

# *2020 Fall Sampling Event*

RECEIVED

ALTEN, LLC

JAN 19 2021

IIS# 84069

NE Dept of Environment and Energy  
By: \_\_\_\_\_ DEE #171 \_\_\_\_\_

## *Groundwater Monitoring Report*

*Submitted by:*



**NUTRIENT**  
**ADVISORS**

449 E. DEERE STREET  
WEST POINT, NEBRASKA 68788  
402-372-2236



20210013587





**NUTRIENT  
ADVISORS**

January 4, 2021

Patrick Durey  
Agricultural Section  
NDEE  
PO Box 98922  
Lincoln, NE 68509

RE: 2020 Fall Sampling Event  
AltEn, LLC  
IIS# 84069

Dear Mr. Miesbach:

This report summarizes Nutrient Advisors monitoring operations at AltEn, LLC in Saunders County, Nebraska.

Justin Sindelar (Certification #79763) conducted ground water sampling on October 12, 2020. Prior to sampling, ground water levels and well depths were measured in each well using an electronic water level indicator. Wells were purged using an electric submersible pump and bailer. A minimum of three well volumes were purged from each well while groundwater parameters (temperature, pH and conductivity) were monitored by Nutrient Advisors until readings stabilized. Ground water samples were collected following stabilized readings and placed in laboratory-supplied bottles. Complete field data sheets are included.

Samples were shipped via UPS to Ward Laboratories, Inc. in Kearney, Nebraska and analyzed for nitrate (EPA Method 353.2), ammonia (EPA Method 350.1), chloride (EPA Method 325.1), total dissolved solids (EPA Method 160.1). Additional samples were also sent to South Dakota Agricultural Laboratories in Brookings, SD and analyzed for azoxystrobin, clothianidin, glyphosate, thiabendazole, and thiamethoxam. Results from this sampling event are reported on the Ground Water Monitoring Results Reports. The duplicate sample was collected from MW-1. Complete analytical results including laboratory detection limits and chain-of-custody are contained in this report.

The additional information needed for the first sampling event, including the as-built map, geological logs and well registrations, are also included.

If you have any questions please call our office.

Sincerely,

Justin Sindelar  
Nutrient Advisors





# Field Data Sheet

## GENERAL INFORMATION

DATE: 10/12/20

Site Name:	AltEn, LLC	IIS Number:	84069
Sampler:	Justin Sindelar	Sampler License:	79763
Monitoring Well Number:	MW-1	Well Registration:	G-190723A
Sample ID (must match COC):	ALT-F20-1	Weather Conditions:	Sunny, Breezy, 68°F
Top of Casing (TOC) Elev.:	114.77	Description of Top of Casing (TOC) Mark:	North

## GROUNDWATER MEASUREMENTS AND PURGE CALCULATIONS

Depth to bottom of casing from TOC (0.00 ft.):		42.61	Well Pipe Volume Table	
	Depth to water from TOC (0.00 ft.):	36.18	Diameter	Gallons/Linear Foot
A	Depth to bottom of casing - Depth to water	6.43	2"	0.17
	Casing diameter (in.):	2"	3"	0.38
B	Gallons/Linear Foot (Refer to Table)	0.17	4"	0.66
	Well volume (gal.) = A x B	1.09	6"	1.5
3 times well volume (gal.) = 3 x C		3.28	8"	2.6
5 times well volume (gal.) = 5 x C			Actual Water Purged (gal.): 4.1	
Groundwater measurement equipment used:		Electric Tape		
Purge equipment used:		<input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Dedicated <input checked="" type="checkbox"/> Non Dedicated		
Well evacuated to Dryness		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

## PURGE PARAMETERS

Time	Temp. (C or F)	pH	Specific Conductivity (umhos)	Approximate Gallons Purged	Observations (clear, cloudy, odors)
4:51	<del>13.0</del> 12.8	6.62	1875 us	1	cloudy
4:52	12.8	6.56	1961 us	2	clearing
4:54	12.3	6.58	2.03 ms	3	clear

## STABILIZED GROUNDWATER SAMPLE PARAMETERS

Time	Temp. (C or F)	pH	Specific Conductivity (umhos)	Appearance (clear, cloudy, color)	Analysis	Preservatives
4:55	12.3	6.58	2.03 ms	clear	NH4N03	H2SO4

## TIMES:

4:43 pm	UNLOCK WELL
4:44 pm	DECON EQUIPMENT
4:46 pm	MEASURE WELL
4:50 pm	START PURGE
5:01 pm	LOCK WELL

## NOTES:

ALT-F20-6	Blank - 4:40 pm
ALT-F20-5	Duplicate - 4:55 pm





# Field Data Sheet

## GENERAL INFORMATION

DATE: 10/12/20

Site Name:	AltEn, LLC	IIS Number:	84069
Sampler:	Justin Sindelar	Sampler License:	79763
Monitoring Well Number:	MW-2	Well Registration:	G-1907238
Sample ID (must match COC):	ALT-F20-2	Weather Conditions:	Sunny, Breezy, 69°F
Top of Casing (TOC) Elev.:	105.64	Description of Top of Casing (TOC) Mark:	North

## GROUNDWATER MEASUREMENTS AND PURGE CALCULATIONS

Depth to bottom of casing from TOC (0.00 ft.):		36.23	Well Pipe Volume Table	
	Depth to water from TOC (0.00 ft.):	28.90	Diameter	Gallons/Linear Foot
A	Depth to bottom of casing - Depth to water	7.33	2"	0.17
	Casing diameter (in.):	2"	3"	0.38
B	Gallons/Linear Foot (Refer to Table)	0.17	4"	0.66
	Well volume (gal.) = A x B	1.25	6"	1.5
3 times well volume (gal.) = 3 x C		3.75	8"	2.6
5 times well volume (gal.) = 5 x C			Actual Water Purged (gal.): 4.5	
Groundwater measurement equipment used:		Electric Tape		
Purge equipment used:		<input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Dedicated <input checked="" type="checkbox"/> Non Dedicated		
Well evacuated to Dryness		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

## PURGE PARAMETERS

Time	Temp. (C or F)	pH	Specific Conductivity (umhos)	Approximate Gallons Purged	Observations (clear, cloudy, odors)
5:25	13.3	6.01	1941 us	1	cloudy
5:26	12.7	6.31	1969 us	2	clearing
5:27	12.3	6.43	2.03 ms	3	clear

## STABILIZED GROUNDWATER SAMPLE PARAMETERS

Time	Temp. (C or F)	pH	Specific Conductivity (umhos)	Appearance (clear, cloudy, color)	Analysis	Preservatives
5:29	12.2	6.47	2.04 ms	clear	NH4N03	H2SO4

## TIMES:

5:19 pm UNLOCK WELL  
 5:20 pm DECON EQUIPMENT  
 5:22 pm MEASURE WELL  
 5:24 pm START PURGE  
 5:32 pm LOCK WELL

## NOTES:

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# Field Data Sheet

## GENERAL INFORMATION

DATE: 10/12/20

Site Name:	AltEn, LLC	IIS Number:	84069
Sampler:	Justin Sindelar	Sampler License:	79763
Monitoring Well Number:	MW-3	Well Registration:	G-190723C
Sample ID (must match COC):	ALT-F20-3	Weather Conditions:	Sunny, Breezy, 68°F
Top of Casing (TOC) Elev.:	110.30	Description of Top of Casing (TOC) Mark:	North

