The appropriated groundwater will be used to produce steam and for cooling at the plant.

The proposed location for the plant currently has an irrigation well with an appropriation (Water License Number 4508-03) for 750 gallons per minute (gpm). Novita plans to plug the existing irrigation well in accordance with South Dakota Administrative Rules 74:02:04:69, terminate the existing appropriation, and install two new production wells at the site. The proposed capacity for each of the two wells is 250 gpm, for a total proposed appropriation of 500 gpm. The enclosed application is for an appropriation associated with the new wells.

Novita has conducted geotechnical exploration borings at the proposed plant location. This application includes logs associated with the geotechnical exploration borings, as well as, a log associated with the existing irrigation well.

The application fee is being submitted by Novita Aurora, LLC under separate cover.

Please direct any questions or comments regarding this application to me at (952) 832-2621 or ctaylor@barr.com. We look forward to working with you on this permit application.

Sincerely,



Chandler P. Taylor
Senior Environmental Consultant

cc: Rick Eggebrecht, Novita Aurora, LLC
Jeffrey See, JGSee Management



2301 Research Park Way
Brookings, SD 57006
605-610-1026

August 19, 2013

PMB 2020

South Dakota Department of Environment and Natural Resources - Water Rights
523 East Capitol Avenue
Pierre, South Dakota 57501-3182

To whom it may concern,

This check for \$1,450.00 is for payment for Application for Permit to appropriate Water within the State of South Dakota, Novita Aurora, LLC - Aurora Plant, submitted under separate cover from BARR Engineering.

Please feel free to contact me if you have any questions.

Best regards,

A handwritten signature in black ink, appearing to read "Rick Eggebrecht".

Rick Eggebrecht
VP of Project Development
Novita, LLC

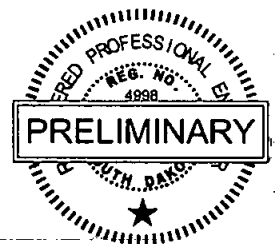
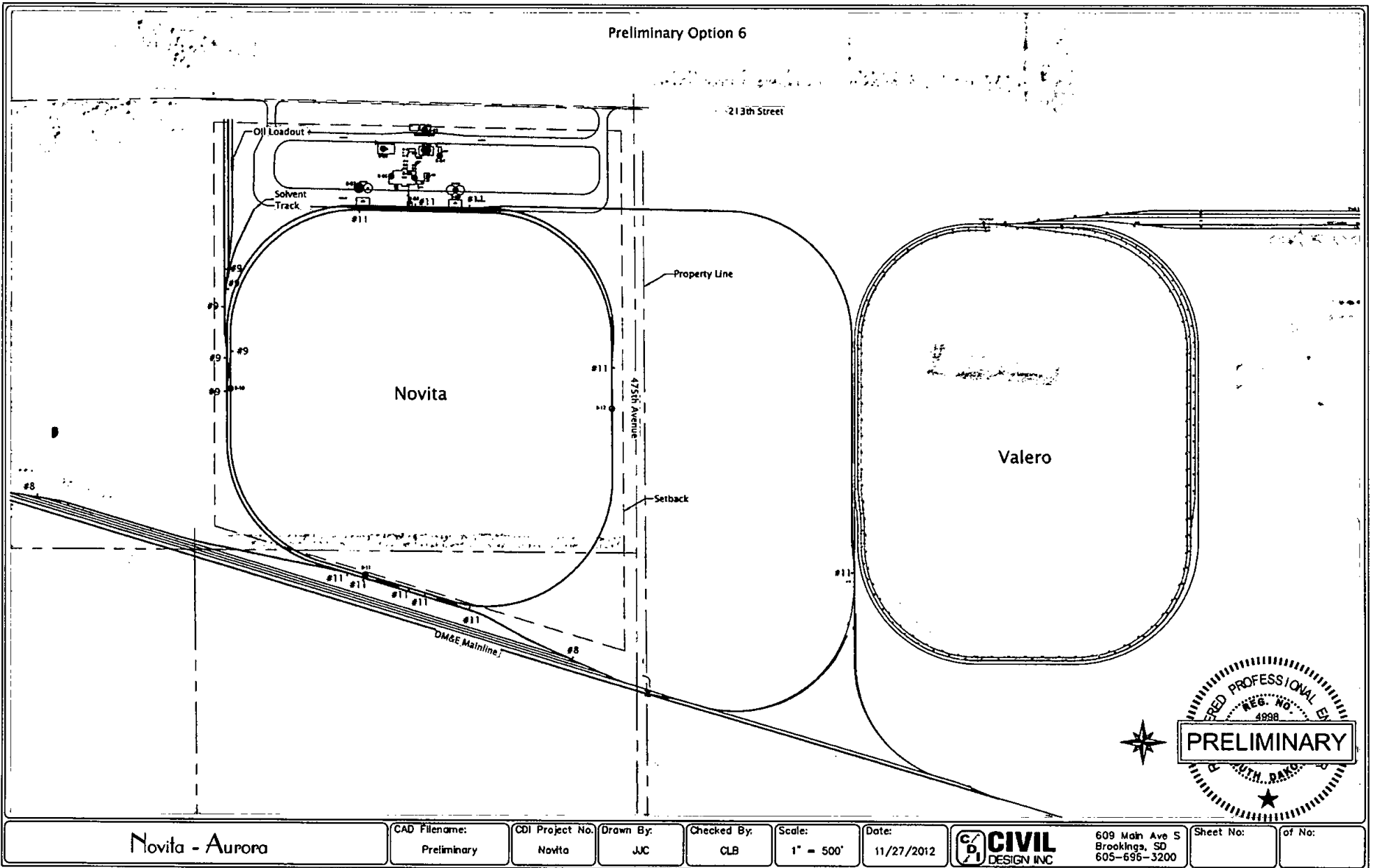
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**WATER RIGHTS
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**EXCERPTS FROM DECEMBER 18, 2012 GEOTEK ENGINEERING & TESTING
SERVICES, INC. GEOTECHNICAL EXPLORATION REPORT
(INCLUDES TWO DEEP BORINGS NEAREST THE PROPOSED WELL SITES)**

Preliminary Option 6



Novita - Aurora

CAD Filename:
Preliminary

CDI Project No.
Novita

Drawn By:
JJC

Checked By:
CLB

Scale:
1" = 500'