## GROUNDWATER MEASUREMENTS AND PURGE CALCULATIONS

Depth to bottom of casing from TOC (0.00 ft.):		41.10	Well Pipe Volume Table	
	Depth to water from TOC (0.00 ft.):	34.08	Diameter	Gallons/Linear Foot
A	Depth to bottom of casing - Depth to water	7.02	2"	0.17
	Casing diameter (in.):	2"	3"	0.38
B	Gallons/Linear Foot (Refer to Table)	0.17	4"	0.66
	Well volume (gal.) = A x B	1.19	6"	1.5
3 times well volume (gal.) = 3 x C		3.58	8"	2.6
5 times well volume (gal.) = 5 x C			Actual Water Purged (gal.): 4.25	
Groundwater measurement equipment used:		Electric Tape		
Purge equipment used:		<input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Dedicated <input checked="" type="checkbox"/> Non Dedicated		
Well evacuated to Dryness		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

## PURGE PARAMETERS

Time	Temp. (°C or F)	pH	Specific Conductivity (umhos)	Approximate Gallons Purged	Observations (clear, cloudy, odors)
5:44	13.8	6.42	1498 us	1	cloudy
5:45	13.0	6.42	1589 us	2	clear
5:47	12.6	6.42	1700 us	3	clear

## STABILIZED GROUNDWATER SAMPLE PARAMETERS

Time	Temp. (°C or F)	pH	Specific Conductivity (umhos)	Appearance (clear, cloudy, color)	Analysis	Preservatives
5:48	12.5	6.44	1703 us	clear	NH4N03	H2SO4

## TIMES:

5:38 pm	UNLOCK WELL
5:39 pm	DECON EQUIPMENT
5:41 pm	MEASURE WELL
5:43 pm	START PURGE
5:51 pm	LOCK WELL

## NOTES:






# Field Data Sheet

## GENERAL INFORMATION

DATE: 10/12/20

Site Name:	AltEn, LLC	IIS Number:	84069
Sampler:	Justin Sindelar	Sampler License:	79763
Monitoring Well Number:	MW-4	Well Registration:	G-190723D
Sample ID (must match COC):	ALT-F20-4	Weather Conditions:	Sunny, Breezy, 69°F
Top of Casing (TOC) Elev.:	103.166	Description of Top of Casing (TOC) Mark:	North

## GROUNDWATER MEASUREMENTS AND PURGE CALCULATIONS

Depth to bottom of casing from TOC (0.00 ft.):		36.12	Well Pipe Volume Table	
	Depth to water from TOC (0.00 ft.):	28.74	Diameter	Gallons/Linear Foot
A	Depth to bottom of casing - Depth to water	7.38	2"	0.17
	Casing diameter (in.):	2"	3"	0.38
B	Gallons/Linear Foot (Refer to Table)	0.17	4"	0.66
	Well volume (gal.) = A x B	1.25	6"	1.5
3 times well volume (gal.) = 3 x C		3.75	8"	2.6
5 times well volume (gal.) = 5 x C			Actual Water Purged (gal.): 4.6	
Groundwater measurement equipment used:		Electric Tape		
Purge equipment used:		<input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Dedicated <input checked="" type="checkbox"/> Non Dedicated		
Well evacuated to Dryness		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

## PURGE PARAMETERS

Time	Temp. (C or F)	pH	Specific Conductivity (umhos)	Approximate Gallons Purged	Observations (clear, cloudy, odors)
6:03	13.2	6.50	2.26 ms	1	slightly foggy
6:04	12.8	6.09	2.28 ms	2	clear
6:05	12.4	6.28	2.34 ms	3	clear

## STABILIZED GROUNDWATER SAMPLE PARAMETERS

Time	Temp. (C or F)	pH	Specific Conductivity (umhos)	Appearance (clear, cloudy, color)	Analysis	Preservatives
6:06	12.4	6.25	2.36 ms	clear	NH4N03	H2SO4

## TIMES:

5:57pm UNLOCK WELL  
 5:58pm DECON EQUIPMENT  
 6:00pm MEASURE WELL  
 6:02pm START PURGE  
  
 6:09pm LOCK WELL

## NOTES:

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# Groundwater Monitoring Results Report

Site Name		Sampling Date		Sampler			Sampler License #		Laboratory		
AltEn, LLC		10/12/2020		Justin Sindelar			79763		Ward Laboratories, Inc.		
Lab #	Well #	Sample #	Stabilized Temp. (C or F)	Stabilized pH	Stabilized Conductivity (uhmos)	Nitrate (ppm)	Chloride (ppm)	Ammonium (ppm)	Total Dissolved Solids (ppm)		
23952	MW-1	ALT-F20-1	12.3 C	6.58	2.03 M	73.8	188.0	n.d.	1123		
23953	MW-2	ALT-F20-2	12.2 C	6.47	2.04 M	50.3	167.0	n.d.	1112		
23954	MW-3	ALT-F20-3	12.5 C	6.44	1703 u	57.3	117.0	n.d.	953		
23955	MW-4	ALT-F20-4	12.4 C	6.25	2.36 M	84.8	96.0	n.d.	1330		
23956	Duplicate	ALT-F20-5	12.3 C	6.58	2.03 M	74.8	190.0	n.d.	1130		
23957	Field Blank	ALT-F20-6	n/a	n/a	n/a	n.d.	2	0.1	10		
Well #	TOC Elev. (ft.)	Depth to Water (ft.)	Water Elev.	Amount Purged (gal.)				Parameter	EPA Method	Detection Limit (ppm)	Reporting Limit (ppm)
MW-1	114.77	36.18	78.59	4.10				Nitrate	353.2	0.05	0.1
MW-2	105.64	28.90	76.74	4.50				Sulfate	375.4	0.05	1
MW-3	110.30	34.08	76.22	4.25				Chloride	325.1	0.1	1
MW-4	103.66	28.74	74.92	4.60				Ammonium	350.1	0.01	0.1
								Total Dissolved Solids	160.1	1	1





# Groundwater Monitoring Results Report

Site Name		Sampling Date		Sampler			Sampler License #		Laboratory		
AltEn, LLC		10/12/2020		Justin Sindelar			79763		SD Agricultural Laboratories		
Lab #	Well #	Sample #	Stabilized Temp. (C or F)	Stabilized pH	Stabilized Conductivity (uhmos)	Azoxystrobin (ppb)	Clothianidin (ppb)	Glyphosate (ppb)	Thiabendazole (ppb)	Thiamethoxam (ppb)	
20PE010845	MW-1	ALT-F20-1C	12.3 C	6.58	2.03 M	n.d.	n.d.	n.d.	n.d.	n.d.	
20PE010846	MW-2	ALT-F20-2C	12.2 C	6.47	2.04 M	n.d.	n.d.	n.d.	n.d.	n.d.	
20PE010847	MW-3	ALT-F20-3C	12.5 C	6.44	1703 u	n.d.	n.d.	n.d.	n.d.	n.d.	
20PE010848	MW-4	ALT-F20-4C	12.4 C	6.25	2.36 M	n.d.	n.d.	n.d.	n.d.	22.6	
Well #	TOC Elev. (ft.)	Depth to Water (ft.)	Water Elev.	Amount Purged (gal.)				Parameter	EPA Method	Detection Limit (ppb)	Reporting Limit (ppb)
MW-1	114.77	36.18	78.59	4.10				Azoxystrobin	LCMS GCMS	1.80	10
MW-2	105.64	28.90	76.74	4.50				Clothianidin	LCMS GCMS	3.00	10
MW-3	110.30	34.08	76.22	4.25				Glyphosate	LCMS GCMS	0.05	10
MW-4	103.66	28.74	74.92	4.60				Thiabendazole	LCMS GCMS	2.00	10
								Thiamethoxam	LCMS GCMS	2.00	10





Account No. : 20850

## Water Analysis Report

**NUTRIENT ADVISORS**

**449 E DEERE ST**

**WEST POINT**

**NE 68788**

Invoice No. : 1328992

Date Received : 10/14/2020

Date Reported : 10/15/2020

Lab Number : 23952

Results For : ALTEN LLC

Location :

Sample ID : ALT-F20-1

	ppm	EPA Method Number	Detection Limit	Reporting Limit
Nitrate, NO <sub>3</sub> -N	73.8	353.2	0.05	0.1
Sulfate, SO <sub>4</sub> -S	56	375.4	0.05	1
Chloride, Cl	188	325.1	0.1	1
Ammonium, NH <sub>4</sub> -N	< 0.1	350.1	0.01	0.1
Total Dissolved Solids	1123	160.1	1	1

"<" - Not Detected / Below Detection Limit

Reviewed By : Raymond Ward

10/20/2020

Copy : 1

Page 1 of 6



Account No. : 20850

## Water Analysis Report

**NUTRIENT ADVISORS**

**449 E DEERE ST**

**WEST POINT**

**NE 68788**

**Invoice No. : 1328992**

**Date Received : 10/14/2020**

**Date Reported : 10/15/2020**

**Lab Number : 23953**

**Results For : ALTEN LLC**

**Location :**

**Sample ID : ALT-F20-2**

	ppm	EPA Method Number	Detection Limit	Reporting Limit
Nitrate, NO <sub>3</sub> -N	50.3	353.2	0.05	0.1
Sulfate, SO <sub>4</sub> -S	78	375.4	0.05	1
Chloride, Cl	167	325.1	0.1	1
Ammonium, NH <sub>4</sub> -N	< 0.1	350.1	0.01	0.1
Total Dissolved Solids	1112	160.1	1	1

"<" - Not Detected / Below Detection Limit



Account No. : 20850

**Water Analysis Report**

**NUTRIENT ADVISORS**  
**449 E DEERE ST**  
**WEST POINT NE 68788**

Invoice No. : 1328992  
Date Received : 10/14/2020  
Date Reported : 10/15/2020

Lab Number : 23954

Results For : ALTEN LLC  
Location :  
Sample ID : ALT-F20-3

	ppm	EPA Method Number	Detection Limit	Reporting Limit
Nitrate, NO <sub>3</sub> -N	57.3	353.2	0.05	0.1
Sulfate, SO <sub>4</sub> -S	44	375.4	0.05	1
Chloride, Cl	117	325.1	0.1	1
Ammonium, NH <sub>4</sub> -N	< 0.1	350.1	0.01	0.1
Total Dissolved Solids	953	160.1	1	1

"<" - Not Detected / Below Detection Limit



Account No. : 20850

## Water Analysis Report

**NUTRIENT ADVISORS**

449 E DEERE ST

WEST POINT

NE 68788

Invoice No. : 1328992

Date Received : 10/14/2020

Date Reported : 10/15/2020

Lab Number : 23955

Results For : ALTEN LLC

Location :

Sample ID : ALT-F20-4

	ppm	EPA Method Number	Detection Limit	Reporting Limit
Nitrate, NO <sub>3</sub> -N	84.8	353.2	0.05	0.1
Sulfate, SO <sub>4</sub> -S	40	375.4	0.05	1
Chloride, Cl	96	325.1	0.1	1
Ammonium, NH <sub>4</sub> -N	< 0.1	350.1	0.01	0.1
Total Dissolved Solids	1330	160.1	1	1

"<" - Not Detected / Below Detection Limit



Account No. : 20850

**Water Analysis Report**

**NUTRIENT ADVISORS**

**449 E DEERE ST**

**WEST POINT**

**NE 68788**

**Invoice No. : 1328992**

**Date Received : 10/14/2020**

**Date Reported : 10/15/2020**

**Lab Number : 23956**

**Results For : ALTEN LLC**

**Location :**

**Sample ID : ALT-F20-5**

	ppm	EPA Method Number	Detection Limit	Reporting Limit
Nitrate, NO <sub>3</sub> -N	74.8	353.2	0.05	0.1
Sulfate, SO <sub>4</sub> -S	56	375.4	0.05	1
Chloride, Cl	190	325.1	0.1	1
Ammonium, NH <sub>4</sub> -N	< 0.1	350.1	0.01	0.1
Total Dissolved Solids	1130	160.1	1	1

"<" - Not Detected / Below Detection Limit



Account No. : 20850

## Water Analysis Report

**NUTRIENT ADVISORS**

**449 E DEERE ST**

**WEST POINT**

**NE 68788**

**Invoice No. : 1328992**

**Date Received : 10/14/2020**

**Date Reported : 10/15/2020**

**Lab Number : 23957**

**Results For : ALTEN LLC**

**Location :**

**Sample ID : ALT-F20-6**

	ppm	EPA Method Number	Detection Limit	Reporting Limit
Nitrate, NO <sub>3</sub> -N	< 0.1	353.2	0.05	0.1
Sulfate, SO <sub>4</sub> -S	< 1	375.4	0.05	1
Chloride, Cl	2	325.1	0.1	1
Ammonium, NH <sub>4</sub> -N	0.1	350.1	0.01	0.1
Total Dissolved Solids	10	160.1	1	1

"<" - Not Detected / Below Detection Limit



**Analyzed By:**

South Dakota Agricultural Laboratories  
1335 Western Avenue  
Brookings, South Dakota 57006  
Phone: 605-692-7325  
E-Mail: regina.wixon@sdaglabs.com

**Collected By:**

AltEn LLC-Mead-M. Tingelhoff  
1344 County Road 10  
Mead, NE 68041  
Phone: 402-624-2000  
E-Mail: mtingelhoff@mrgkc.com

**Report Date: 2021-01-04****Final Report**

## Report Of Analysis

**Date Received : 2020-10-14****Package Id : 20201014-004**

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**20PE010845**                      **Description: Water**                      **Date Collected: 2020-10-12**

ALT-F20-1C

**Analyte****Result**

Azoxystrobin

ND ppb

Clothianidin

ND ppb

Glyphosate

ND ppb

Thiabendazole

ND ppb

Thiamethoxam

ND ppb

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**20PE010846****Description: Water****Date Collected: 2020-10-12**

ALT-F20-2C

**Analyte****Result**

Azoxystrobin

ND ppb

Clothianidin

ND ppb

Glyphosate

ND ppb

Thiabendazole

ND ppb

Thiamethoxam

ND ppb

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**20PE010847****Description: Water****Date Collected: 2020-10-12**

ALT-F20-3C

**Analyte****Result**

Azoxystrobin

ND ppb

Clothianidin

ND ppb

Glyphosate

ND ppb

Thiabendazole

ND ppb

Thiamethoxam

ND ppb

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**20PE010848****Description: Water****Date Collected: 2020-10-12**

ALT-F20-4C

**Analyte****Result**

Azoxystrobin

ND ppb

Clothianidin

ND ppb

Glyphosate

ND ppb

Thiabendazole

ND ppb

Thiamethoxam

22.6 ppb



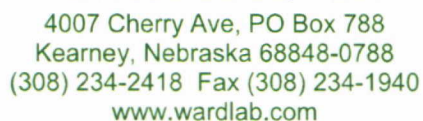
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ND Not Detected

**Reviewed By: Katie Ahlstrom.**

The analytical results on this report reflect what was found in the laboratory sample as it was received at the laboratory.