Date:
11/27/2012

CIVIL
DESIGN INC

609 Main Ave S
Brookings, SD
605-696-3200

Sheet No:

of No:



**GEOTEK ENGINEERING
& TESTING SERVICES, INC.**
909 E. 50th Street North
Sioux Falls, SD 57104
605-335-5512 Fax 605-335-0773
www.geotekeng.com

GEOTECHNICAL TEST BORING LOG

GEOTEK # **12-C83**

BORING NO. **7 (1 of 2)**

PROJECT **Proposed Oil Extraction Project, Adjacent to Valero Ethanol Plant, Aurora, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
	↓ SURFACE ELEVATION <u>1626.9 ft</u>										
2	LEAN CLAY: black to dark brown, moist, (CL)	TOPSOIL			1	FA					
	SAND: a trace of gravel, fine to medium grained, brown, medium dense to dense, (SP)	COARSE ALLUVIUM	12		2	SPT					
			13		3	SPT					
21				4	SPT						
9	SAND: a little gravel, medium grained, brown, very dense to dense, (SP)	COARSE ALLUVIUM	40		5	SPT					
			21		6	SPT					
			46		7	SPT					
			36		8	SPT					
WATER LEVEL MEASUREMENTS						START <u>11-30-12</u> COMPLETE <u>11-30-12 12:20 pm</u>					
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
--	--	--	--	--	--						
--	--	--	--	--	--						
--	--	--	--	--	--						
--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 12-C83.GPJ GEOTEKENG.GDT 12/18/12



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GEOTECHNICAL TEST BORING LOG

GEOTEK # **12-C83**

BORING NO. **7 (2 of 2)**

PROJECT **Proposed Oil Extraction Project, Adjacent to Valero Ethanol Plant, Aurora, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS					
					NO.	TYPE	WC	D	LL	PL	QU	
↓ SURFACE ELEVATION <u>1626.9 ft</u>												
	SAND: a little gravel, medium grained, brown, very dense to dense, (SP) (Continued from previous page)	COARSE ALLUVIUM										
			27		9	X SPT						
			44		10	X SPT						
			29		11	X SPT						
44½	LEAN CLAY WITH SAND: a little gravel, brown, stiff, (CL)	GLACIAL TILL	14		12	X SPT						
49	LEAN CLAY WITH SAND: a little gravel, dark gray, very stiff, (CL)	GLACIAL TILL	21		13	X SPT						
51	Bottom of borehole at 51 feet.											
WATER LEVEL MEASUREMENTS						START <u>11-30-12</u> COMPLETE <u>11-30-12 12:20 pm</u>						
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling						
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--	--	--	--	--	--	CREW CHIEF Roy Hanson						

GEOTECHNICAL TEST BORING 12-C83.GPJ, GEOTEKENG.GDT 12/18/12



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GEOTECHNICAL TEST BORING LOG

GEOTEK # **12-C83**

BORING NO. **9 (1 of 2)**

PROJECT **Proposed Oil Extraction Project, Adjacent to Valero Ethanol Plant, Aurora, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
	↓ SURFACE ELEVATION 1631.3 ft										
2	LEAN CLAY: black to dark brown, moist, (CL)	TOPSOIL			1	FA					
4	SAND: a little gravel, medium grained, brown, moist, dense, (SP)	COARSE ALLUVIUM	18		2	SPT					
	SAND: a trace of gravel, fine to medium grained, brown, dense to medium dense, (SP)	COARSE ALLUVIUM	17		3	SPT					
			13		4	SPT					
			18		5	SPT					
14	SAND: a little gravel, medium grained, brown, very dense to dense, (SP)	COARSE ALLUVIUM	57		6	SPT					
			22		7	SPT					
			48		8	SPT					
WATER LEVEL MEASUREMENTS			START 11-30-12 COMPLETE 11-30-12 3:55 pm								
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--						
--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 12-C83.GPJ GEOTEKENG.GDT 12/18/12



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GEOTECHNICAL TEST BORING LOG

GEOTEK # **12-C83**

BORING NO. **9 (2 of 2)**

PROJECT **Proposed Oil Extraction Project, Adjacent to Valero Ethanol Plant, Aurora, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS					
					NO.	TYPE	WC	D	LL	PL	QU	
	↓ SURFACE ELEVATION <u>1631.3 ft</u>											
	SAND: a little gravel, medium grained, brown, very dense to dense, (SP) (Continued from previous page)	COARSE ALLUVIUM										
			34		9	X	SPT					
			28		10	X	SPT					
			44		11	X	SPT					
			30		12	X	SPT					
			32		13	X	SPT					
51	Bottom of borehole at 51 feet.											
WATER LEVEL MEASUREMENTS					START	11-30-12		COMPLETE	11-30-12 3:55 pm			
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling						
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--	--	--	--	--	--	CREW CHIEF Roy Hanson						

GEOTECHNICAL TEST BORING 12-C83.GPJ GEOTEKENG.GDT 12/18/12

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

BORING LOG SYMBOLS AND DESCRIPTIVE TERMINOLOGY

SYMBOLS FOR DRILLING AND SAMPLING

<u>Symbol</u>	<u>Definition</u>
Bag	Bag sample
CS	Continuous split-spoon sampling
DM	Drilling mud
FA	Flight auger; number indicates outside diameter in inches
HA	Hand auger; number indicates outside diameter in inches
HSA	Hollow stem auger; number indicates inside diameter in inches
LS	Liner sample; number indicates outside diameter of liner sample
N	Standard penetration resistance (N-value) in blows per foot
NMR	No water level measurement recorded, primarily due to presence of drilling fluid
NSR	No sample retrieved; classification is based on action of drilling equipment and/or material noted in drilling fluid or on sampling bit
SH	Shelby tube sample; 3-inch outside diameter
SPT	Standard penetration test (N-value) using standard split-spoon sampler
SS	Split-spoon sample; 2-inch outside diameter unless otherwise noted
WL	Water level directly measured in boring
▼	Water level symbol

SYMBOLS FOR LABORATORY TESTS

<u>Symbol</u>	<u>Definition</u>
WC	Water content, percent of dry weight; ASTM:D2216
D	Dry density, pounds per cubic foot
LL	Liquid limit; ASTM:D4318
PL	Plastic limit; ASTM:D4318
QU	Unconfined compressive strength, pounds per square foot; ASTM:D2166