Also test:  
Total Dissolved Solids  
Total Kjeldahl Nitrogen

10/5

Submitted By
Nutrient Advisors
449 Deere St
West Point, NE 68788
Acct #20850

Sample Type (mark one)		
<input checked="" type="checkbox"/>	Water	Wastewater
<input type="checkbox"/>	Slurry	Potato
<input type="checkbox"/>	Manure	Herbicide
<input type="checkbox"/>	Fertilizer	Other

Sample Information	
Date	10/12/2020

For Lab Use	Results For	Sample ID 1	Description	Sub-Type	Test
23952	AltEn, LLC	ALT-F20-1	Water	GWM	20'
53	AltEn, LLC	ALT-F20-2	Water	GWM	T
54	AltEn, LLC	ALT-F20-3	Water	GWM	J
55	AltEn, LLC	ALT-F20-4	Water	GWM	J
56	AltEn, LLC	ALT-F20-5	Water	GWM	J
57	AltEn, LLC	ALT-F20-6	Water	GWM	J
		B=Acid			

Sample Sub-Types
<p><b>Water</b>  <b>H</b> = Household, <b>I</b> = Irrigation, <b>L</b> = Livestock</p> <p><b>Slurry</b>  <b>H</b> = Hog, <b>B</b> = Beef, <b>P</b> = Poultry, <b>D</b> = Dairy</p> <p><b>Manure</b>  <b>H</b> = Hog, <b>B</b> = Beef, <b>P</b> = Poultry, <b>D</b> = Dairy, <b>C</b> = Compost</p> <p><b>Fertilizer</b>  <b>L</b> = Liquid, <b>D</b> = Dry</p> <p><b>Wastewater, Potato, Herbicide</b>  <i>none</i></p>

Comments:

Chain of Custody			
Relinquished By	Date / Time	Received By	Date / Time
<i>Justin Lindela</i>	10-13-20 3:00pm	<i>Aleisha Ziegler</i>	10/14/20
<i>Ray Ward</i>	10/20/20		

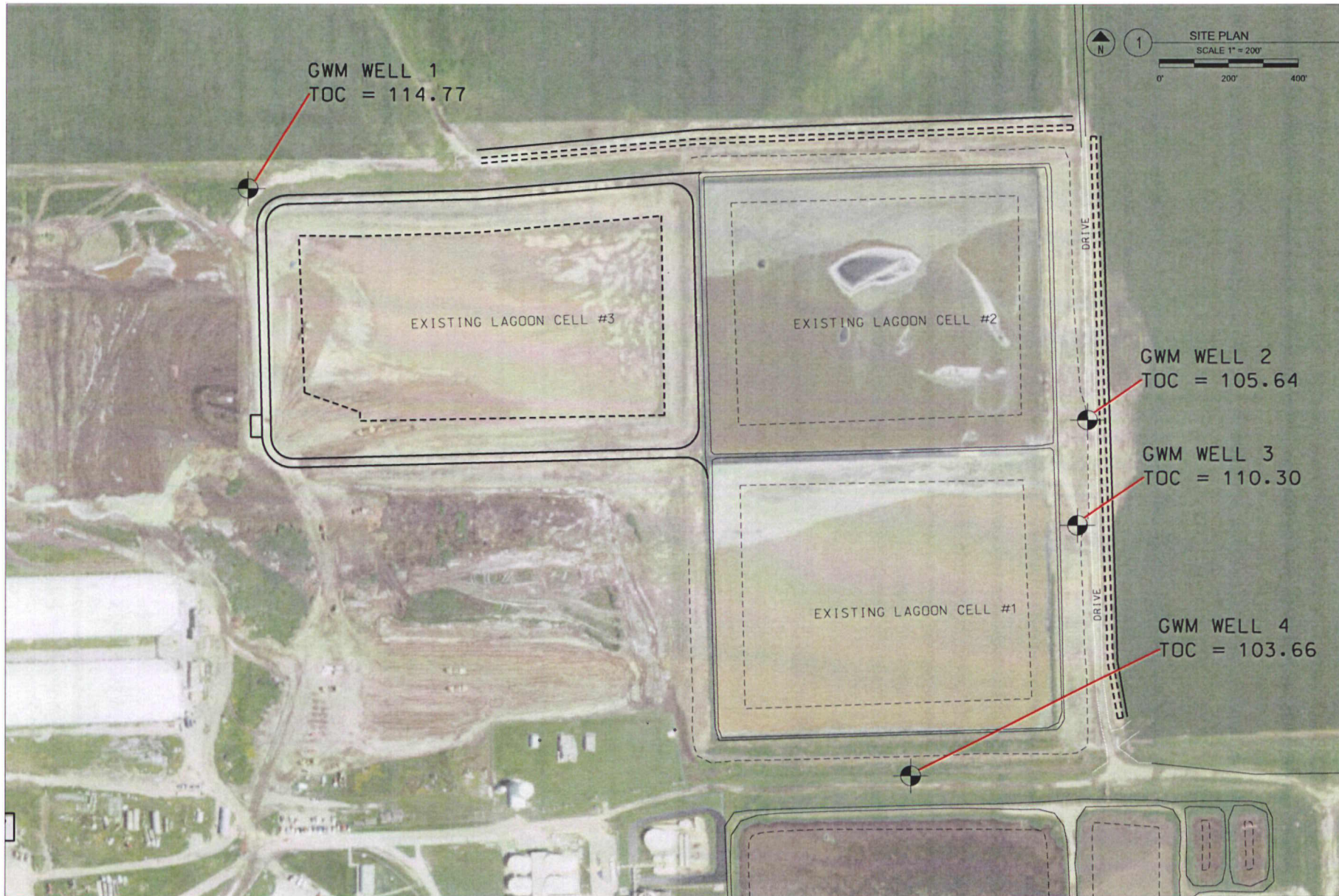
-20 3:00pm	Alaishan Zigerken	10/14/20	Warm
-20			
11:45am			



$10/15$ 

**NUTRIENT  
ADVISORS**





<b>SETTLE</b> <b>Agri-Service &amp; Engineering, Inc.</b>	15460 NW 48th St. Raymond, NE 68428 Office: (402) 783-2100 Fax: (402) 783-2104 Web Site: www.settle.com	<b>AltEn, LLC</b> SE 1/4 of NW 1/4 of Sec. 12, T-14-N, R-8-E Saunders County, Nebraska	Industrial Wastewater Holding Ponds AS-BUILT GWM Well Locations	Date Prepared: 3/2/2019 Rev. Date



## Well Registration or Area Permit

Fee Paid: \$70.00 HHSS Fee: \$30.00  
 DNR Cash Fund: \$18.50 WWDF: \$21.50  
 Billing ID: 69304

Source: Nebraska On Line Import Status: Accepted Use: Monitoring (Ground Water Quality) Owner ID: 138728  
 Nol ID: 160392873111244 Status: Active Registered Well Decommission Date: — Registration Number: G-190723A  
 Well ID: 263366 NRD: Lower Platte North Registration Date: 10/29/2020  
 Last Change User: lucas.hadenfeldt Call Up Code: — Call Up Date: — Last Change Date: 10/29/2020

Owner: ☐ Show previous owners

ContactID	Type	SeqNum	Begin Date	End Date	Name
<a href="#">Display</a> 138728	Owner 1				AltEn LLC

Contractor:

Contact ID	First Name	Last Name	Contact Type	License Information
<a href="#">Display</a> 148089	Dustin Z	Humann	Water Well Professional	19311

Drilling Firm:

Contact ID	Employer	Contact Type	License Information
<a href="#">Display</a> 144889	Olsson and Associates	Water Well Entity	Employer ID: 403006

- A. Well Location: SW1/4NW1/4 of Section 12  
 Township 14 North, Range 8 ( East E/W), Saunders County  
 B. Natural Resource District: Lower Platte North  
 Latitude Longitude  
 Well GPS Coordinates: 41° 12' 2.920" -96° 28' 49.900"  
 Lat/Long DD 41.2008111100 -96.4805277700  
 C. The well is: 1608 feet from the N Section line and 899 feet from the W section line.  
 D. Street address or block, lot and subdivision: Addr/Sub Div — Block No — Lot —  
 E. Location of water use, if applicable (give legal description): NA  
 G. Well reference letter(s) if applicable: MW-1

Well In A Series

Well Part of a Series with Site Plan: Yes  
 Series Reg # (External Source): —

Series ID	# of Wells Registered	Total # of Wells	Acres	Acres Certified	Series Code-Description
270520	4	4		No	Mon-Monitoring Wells Part of a single site

WellID	Registration #	NRD Approved	Comment	Series Reg # (External Source)	Well Status	Completion Date	Start Date
<a href="#">263367</a>		No			P-Partial Well Entry for Tracking of Incomplete Registration	9/25/2020	10/29/20
<a href="#">263368</a>		No			P-Partial Well Entry for Tracking of Incomplete Registration	9/25/2020	10/29/20
<a href="#">263369</a>		No			P-Partial Well Entry for Tracking of Incomplete Registration	9/25/2020	10/29/20
<a href="#">263366</a>	G-190723A	No			A-Active Registered Well	9/25/2020	10/29/20

Permits

	Aprvd Date(s)		Aprvd Date(s)
Area Permit	— — —	SWater App Code	— — —
GeoPermit	— — —	Industrial	— — —
MWF	— — —	Transfer	— — —
WSP	— — —	Swater Conduct Code	— — —
HHSS	—	Other	— —
HHSS PWS ID	—	ITN	— —
NDEQ	—		

5. Purpose of Well Monitoring (Ground Water Quality)  
 Other Use —  
 Notes —

7. Replacement well information. Well Considered a replacement by NRD(WellID, RegCD) —
- A. Is this well a Replacement well? No Repl No — NRD Approval Date — Well Replacement Reg CD —  
 B. Registration number of abandoned well: — If not registered, date abandoned well was constructed —  
 C. Abandoned well last operated — D. Replacement well is — feet from abandoned well.  
 E. Original well pump column size: — inches.  
 F. ☐ Original water well decommissioned —  
☐ Original water well was modified —  
☐ I hereby certify that the original water well will be decommissioned within 180 days after such construction of the replacement water well.  
☐ I hereby certify that the original water well will be modified and equipped to pump 50 gallons per minute or less within 180 days after such construction of the replacement water well.



- ☐ Livestock  
☐ Monitoring  
☐ Observation  
☐ Nonconsumptive or de minimus use approved by the applicable natural resources district. \_\_\_\_  
☐ Owner is not yet sure if they want to decommission or modify original well within 180 days.

G. Location of water use of original well: \_\_\_\_

#### Decommission Information

Decommission Date: \_\_\_\_

Decommissioned By: \_\_\_\_

#### 8. Pump Information.

- A. Is Pump installed at this time? No Pump present but Well Inactive: No  
 Free Flowing Well: No Well active, no pump installed: Yes  
 B. License No. \_\_\_\_\_  
 Pump Installer: \_\_\_\_\_  
 Pump Installer Firm: \_\_\_\_\_  
 C. Pumping Rate \_\_\_\_ gallons per minute. D. Pumping water level \_\_\_\_ feet.  
 E. Drop pipe diameter \_\_\_\_ inches. F. Length of pipe \_\_\_\_ in feet.  
 G. Pump equipment installed: \_\_\_\_ H. Pump Brand/Type \_\_\_\_  
 I. Will this well be used to pump 50 gpm or less? Yes

#### 9. Well Construction Information

- A. Total well depth: 40.5 feet. B. Static water level 33.5 feet.  
 C. Well Construction began: 9/22/2020 D. Well Construction Completed: 9/25/2020 Days To Register: 34  
 E. Bore hole diameter in inches. Top 8.25 Bottom 8.25  
 F. Casing and Screen Joints are: Threaded Other Joints description: \_\_\_\_  
 H. Total Estimate Capacity of Well 5 gallons per minute. I. Pumping water level at capacity: 38 feet.

#### 10. Well Construction (Casing & Screen) - c, d, e & f measurements should be in inches to three decimal places

Record Count = 2

WellID	FromDepth*	ToDepth*	Case/Screen	InsideDiam	OutsideDiam	CaseThickness	ScrnSlotSize	Material	ScreenTname
263366	0	30.5	casing	2.04	2.37	0.15		PVC	EMI
263366	30.5	40.5	screen	2.04	2.37	0.15	0.01	PVC	EMI

\* are in Feet, all else is in inches

#### 11. Grout and Gravel Pack

Record Count = 3

WellID	FromDepth	ToDepth	Grout/Gravel	Material Description <sup>1</sup>	Volume & Type Grout <sup>3</sup>	Quantity Gravel <sup>2</sup>
263366	0	22.5	grout	Bentonite Grout	8.5 Gallons	
263366	22.5	27.5	grout	Bentonite Chips	2 Bags	
263366	27.5	40.5	gravel	10/20 Silica Sand		10

\* are in Feet, all else is in inches

<sup>1</sup>Description of gravel pack, i.e. engineered gravel pack, or gravel pit description (1/4 down) or brand name (best sand) natural formation, drilling cuttings, soil backfill

<sup>2</sup>Quantity #cubic yards, #Tons, #Sacks - (for drilling cuttings and soil backfill estimate quantity) Calculation assistance available on web

<sup>3</sup>Volume & Type: #gallons of a slurry, #Barrels of a slurry, #sacks used in the slurry, #Bags of non-slurry bentonite (chip-pellet-granular)

#### 12. Well Geologic Materials Logged

WellID	FromDepth*	ToDepth*	Materials Drilled	Density/Hardness	Color	Other Material, Colors, Drilling Action, Note
263366	0	15	Clay	Dense/Stiff	Brown	
263366	15	40.5	Sand fine-med	Dense/Stiff	Tan	

\* are in Feet.