DENSITY/CONSISTENCY TERMINOLOGY

<u>Density</u>		<u>Consistency</u>
<u>Term</u>	<u>N-Value</u>	<u>Term</u>
Very Loose	0-4	Soft
Loose	5-8	Firm
Medium Dense	9-15	Stiff
Dense	16-30	Very Stiff
Very Dense	Over 30	Hard

PARTICLE SIZES

<u>Term</u>	<u>Particle Size</u>
Boulder	Over 12"
Cobble	3" – 12"
Gravel	#4 – 3"
Coarse Sand	#10 – #4
Medium Sand	#40 – #10
Fine Sand	#200 – #40
Silt and Clay	passes #200 sieve

DESCRIPTIVE TERMINOLOGY

<u>Term</u>	<u>Definition</u>
Dry	Absence of moisture, powdery
Frozen	Frozen soil
Moist	Damp, below saturation
Waterbearing	Pervious soil below water
Wet	Saturated, above liquid limit
Lamination	Up to 1/2" thick stratum
Layer	1/2" to 6" thick stratum
Lens	1/2" to 6" discontinuous stratum

GRAVEL PERCENTAGES

<u>Term</u>	<u>Range</u>
A trace of gravel	2-4%
A little gravel	5-15%
With gravel	16-50%

Schlaak, Karen

From: McMath, Genny
Sent: Wednesday, August 28, 2013 10:56 AM
To: Schlaak, Karen
Subject: FW: Novita Aurora LLC

You may not need to know yet but I should have included you in the email so when you are drafting the new permit up (in a couple months) you would know why I had not scheduled it yet.

From: McMath, Genny
Sent: Wednesday, August 28, 2013 10:53 AM
To: Gronlund, Eric; Buhler, Ken
Subject: FW: Novita Aurora LLC

Chandler Taylor called concerning my questions below. He indicated that Novita Aurora LLC have not acquired the property yet. They hope to have everything worked out by later this fall or early spring. In the meantime, James Gilkerson still owns the land and is still irrigating.

I told Mr. Taylor to contact me when the purchase was completed and at that time I would schedule the water right for cancellation. He was agreeable to that and felt that was the best option. For now, they are just trying to get all their permits in place. He was concerned that "not cancelling" the irrigation permit would somehow affect the review of the application they submitted. I told him I did not think the issue would affect the review process.

If I am wrong and the review is dependent on the old water right being cancelled, please give him a call.

Genny

From: McMath, Genny
Sent: Wednesday, August 28, 2013 10:05 AM
To: 'ctaylor@barr.com'; 'rick@novitalc.com'
Subject: Novita Aurora LLC

Mr. Taylor,

Our office is in receipt of the water permit application for Novita Aurora LLC. The letter submitted with the application indicates the proposed location of the plant currently has an irrigation well on it that will be plugged. A request was made in the letter to terminate or cancel the existing irrigation right.

Our records show that James Gilkerson still holds the water right. When did Novita Aurora LLC purchase the property. If they did not purchase the land, has an agreement been worked out with Mr. Gilkerson. The reason I ask is that I am hesitant to schedule a water right for cancellation unless further information is known especially since it is still being used.

Please let me know soon I can update the file accordingly,

Genny McMath
Water Rights Program
605.773.5455



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 7887-3, Novita Aurora, LLC**

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. 7887-3, Novita Aurora, LLC, c/o Rick Eggebrecht, 2301 Research Parkway, Ste. 226, Brookings SD 57006.

The Chief Engineer is recommending APPROVAL of Application No. 7887-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The wells approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The wells authorized by Permit No. 7887-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Novita Aurora LLC shall report to the Chief Engineer annually the amount of water withdrawn from the Big Sioux:Aurora Aquifer.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
October 11, 2013

REPORT TO THE CHIEF ENGINEER

WATER PERMIT APPLICATION NO. 7887-3

Novita Aurora, LLC, c/o Rick Eggebrecht

September 23, 2013

Water Permit Application No. 7887-3 proposes to appropriate water at a maximum diversion rate of 1.11 cubic feet per second (cfs) from two wells to be completed into the Aurora management unit of the Big Sioux aquifer. The wells are expected to be approximately 51 feet deep, located in the N½ NE¼ of Section 33, T110N-R49W in Brookings County. Water will be used for industrial use.

AQUIFER: Aurora management unit of the Big Sioux aquifer (BS: A)

HYDROGEOLOGY:

The Big Sioux aquifer is an alluvium mantled outwash consisting of silt and fine to coarse sand and gravel that is generally under unconfined conditions near the Big Sioux River and can be confined elsewhere. The aquifer is hydraulically connected to the Big Sioux River, and water in the aquifer generally moves from north to south and locally towards the Big Sioux River (Hamilton, 1989). The Aurora management unit of the Big Sioux aquifer underlies approximately 83,000 acres in Brookings and Moody Counties in South Dakota and Lincoln and Pipestone Counties in Minnesota. In the center of T109N-R47W, groundwater flow in the aquifer divides: west-northwest in the northern portion and southwest in the southern portion, essentially creating subunits of the Aurora management unit. The northern subunit, where the proposed well sites are located, underlies approximately 63,000 acres all in Brookings County (Buhler, 2012).

In Brookings and Kingsbury Counties, the top of the Big Sioux: Aurora aquifer is encountered from ground surface to 212 feet below ground surface, the aquifer is 30 feet thick on average, and depth to water in the aquifer ranges from ground surface to 120 feet below ground surface. In the area of the proposed well sites, the aquifer is expected to be encountered from just below ground surface to approximately 50 feet below ground surface. The aquifer is approximately 40 feet thick and has a static water level of approximately 10 feet below ground surface (Hamilton, 1989; SD Geological Survey, 2013). From the well log submitted with the application, aquifer materials were found between five and 51 feet below ground surface.

SDCL 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and existing rights from the aquifer that are pertinent to this application.

WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer can be evaluated by considering SDCL 46-6-3.1, which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source.” If the source of the water is older or lower than the Greenhorn Formation and a public water system has applied for a permit, the Board need not consider the recharge/withdrawal issue. Here, a public water system is not involved. Therefore, withdrawal/recharge issue must be considered.