## Well Registration or Area Permit

Fee Paid: \$70.00 HHSS Fee: \$30.00  
 DNR Cash Fund: \$18.50 WWDF: \$21.50  
 Billing ID: 69305

Source: Nebraska On Line Import Status: Accepted Use: Monitoring (Ground Water Quality) Owner ID: 138728  
 Nol ID: 160393007932312 Status: Active Registered Well Decommission Date: — Registration Number: G-190723B  
 Well ID: 263367 NRD: Lower Platte North Registration Date: 10/29/2020  
 Last Change User: lucas.hadenfeldt Call Up Code: — Call Up Date: — Last Change Date: 10/29/2020

Owner: ☐ Show previous owners

ContactID	Type	SeqNum	Begin Date	End Date	Name
<a href="#">Display</a> 138728	Owner 1				AltEn LLC

Contractor:

Contact ID	First Name	Last Name	Contact Type	License Information
<a href="#">Display</a> 148089	Dustin Z	Humann	Water Well Professional	19311

Drilling Firm:

Contact ID	Employer	Contact Type	License Information
<a href="#">Display</a> 144889	Olsson and Associates	Water Well Entity Employer ID: 403006	

- A. Well Location: SW1/4NE1/4 of Section 12  
 Township 14 North, Range 8 ( East E/W), Saunders County  
 B. Natural Resource District: Lower Platte North  
 Latitude Longitude  
 Well GPS Coordinates: 41° 11' 57.480" -96° 28' 24.920"  
 Lat/Long DD 41.1993000000 -96.4735888800  
 C. The well is: 2087 feet from the N Section line and 2661 feet from the E section line.  
 D. Street address or block, lot and subdivision: Addr/Sub Div — Block No — Lot —  
 E. Location of water use, if applicable (give legal description): NA  
 G. Well reference letter(s) if applicable: MW-2

Well In A Series

Well Part of a Series with Site Plan: Yes  
 Series Reg # (External Source): —

Series ID	# of Wells Registered	Total # of Wells	Acres	Acres Certified	Series Code-Description		
270520	4	4		No	Mon-Monitoring Wells Part of a single site		
WellID	Registration #	NRD Approved	Comment	Series Reg # (External Source)	Well Status	Completion Date	Start Date
<a href="#">263368</a>		No			P-Partial Well Entry for Tracking of Incomplete Registration	9/25/2020	10/29/2020
<a href="#">263369</a>		No			P-Partial Well Entry for Tracking of Incomplete Registration	9/25/2020	10/29/2020
<a href="#">263366</a>	G-190723A	No			A-Active Registered Well	9/25/2020	10/29/2020
<a href="#">263367</a>	G-190723B	No			A-Active Registered Well	9/25/2020	10/29/2020

Permits

	Aprvd Date(s)		Aprvd Date(s)
Area Permit	<u>— — —</u>	SWater App Code	<u>— — —</u>
GeoPermit	<u>— — —</u>	Industrial	<u>— — —</u>
MWF	<u>— — —</u>	Transfer	<u>— — —</u>
WSP	<u>— — —</u>	Swater Conduct Code	<u>— — —</u>
HHSS	<u>—</u>	Other	<u>— —</u>
HHSS PWS ID	<u>—</u>	ITN	<u>— —</u>
NDEQ	<u>—</u>		

5. Purpose of Well Monitoring (Ground Water Quality)  
 Other Use —  
 Notes —

7. Replacement well information. Well Considered a replacement by NRD(WellID, RegCD) —  
 A. Is this well a Replacement well? No Repl No — NRD Approval Date — Well Replacement Reg CD —  
 B. Registration number of abandoned well: — If not registered, date abandoned well was constructed —  
 C. Abandoned well last operated — D. Replacement well is — feet from abandoned well.  
 E. Original well pump column size: — inches.  
 F. ☐ Original water well decommissioned —  
☐ Original water well was modified —  
☐ I hereby certify that the original water well will be decommissioned within 180 days after such construction of the replacement water well.  
☐ I hereby certify that the original water well will be modified and equipped to pump 50 gallons per minute or less within 180 days after such construction of the replacement water well.



- ☐ Livestock  
☐ Monitoring  
☐ Observation  
☐ Nonconsumptive or de minimus use approved by the applicable natural resources district. \_\_\_\_  
☐ Owner is not yet sure if they want to decommission or modify original well within 180 days.

G. Location of water use of original well: \_\_\_\_

#### Decommission Information

Decommission Date: \_\_\_\_

Decommissioned By: \_\_\_\_

#### 8. Pump Information.

- A. Is Pump installed at this time? No Pump present but Well Inactive: No  
 Free Flowing Well: No Well active, no pump installed: Yes  
 B. License No. \_\_\_\_  
 Pump Installer: \_\_\_\_  
 Pump Installer Firm: \_\_\_\_  
 C. Pumping Rate \_\_\_\_ gallons per minute. D. Pumping water level \_\_\_\_ feet.  
 E. Drop pipe diameter \_\_\_\_ inches. F. Length of pipe \_\_\_\_ in feet.  
 G. Pump equipment installed: \_\_\_\_ H. Pump Brand/Type \_\_\_\_  
 I. Will this well be used to pump 50 gpm or less? Yes

#### 9. Well Construction Information

- A. Total well depth: 33.5 feet. B. Static water level 26.5 feet.  
 C. Well Construction began: 9/22/2020 D. Well Construction Completed: 9/25/2020 Days To Register: 34  
 E. Bore hole diameter in inches. Top 8.25 Bottom 8.25  
 F. Casing and Screen Joints are: Threaded Other Joints description: \_\_\_\_  
 H. Total Estimate Capacity of Well 5 gallons per minute. I. Pumping water level at capacity: 32 feet.

#### 10. Well Construction (Casing & Screen) - c, d, e & f measurements should be in inches to three decimal places Record Count = 2

WellID	FromDepth*	ToDepth*	Case/Screen	InsideDiam	OutsideDiam	CaseThickness	ScrnSlotSize	Material	ScreenTname
263367	0	23.5	casing	2.04	2.37	0.15		PVC	EMI
263367	23.5	33.5	screen	2.04	2.37	0.15	0.01	PVC	EMI

\* are in Feet, all else is in inches

#### 11. Grout and Gravel Pack

Record Count = 3

WellID	FromDepth	ToDepth	Grout/Gravel	Material Description <sup>1</sup>	Volume & Type Grout <sup>3</sup>	Quantity Gravel <sup>2</sup>
263367	0	15.5	grout	Bentonite Grout	6 Gallons	
263367	15.5	20.5	grout	Bentonite Chips	2 Bags	
263367	20.5	33.5	gravel	10/20 Silica Sand		10

\* are in Feet, all else is in inches

<sup>1</sup>Description of gravel pack, i.e. engineered gravel pack, or gravel pit description (1/4 down) or brand name (best sand) natural formation, drilling cuttings, soil backfill

<sup>2</sup>Quantity #cubic yards, #Tons, #Sacks - (for drilling cuttings and soil backfill estimate quantity) Calculation assistance available on web

<sup>3</sup>Volume & Type: #gallons of a slurry, #Barrels of a slurry, #sacks used in the slurry, #Bags of non-slurry bentonite (chip-pellet-granular)

#### 12. Well Geologic Materials Logged

WellID	FromDepth*	ToDepth*	Materials Drilled	Density/Hardness	Color	Other Material, Colors, Drilling Action, Note
263367	0	15	Clay	Dense/Stiff	Brown	
263367	15	33.5	Sand fine-med	Dense/Stiff	Tan	

\* are in Feet.



## Well Registration or Area Permit

Fee Paid: \$70.00 HHSS Fee: \$30.00  
 DNR Cash Fund: \$18.50 WWDF: \$21.50  
 Billing ID: 69306

Source: Nebraska On Line Import Status: Accepted Use: Monitoring (Ground Water Quality) Owner ID: 138728  
 Nol ID: 160393047731024 Status: Active Registered Well Decommission Date: — Registration Number: G-190723C  
 Well ID: 263368 NRD: Lower Platte North Registration Date: 10/29/2020  
 Last Change User: lucas.hadenfeldt Call Up Code: — Call Up Date: — Last Change Date: 10/29/2020

Owner: ☐ Show previous owners

ContactID	Type	SeqNum	Begin Date	End Date	Name
<a href="#">Display</a> 138728	Owner 1				AltEn LLC

Contractor:

Contact ID	First Name	Last Name	Contact Type	License Information
<a href="#">Display</a> 148089	Dustin Z	Humann	Water Well Professional	19311

Drilling Firm:

Contact ID	Employer	Contact Type	License Information
<a href="#">Display</a> 144889	Olsson and Associates	Water Well Entity	Employer ID: 403006

- A. Well Location: SW1/4NE1/4 of Section 12  
 Township 14 North, Range 8 ( East E/W), Saunders County  
 B. Natural Resource District: Lower Platte North  
 Latitude Longitude  
 Well GPS Coordinates: 41° 11' 54.190" -96° 28' 25.140"  
 Lat/Long DD 41.1983861100 -96.4736500000  
 C. The well is: 2418 feet from the N Section line and 2680 feet from the E section line.  
 D. Street address or block, lot and subdivision: Addr/Sub Div — Block No — Lot —  
 E. Location of water use, if applicable (give legal description): NA  
 G. Well reference letter(s) if applicable: MW-3

Well In A Series

Well Part of a Series with Site Plan: Yes  
 Series Reg # (External Source): —

Series ID	# of Wells Registered	Total # of Wells	Acres	Acres Certified	Series Code-Description
270520	4	4		No	Mon-Monitoring Wells Part of a single site

WellID	Registration #	NRD Approved	Comment	Series Reg # (External Source)	Well Status	Completion Date	Start Date
<a href="#">263369</a>		No			P-Partial Well Entry for Tracking of Incomplete Registration	9/25/2020	10/29/20
<a href="#">263366</a>	G-190723A	No			A-Active Registered Well	9/25/2020	10/29/20
<a href="#">263367</a>	G-190723B	No			A-Active Registered Well	9/25/2020	10/29/20
<a href="#">263368</a>	G-190723C	No			A-Active Registered Well	9/25/2020	10/29/20

Permits

	Aprvd Date(s)		Aprvd Date(s)
Area Permit	— — —	SWater App Code	— — —
GeoPermit	— — —	Industrial	— — —
MWF	— — —	Transfer	— — —
WSP	— — —	Swater Conduct Code	— — —
HHSS	—	Other	— —
HHSS PWS ID	—	ITN	— —
NDEQ	—		

5. Purpose of Well Monitoring (Ground Water Quality)  
 Other Use —  
 Notes —

7. Replacement well information. Well Considered a replacement by NRD(WellID, RegCD) —
- A. Is this well a Replacement well? No Repl No — NRD Approval Date — Well Replacement Reg CD —  
 B. Registration number of abandoned well: — If not registered, date abandoned well was constructed —  
 C. Abandoned well last operated — D. Replacement well is — feet from abandoned well.  
 E. Original well pump column size: — inches.  
 F. ☐ Original water well decommissioned —  
☐ Original water well was modified —  
☐ I hereby certify that the original water well will be decommissioned within 180 days after such construction of the replacement water well.  
☐ I hereby certify that the original water well will be modified and equipped to pump 50 gallons per minute or less within 180 days after such construction of the replacement water well.



- ☐ Livestock  
☐ Monitoring  
☐ Observation  
☐ Nonconsumptive or de minimus use approved by the applicable natural resources district. \_\_\_\_  
☐ Owner is not yet sure if they want to decommission or modify original well within 180 days.

G. Location of water use of original well: \_\_\_\_

#### Decommission Information

Decommission Date: \_\_\_\_

Decommissioned By: \_\_\_\_

#### 8. Pump Information.

- A. Is Pump installed at this time? No Pump present but Well Inactive: No  
 Free Flowing Well: No Well active, no pump installed: Yes  
 B. License No. \_\_\_\_  
 Pump Installer: \_\_\_\_  
 Pump Installer Firm: \_\_\_\_  
 C. Pumping Rate \_\_\_\_ gallons per minute. D. Pumping water level \_\_\_\_ feet.  
 E. Drop pipe diameter \_\_\_\_ inches. F. Length of pipe \_\_\_\_ in feet.  
 G. Pump equipment installed: \_\_\_\_ H. Pump Brand/Type \_\_\_\_  
 I. Will this well be used to pump 50 gpm or less? Yes

#### 9. Well Construction Information

- A. Total well depth: 38.5 feet. B. Static water level 31.5 feet.  
 C. Well Construction began: 9/22/2020 D. Well Construction Completed: 9/25/2020 Days To Register: 34  
 E. Bore hole diameter in inches. Top 8.25 Bottom 8.25  
 F. Casing and Screen Joints are: Threaded Other Joints description: \_\_\_\_  
 H. Total Estimate Capacity of Well 5 gallons per minute. I. Pumping water level at capacity: 37 feet.

#### 10. Well Construction (Casing & Screen) - c, d, e & f measurements should be in inches to three decimal places Record Count = 2

WellID	FromDepth*	ToDepth*	Case/Screen	InsideDiam	OutsideDiam	CaseThickness	ScrnSlotSize	Material	ScreenTname
263368	0	28.5	casing	2.04	2.37	0.15		PVC	EMI
263368	28.5	38.5	screen	2.04	2.37	0.15	0.01	PVC	EMI

\* are in Feet, all else is in inches

#### 11. Grout and Gravel Pack

Record Count = 3

WellID	FromDepth	ToDepth	Grout/Gravel	Material Description <sup>1</sup>	Volume & Type Grout <sup>3</sup>	Quantity Gravel <sup>2</sup>
263368	0	20.5	grout	Bentonite Grout	8 Gallons	
263368	20.5	25.5	grout	Bentonite Chips	2 Bags	
263368	25.5	38.5	gravel	10/20 Silica Sand		10

\* are in Feet, all else is in inches

<sup>1</sup>Description of gravel pack, i.e. engineered gravel pack, or gravel pit description (1/4 down) or brand name (best sand) natural formation, drilling cuttings, soil backfill

<sup>2</sup>Quantity #cubic yards, #Tons, #Sacks - (for drilling cuttings and soil backfill estimate quantity) Calculation assistance available on web

<sup>3</sup>Volume & Type: #gallons of a slurry, #Barrels of a slurry, #sacks used in the slurry, #Bags of non-slurry bentonite (chip-pellet-granular)

#### 12. Well Geologic Materials Logged

WellID	FromDepth*	ToDepth*	Materials Drilled	Density/Hardness	Color	Other Material, Colors, Drilling Action, Note
263368	0	15	Clay	Dense/Stiff	Brown	
263368	15	38.5	Sand fine-med	Dense/Stiff	Tan	

\* are in Feet.