Hydrologic Budget:*Recharge:*

Recharge to the Big Sioux: Aurora aquifer occurs through infiltration of precipitation in areas where the aquifer is at or near land surface, seepage through till, lake deposits, and underlying aquifers, and inflow from the Big Sioux River during wet years (Hamilton, 1989).

Hedges and others (1985) determined the average recharge to the entire Big Sioux aquifer system by base flow analysis to be 6.5 inches per year (in/yr). Koch (1980) estimated average recharge to the Big Sioux aquifer in Brookings, Deuel, and Hamlin Counties by modeling to be 6.57 in/yr to the unconfined portions. Hansen (1988) estimated recharge to the Big Sioux aquifer in Moody County by modeling to be on average 4.85 in/yr. Hedges and others (1985) estimated recharge specifically of the Aurora management unit by observation well analysis to be 5.0 in/yr; this is considered the best data available due to its emphasis on the management unit.

Koch (1980) indicates that even more water could be pumped than the estimated average recharge based on the concept of induced recharge from surface waters due to pumpage and capture of water to pumpage prior to evapotranspiration or natural outflow.

Applying the recharge rate of the Aurora management unit of 5.0 in/yr, and the area of the subunit of 63,000 acres, recharge to the northern subunit of the Big Sioux: Aurora aquifer is estimated to be 26,250 ac-ft/yr.

Discharge:

Discharge from the Big Sioux: Aurora aquifer occurs through evapotranspiration in areas where the aquifer is at or near land surface, outflow to streams during dry years, and well withdrawals. There are a total of 45 water rights, six water permits appropriating water and one future use permit reserving water from this northern subunit of the Big Sioux: Aurora aquifer (Water Rights, 2013b).

The City of Brookings has reported annual use from the Big Sioux: Aurora continuously for the past ten years. The average annual use of 2,103 ac-ft/yr has remained relatively constant over the time period. Non-irrigation water rights/permits that do not report annual use currently authorize a total maximum diversion rate of 1.666 cfs and annual volume of 1,945 ac-ft/yr. Future Use Permit No. 1598-3, City of Brookings, currently reserves 2,426 ac-ft/yr. The City of Aurora is now connected to a Brookings Municipal Utilities. Water Right No. 1952-3 is maintained as a standby source (Water Rights, 2013b).

The amount of water that can be expected to be withdrawn by non-irrigation use water rights/permits and future use permits at the current appropriation/reservation amount can be estimated by assuming:

- 1) average annual reported use of municipalities over appropriate time periods is considered to be expected use,
- 2) water rights/permits limited by an annual volume will pump the entire volume appropriated annually,
- 3) water rights/permits limited only by diversion rate will pump at the maximum permitted diversion rate 60 percent of the time,
- 4) future use permits can be fully developed, and
- 5) water rights/permits authorized to municipalities using rural water systems as a primary source will not be used.

Considering this water use expectations, 7,198 ac-ft/yr is estimated to be withdrawn from the northern subunit of the Big Sioux: Aurora aquifer due to non-irrigation water rights/permits and the future use permit (Water Rights, 2013b).

While there are numerous domestic wells on file, many are no longer used as primary sources since rural water systems have been introduced in the area. Considering this, and the relatively small withdrawal ability and authorization of a domestic well, the annual quantity of water withdrawn due to domestic wells is not significant to the hydrologic budget of the Big Sioux: Brookings aquifer (Water Rights, 2013c).

Over the period of record, water appropriation from the northern subunit of the Big Sioux: Aurora aquifer has remained fairly constant. The historic irrigation use is shown in Figure 1. Over the period of record, the average annual pumpage is 2,221 ac-ft/yr, but varies from a minimum of 208 ac-ft/yr to a maximum of 4,275 ac-ft/yr. This wide range of annual irrigation pumpage can be attributed to several unpredictable factors, namely economic and climatic conditions (Water Rights, 1980-2013). The expected use of irrigation water rights/permits is estimated to be the average pumpage reported over the entire period of record.

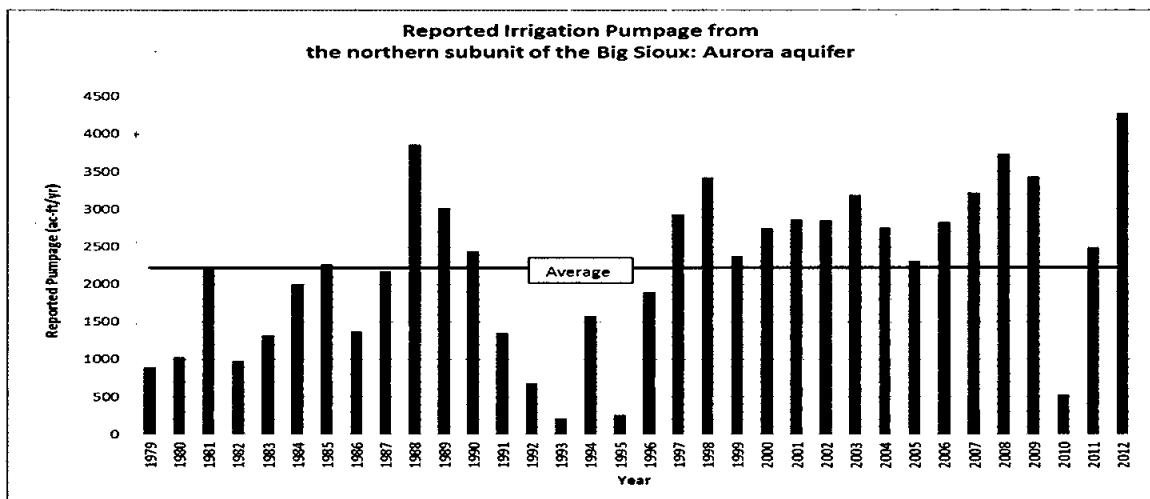


Figure 1: Historic irrigation water use from the northern subunit of the Big Sioux: Aurora aquifer (Water Rights, 1980-2013)

Hydrologic Budget:

The average annual withdrawal is estimated to be 9,419 ac-ft/yr, which is much less than the estimated annual recharge of 26,250 ac-ft/yr. If the applicant pumps at the maximum diversion rate at the expected 60 percent of the time, withdrawal would equal 483 ac-ft/yr. Therefore, unappropriated water is available from the northern subunit of the Big Sioux: Aurora aquifer to support the proposed appropriation.

Observation Well Data:

Administrative Rule of South Dakota Section 74:02:05:07 requires that “the Water Management Board shall rely upon the record of observation well measurements to determine that the quantity of water withdrawn annually from the aquifer does not exceed the estimated average annual recharge of the aquifer.”

The SD DENR-Water Rights Program monitors 14 observation wells completed into the northern subunit of the Big Sioux: Aurora aquifer. All of these hydrographs record steady water levels in the aquifer over the period of record. The nearest wells, BG-79D, BG-89A, and BG-77R are located approximately 1.3 miles northwest, 1.1 miles east, and 1.1 miles southwest of the proposed well sites, respectively. The hydrograph of these wells are shown in Figures 2, 3, and 4 (Water Rights, 2013a).

The observation well data documents cyclic conditions of water levels, recharging during wet years and declining during dry years. These hydrographs are typical of many observation wells recording water levels in the aquifer. The data documents that at the current level of development temporal well withdrawal is masked by climatic conditions, and recharge to and natural discharge from the aquifer exceeds well withdrawal. Therefore, unappropriated water is available from the northern subunit of the Big Sioux: Aurora aquifer to support the proposed appropriation.

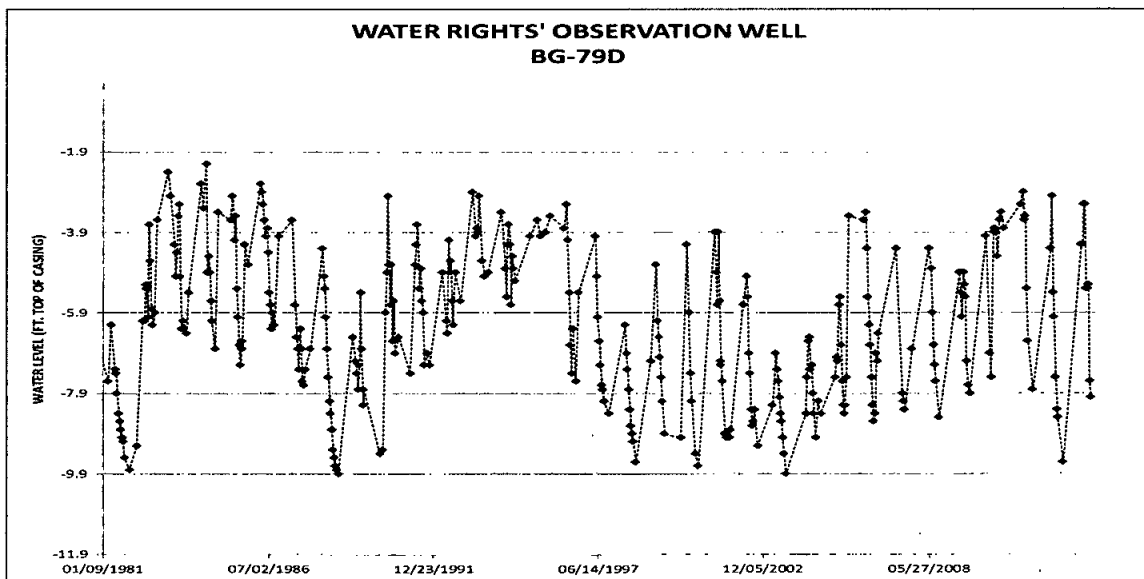


Figure 2: Hydrograph for observation well BG-79D (Water Rights, 2013a)

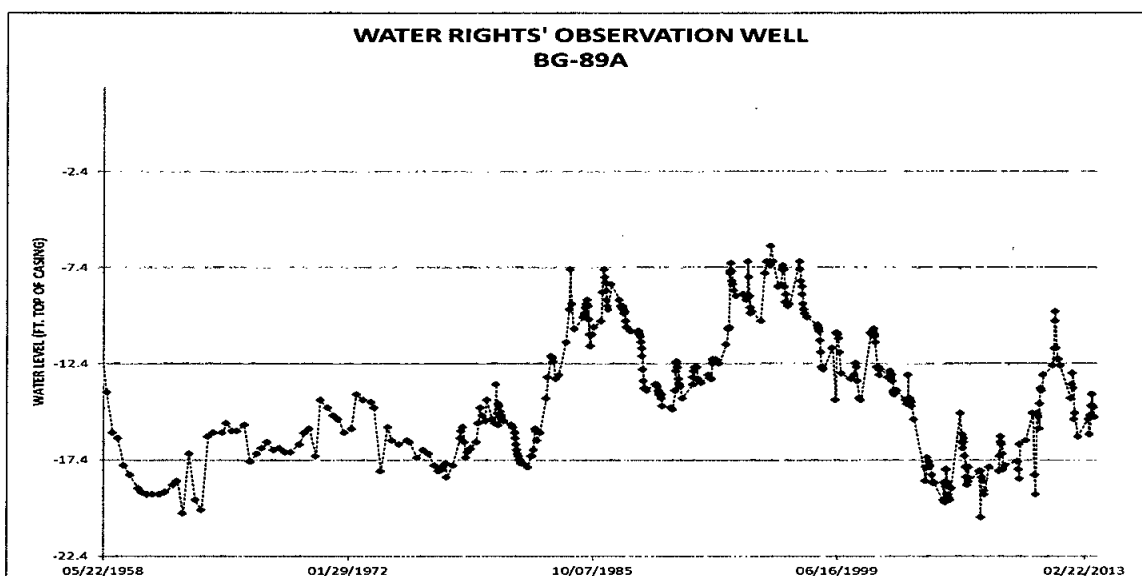


Figure 3: Hydrograph for observation well BG-89A (Water Rights, 2013a)