## Well Registration or Area Permit

Fee Paid: \$70.00 HHSS Fee: \$30.00

DNR Cash Fund: \$18.50 WWDF: \$21.50

Billing ID: 69307

Source: Nebraska On Line Import Status: Accepted Use: Monitoring (Ground Water Quality) Owner ID: 138728

Nol ID: 160393067020221 Status: Active Registered Well Decommission Date: — Registration Number: G-190723D

Well ID: 263369 NRD: Lower Platte North Registration Date: 10/29/2020

Last Change User: lucas.hadenfeldt Call Up Code: — Call Up Date: — Last Change Date: 10/29/2020

Owner: ☐ Show previous owners

ContactID	Type	SeqNum	Begin Date	End Date	Name
14889	Owner 1				AltEn LLC

Contractor:

Contact ID	First Name	Last Name	Contact Type	License Information
14889	Dustin Z	Humann	Water Well Professional	19311

Drilling Firm:

Contact ID	Employer	Contact Type	License Information
14889	Olsson and Associates	Water Well Entity	Employer ID: 403006

A. Well Location: NE1/4SW1/4 of Section 12Township 14 North, Range 8 ( East E/W), Saunders CountyB. Natural Resource District: Lower Platte North

Latitude Longitude

Well GPS Coordinates: 41° 11' 49.360" -96° 28' 29.490"Lat/Long DD 41.1970444400 -96.4748583300C. The well is: 2365 feet from the S Section line and 2441 feet from the W section line.D. Street address or block, lot and subdivision: Addr/Sub Div — Block No — Lot —E. Location of water use, if applicable (give legal description): NAG. Well reference letter(s) if applicable: MW-4

Well In A Series

Well Part of a Series with Site Plan: YesSeries Reg # (External Source): —

Series ID	# of Wells Registered	Total # of Wells	Acres	Acres Certified	Series Code-Description
270520	4	4		No	Mon-Monitoring Wells Part of a single site

WellID	Registration #	NRD Approved	Comment	Series Reg # (External Source)	Well Status	Completion Date	Start Date	End Date
<u>263366</u>	G-190723A	No			A-Active Registered Well	9/25/2020	10/29/2020	
<u>263367</u>	G-190723B	No			A-Active Registered Well	9/25/2020	10/29/2020	
<u>263368</u>	G-190723C	No			A-Active Registered Well	9/25/2020	10/29/2020	
<u>263369</u>	G-190723D	No			A-Active Registered Well	9/25/2020	10/29/2020	

Permits

	Aprvd Date(s)		Aprvd Date(s)
Area Permit	— — —	SWater App Code	— — —
GeoPermit	— — —	Industrial	— — —
MWF	— — —	Transfer	— — —
WSP	— — —	Swater Conduct Code	— — —
HHSS	—	Other	— —
HHSS PWS ID	—	ITN	— —
NDEQ	—		

5. Purpose of Well Monitoring (Ground Water Quality)Other Use —Notes —

7. Replacement well information.

Well Considered a replacement by  
NRD(WellID, RegCD) —A. Is this well a Replacement well? No Repl No — NRD Approval Date — Well Replacement Reg CD —B. Registration number of abandoned well: — If not registered, date abandoned well was constructed —C. Abandoned well last operated — D. Replacement well is — feet from abandoned well.E. Original well pump column size: — inches.F. ☐ Original water well decommissioned —☐ Original water well was modified —☐ I hereby certify that the original water well will be decommissioned within 180 days after such construction of the replacement water well.☐ I hereby certify that the original water well will be modified and equipped to pump 50 gallons per minute or less within 180 days after such construction of the replacement water well.



- ☐ Livestock  
☐ Monitoring  
☐ Observation  
☐ Nonconsumptive or de minimus use approved by the applicable natural resources district. \_\_\_\_  
☐ Owner is not yet sure if they want to decommission or modify original well within 180 days.

G. Location of water use of original well: \_\_\_\_

#### Decommission Information

Decommission Date: \_\_\_\_

Decommissioned By: \_\_\_\_

#### 8. Pump Information.

A. Is Pump installed at this time? No Pump present but Well Inactive: No  
 Free Flowing Well: No Well active, no pump installed: Yes  
 B. License No.  
 Pump Installer:

Pump Installer Firm:

C. Pumping Rate \_\_\_\_ gallons per minute. D. Pumping water level \_\_\_\_ feet.  
 E. Drop pipe diameter \_\_\_\_ inches. F. Length of pipe \_\_\_\_ in feet.  
 G. Pump equipment installed: \_\_\_\_ H. Pump Brand/Type \_\_\_\_  
 I. Will this well be used to pump 50 gpm or less? Yes

#### 9. Well Construction Information

A. Total well depth: 33.5 feet. B. Static water level 26.5 feet.  
 C. Well Construction began: 9/22/2020 D. Well Construction Completed: 9/25/2020 Days To Register: 34  
 E. Bore hole diameter in inches. Top 8.25 Bottom 8.25  
 F. Casing and Screen Joints are: Threaded Other Joints description: \_\_\_\_  
 H. Total Estimate Capacity of Well 5 gallons per minute. I. Pumping water level at capacity: 25 feet.

#### 10. Well Construction (Casing & Screen) - c, d, e & f measurements should be in inches to three decimal places Record Count = 2

WellID	FromDepth*	ToDepth*	Case/Screen	InsideDiam	OutsideDiam	CaseThickness	ScrnSlotSize	Material	ScreenTname
263369	0	23.5	casing	2.04	2.37	0.15		PVC	EMI
263369	23.5	33.5	screen	2.04	2.37	0.15	0.01	PVC	EMI

\* are in Feet, all else is in inches

#### 11. Grout and Gravel Pack

Record Count = 3

WellID	FromDepth	ToDepth	Grout/Gravel	Material Description <sup>1</sup>	Volume & Type Grout <sup>3</sup>	Quantity Gravel <sup>2</sup>
263369	0	15.5	grout	Bentonite Grout	6 Gallons	
263369	15.5	20.5	grout	Bentonite Chips	2 Bags	
263369	20.5	33.5	gravel	10/20 Silica Sand		10

\* are in Feet, all else is in inches

<sup>1</sup>Description of gravel pack, i.e. engineered gravel pack, or gravel pit description (1/4 down) or brand name (best sand) natural formation, drilling cuttings, soil backfill

<sup>2</sup>Quantity #cubic yards, #Tons, #Sacks - (for drilling cuttings and soil backfill estimate quantity) Calculation assistance available on web

<sup>3</sup>Volume & Type: #gallons of a slurry, #Barrels of a slurry, #sacks used in the slurry, #Bags of non-slurry bentonite (chip-pellet-granular)

#### 12. Well Geologic Materials Logged

WellID	FromDepth*	ToDepth*	Materials Drilled	Density/Hardness	Color	Other Material, Colors, Drilling Action, Note
263369	0	15	Clay	Dense/Stiff	Brown	
263369	15	33.5	Sand fine-med	Dense/Stiff	Tan	

\* are in Feet.