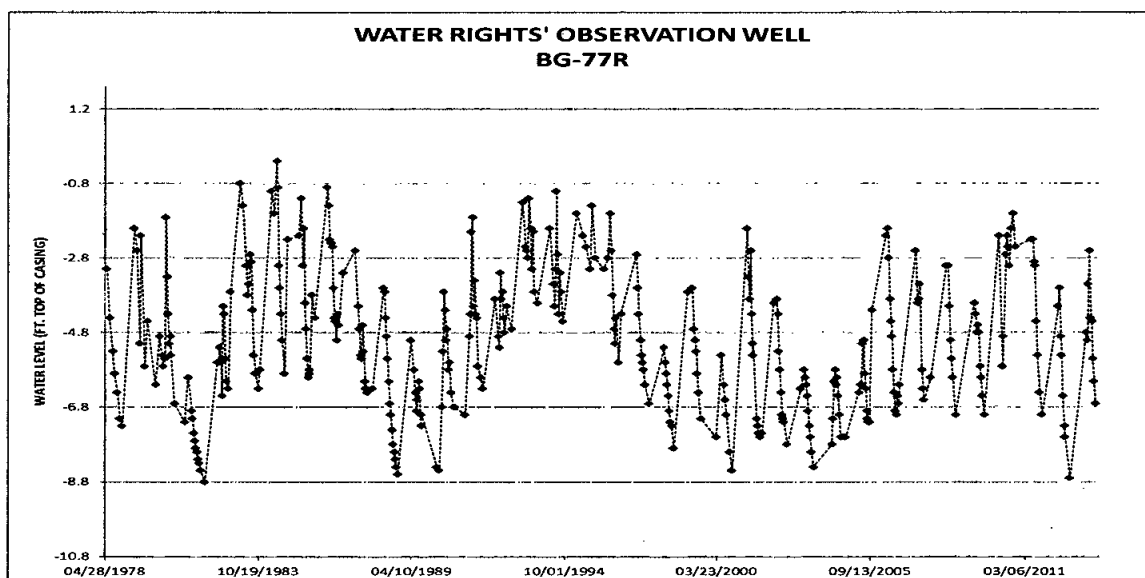


Figure 4: Hydrograph for observation well BG-77R (Water Rights, 2013a)

EXISTING WATER RIGHTS:

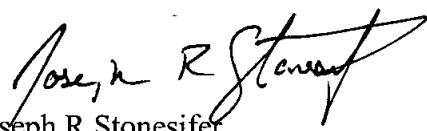
There are several wells completed into the Big Sioux aquifer in the area of the proposed well sites. There are six water rights within one mile of the proposed well sites; however, one water right, No. 4508-3, is expected to be canceled. A municipal production well, authorized to Water Right No. 6048-3, City of Brookings, is located approximately one mile from the proposed well sites. Also, the future use area reserved by Future Use Permit No. 1598-3, City of Brookings, is located approximately one mile from the proposed well sites. Additionally, there are several domestic wells on file that are completed into the Big Sioux: Aurora aquifer within one mile of the proposed well sites. Aside from the well authorized by Water Right No. 4508-3, which will be plugged, the nearest well, authorized to Water Right No. 3346-3, Ida Slocum, is located 1,000 feet from the nearest proposed well (Water Rights, 2013b; Water Rights, 2013c).

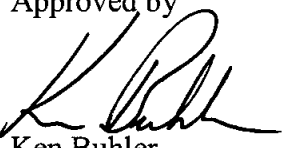
The water table conditions of the aquifer in this area dictate that drawdown due to pumping would probably not extend far from the proposed well sites. The Water Management Board has consistently recognized that to place water to maximum beneficial use a certain amount of drawdown may occur. Therefore, nearby adequate wells are not expected to be adversely or unlawfully impaired by the proposed diversions. Also, the proposed diversions are not expected to impair the ability of the future use area to be developed.

While the withdrawals may not exceed recharge of the aquifer as a whole, the cumulative impact of withdrawals could lead to a reduction of water levels to the extent that water rights/permits can no longer pump at their developed or "historically established," diversion rates, which could be considered an adverse impact. If approved, the water permit holder should be required to control withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

CONCLUSIONS:

1. This water permit application proposes to appropriate water at a maximum diversion rate of 1.11 cfs from two wells to be completed into the Big Sioux: Aurora aquifer for industrial use. The wells are expected to be approximately 51 feet deep, located in Brookings County.
2. Unappropriated water is available from the northern subunit of the Big Sioux: Aurora aquifer to supply the proposed appropriation.
3. The proposed diversions at the proposed well locations are not expected to adversely or unlawfully impair existing nearby adequate wells or the ability of future use permits to develop.


Joseph R Stonesifer
SD DENR-Water Rights Program

Approved by

Ken Buhler
SD DENR-Water Rights Program

REFERENCES:

- Buhler, K. 2012. Report on Water Permit Application Nos. 7392-3 and 7393-3 for Lincoln Pipestone Rural Water: SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Hamilton, L.J. 1989, Water Resources of Brookings and Kingsbury Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 88-4185, 82 p.
- Hansen, H.S. 1988. Appraisal of the Water Resources of the Big Sioux Aquifer, Moody County, South Dakota. Water-Resources Investigations Report 87-4057. USGS, Huron, South Dakota.
- Hedges, L.S., Allen, J., and Holly, D.E. 1985. Evaluation of Ground-Water Resources Eastern South Dakota and Upper Big Sioux River, South Dakota and Iowa. Task 7: Ground Water Recharge. U.S. Army Corps of Engineers Contract DACW 45-80-C-0185.
- Koch, N.C., 1980, Appraisal of the Water Resources of the Big Sioux Aquifer, Brookings, Deuel, and Hamlin Counties, South Dakota: U.S. Geological Survey Water-Resources Investigations 80-100, 46 p.
- Water Rights. 1980-2013. "Annual Irrigation Summary by Aquifer": SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2013c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

RECEIVED

OCT 30 2013

WATER RIGHTS
PROGRAM

Affidavit of Publication

10/

Exhibit "A"

State of South Dakota

ss

County of Brookings

Jennifer Milligan of said county, first duly sworn, on oath, says: That she is the office clerk of THE BROOKINGS REGISTER, a daily newspaper, printed and published in the City of Brookings, in said County of Brookings, and State of South Dakota; that she has full and personal knowledge of the facts herein stated; that said newspaper is a legal newspaper and has a bona fide circulation of at least two hundred copies of each issue daily; that said newspaper has been published within the said County of Brookings and State of South Dakota, for more than one year prior to the first publication of Exhibit "A," hereto attached and herein mentioned, and was and is printed that the

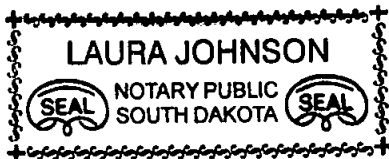
Leg#681 Notice on App#7887.3- Novita

same was published, is hereto attached marked Exhibit said newspaper for _____ 1 times, to-wit:

October 23, 2013

said Exhibit "A" inures to the sole benefit for the publishers of said newspaper; that no agreement or understanding for the division thereof has been made with any other person, and that no part thereof has been agreed to be paid to any person whomsoever; that the fees charged for the publication thereof are:

twenty-four dollars and sixty-five cents \$24.65



24th day of

2013

October

Notary Public in and for the County of Brookings, South Dakota.
My Commission expires August 3, 2017.

Legal 681, 1x, 10/23
NOTICE OF APPLICATION NO. 7887-3 to
Appropriate Water
Notice is given that Novita Aurora, LLC, c/o Rick Eggebrecht, 2301 Research Parkway, Ste. 226, Brookings SD 57006 has filed an application for a water permit to appropriate 1.11 cubic feet of water per second from two wells to be completed into the Big Sioux Aquifer (51 feet deep) located in the N 1/2 NE 1/4 Section 33-T110N-R49W for industrial use. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 7887-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition. Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 4, 2013.

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. Steven M. Pliner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of \$24.65.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

October 15, 2013

Brookings Register
PO Box 177
Brookings SD 57006

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 7887-3 to Appropriate Water. Please publish the notice once on October 23, 2013. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Novita Aurora LLC, c/o Rick Eggebrecht, 2301 Research Prkwy # 226, Brookings SD 57006 (Ph # 605-610-1007).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

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

October 15, 2013

Novita Aurora LLC
Rick Eggebrecht
2301 Research Prkwy # 226
Brookings SD 57006

Dear Mr. Eggebrecht:

Water Permit Application No. 7887-3 for industrial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Brookings Register printed at Brookings SD (Ph # 605-692-6271). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and 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(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. 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 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.

Instruction to Newspaper - Publish the Notice on October 23, 2013. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 7887-3 to Appropriate Water

Notice is given that Novita Aurora, LLC, c/o Rick Eggebrecht, 2301 Research Parkway, Ste. 226, Brookings SD 57006 has filed an application for a water permit to appropriate 1.11 cubic feet of water per second from two wells to be completed into the Big Sioux:Aurora Aquifer (51 feet deep) located in the N 1/2 NE 1/4 Section 33-T110N-R49W for industrial use.

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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 November 4, 2013.

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

Published once at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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NOV 18 2013

Novita Aurora LLC
Rick Eggebrecht
2301 Research Parkway # 226
Brookings SD 57006

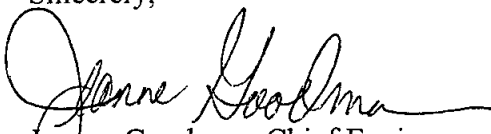
Dear Mr. Eggebrecht:

Enclosed is Water Permit No. 7887-3 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.

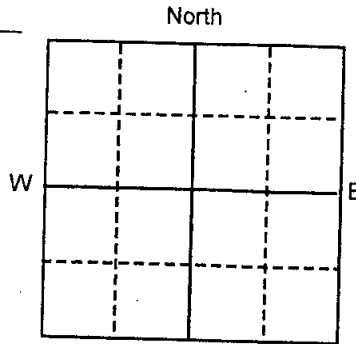
Sincerely,


Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 NE 1/4 Sec 110 Twp 49W Rg 33County BrookingsPlease mark well
location with an "X"

Well Completion Date

10/06/15

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	0.0 FT	53.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	28	Lb/gal	0.0 Ft	51.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie piped

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12.00 Inches Length 20.0 FeetMaterial stainless steelSlot Size .070 Set From 53.0 Feet to 73.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? chlorinated
☐ No, Why Not?
Lab to which water
quality sample sent for analysis

n/a - non-potable

Well Owner: Novita Aurora LLC

Business Name:

Address: 47491 213th StCity, State, Zip: Aurora SD 57002

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top soil	0	2
Brown clay	2	3
Sand & gravel	3	61
Gravel & sand w/blue clay layers	61	64
Sand & gravel	64	71
Blue clay	71	80

STATIC WATER LEVEL 20.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

27.6 Ft. After 8.0 Hrs. pumped 250.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

GPS: N 44 17.772

W 096 42.516

RECEIVED

MAR 14 2016

WATER RIGHTS
PROGRAM

North well

Big Sioux: Aurora KBThis well was drilled under license # 475 and this
report is true and accurate.Drilling firm: Thein Well Co., Inc.

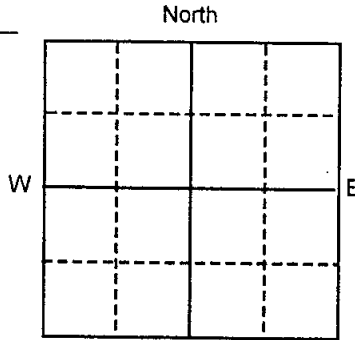
Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 NE 1/4 Sec 110 Twp 49W Rg 33County BrookingsPlease mark well
location with an "X"

Well Completion Date

10/08/15

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	12.00 IN	0.0 FT	53.0 FT	17.50 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Bentonite	28	Lb/gal	0.0 Ft	51.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
tremie piped

SCREEN:

☐ Perforated pipe ☒ Manufactured
Diameter 12.00 Inches Length 20.0 FeetMaterial stainless steelSlot Size .070 Set From 53.0 Feet to 73.0 Feet

Other information

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? chlorinated☐ No, Why Not?Lab to which water
quality sample sent for analysis

n/a - non-potable

Well Owner: Novita Aurora LLC

Business Name:

Address: 47491 213th StCity, State, Zip: Aurora SD 57002

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Top soil	0	1
Brown clay	1	2
Sand & gravel	2	57
Rock	57	58
Blue clay	58	61
Sand & gravel w/blue clay layers	61	71
Blue clay	71	80

STATIC WATER LEVEL 20.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in?

WELL TEST DATA:

☒ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

34.2 Ft. After 8.0 Hrs. pumped 250.0 GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

GPS: N 44 17.732
W 096 42.501

South well

Big Sioux: Aurora KBThis well was drilled under license # 475 and this
report is true and accurate.Drilling firm: Thein Well Co., Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

RECEIVED

MAR 14 2016

WATER RIGHTS
PROGRAM

RECEIVED

MAY - 4 2017

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE

Date

4/28/17

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

FROM:

Novita Nutrition LLC

47491^(name) 213th StreetAurora, SD 57002^(address)

(city, state, zip)

605-610-4329

(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. 7887-3 states that the water use system is to be constructed by

Nov 4, 2018

(date)

and water is to be put to beneficial use by

Nov 4, 2022

(date)

The water use system was completed on

February 9th 2017

(date)

Applying the water to beneficial use was completed on

February 10th 2017

(date)

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

Justin Brandt
(signature)



McMath, Genny

From: Justin Brandt <justin.brandt@novitanutrition.com>
Sent: Thursday, May 04, 2017 10:28 AM
To: McMath, Genny
Subject: [EXT] RE: Water Permit No. 7887-3

Genny,

Ownership hasn't changed for this permit it's the same company.

From: McMath, Genny [<mailto:Genny.McMath@state.sd.us>]
Sent: Thursday, May 4, 2017 10:09 AM
To: Justin Brandt <justin.brandt@novitanutrition.com>
Subject: Water Permit No. 7887-3

Mr. Brandt,

Today we received the "Notice of Completion of Works" form from you for Water Permit No. 7887-3. The water permit is held by Novita Aurora LLC.

I note from the form you completed, you listed the name as Novita Nutrition LLC. Has ownership changed for this? If ownership has changed or even the name of the business has changed, a transfer will need to be completed. I can forward you the appropriate form for that if needed.

Let me know what changes need to be made and I can help walk you through the process,
Thank you in advance,

Genny McMath
Water Rights Program
605.773-5455



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

May 4, 2017

7887-3

Novita Aurora LLC
2301 Research Parkway Ste 226
Brookings SD 57006

Dear Sir:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form submitted by Novita Nutrition LLC to let us know the water use system authorized under Water Permit No. 7887-3 has been completed.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. If you have any questions, please contact me.

Sincerely,

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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 7887-3

I have this day, May 14, 2021, made a thorough examination of the water use system constructed by Novita Aurora LLC, 2301 Research Parkway, Ste 226, Brookings, SD 57006 of Permit No. 7887-3, bearing the priority of August 21, 2013 authorizing the diversion of 1.11 cu. ft. per second of the waters of Big Sioux: Aurora Aquifer for industrial purposes, in Brookings County.

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Thein Well Co, Inc
- 2) No. of Wells 2
- 3) Depth(s) Both 73 feet
- 4) Well log is available Y

Casing:

- 1) Diameter 12 inches
- 2) Length 53 feet
- 3) Type Steel

Screen:

- 1) Type Manufactured
- 2) Length 20 feet
- 3) Static water level 20 feet

Pump:

- 1) Make NA
- 2) Model Submersible
- 3) Size NA
- 4) Capacity Both 300 GPM

Motor:

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

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

- 1) Type NA
- 2) Size NA inches
- 3) Length NA feet

D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Y
- 2) Exceptions to compliance are: None

E. Condition and Location:

1. The system is in good condition with the point(s) of diversion located as follows: From the NE corner of Sec 33 T110N-R49W (NORTH WELL) 190 ft S & 160 ft W Lat 44.29636 Long -96.70839 (NE ¼ NE ¼ Sec 33) (SOUTH WELL) 300 ft S & 145 ft W Lat 44.29608 Long -96.70829 (NE ¼ NE ¼ Sec 33)
2. The works are capable of diverting and conveying to the place of use 1.33 cu. ft. per second of water which is to be used for industrial use.
3. The license should be issued for the permitted amount of 0.67 cfs.

F. Comments or other permit(s) associated with the project:

Mr. Aaron Worlie, Plant Engineer, indicated that the plant has been using only one of the 300 gpm wells at a time and that single well only about 50% of the time.



Darrell W DeBoer
Water Rights Inspector
DANR, Water Rights Program

Date report completed: May 20, 2021



0 0.1 0.2 0.4 0.6 0.8 Miles



Darrell DeBoer
Water Right Inspector
DANR-Water Rights Program



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

MAY 25 2021

7887-3

James Adler
Novita Aurora LLC
47491 213th St
Aurora SD 57002

Dear Mr. Adler:

Enclosed is Water License No. 7887-3. This is the final water right document completing your process of obtaining a Water Right. Included with the license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if in the future, the owner of an existing well, 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, State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

c: Rick Eggebrecht

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 7887-3

(1) Novita Aurora LLC, 2301 Research Parkway, Ste 226, Brookings SD 57006 made Application No. 7887-3, August 21, 2013 for a water permit to divert 1.11 cubic feet of water per second from ground water, two wells (Big Sioux Aurora Aquifer), Brookings County, South Dakota for industrial purposes. Permit No. 7887-3, with a priority date of August 21, 2013 was approved November 4, 2013 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before November 4, 2018 and for the application to beneficial use of water on or before November 4, 2022.

The Permit holder submitted a "Notice of Completion of Works and Application of Water to Beneficial Use" on May 4, 2017. The "Notice" stated the water use system was completed on February 9, 2017 and the water placed to beneficial use on February 10, 2017.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and the application of water to beneficial use. The permit holder is entitled to divert 0.67 cubic feet of water per second for beneficial use. The location of the diversion points are as follows:

- North well: 190'S & 160'W of the NE corner of Section 33, T110N, R49W (NE ¼ NE ¼)
Latitude 44.29636, Longitude -96.70839
- South well: 300'S & 145'W of the NE corner of Section 33, T110N, R49W (NE ¼ NE ¼)
Latitude 44.29608, Longitude -96.70829

(3) Pursuant to South Dakota Water Law 46-5-30.1 Novita Aurora LLC, 2301 Research Parkway, Ste 226, Brookings SD 57006 the holder and/or owner of Water Right No. 7887-3 is issued a license to appropriate water, the right to use 0.67 cubic feet of water per second from ground water, two wells (Big Sioux Aurora Aquifer) with a priority date of August 21, 2013 from the locations 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. 7887-3 and subject to the following qualifications:

- The wells approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right 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 wells authorized by Permit No. 7887-3 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with the 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. ***Both wells were drilled in October, 2015 by Thein Well Co., Inc. Copies of the well completion reports are on file with the Water Rights Program.***

continued

- Novita Aurora LLC shall report to the Chief Engineer annually the amount of water withdrawn from the Big Sioux Aurora Aquifer.



Eric Gronlund, Chief Engineer
Water Rights Program
Department of Agriculture and Natural Resources

MAY 25 2021
date

