

CCR Groundwater Monitoring System



Omaha Public Power District

Nebraska City Station NC2 Ash Disposal Area

Nebraska City, Nebraska

June 1, 2016

Updated June 2019

OPPD Nebraska City Station NC2 Ash Disposal Area CCR Groundwater Monitoring System

Revision Log

This Plan may be revised from time to time when procedures are changed. Because revisions to this document can be made on a periodic basis, document control is necessary. The most recent version of this Plan is required to be posted on the CCR website. The revision log below will be updated every time the plan is amended.

Revision No.	Revision Date	Revised Sections	Originator	Notes
0	June 1, 2016	N/A	HDR	Per CCR Rule – Certification of well network
1	June 21, 2019	Section 4	HDR	Added downgradient well (NC2-MW-8) to well network

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Professional Engineer Certificate

"I hereby certify that the groundwater monitoring system described in this report for the CCR landfill known as the NC2 Ash Disposal Area at the Nebraska City Generating Station, owned and operated by the Omaha Public Power District, has been designed and constructed to meet the requirements of the Coal Combustion Residual Rule 40 CFR 257.91. I am a duly licensed Professional Engineer under the laws of the State of Nebraska."

Print Name:	Megan B. Seymour	
Signature:	Megn B. Sugar	
Date:	6-21-2019	
License #:	E-15931	



My license renewal date is December 31, 2020

1 Introduction

On April 17, 2015 the U.S. Environmental Protection Agency (EPA) published the final rule for the regulation and management of Coal Combustion Residuals (CCR) under the Resource Conservation and Recovery Act (RCRA). The Federal CCR Rule – effective on October 19, 2015 – applies to Omaha Public Power District's (OPPD's) Nebraska City Generating Station (Station). The Station, located southeast of Nebraska City, Nebraska has two coal-fired combustion units – Unit 1 and Unit 2. CCR from both units may be disposed in the NC2 Ash Disposal Area.

The CCR Rule, 40 CFR Subpart D-Standards for the Disposal of CCRs, Section §257.91 requires groundwater monitoring system that consists of sufficient number of wells at appropriate locations and depths, based on site-specific technical information, to yield groundwater samples from the uppermost aquifer that:

- Accurately represent the quality of both background groundwater, and groundwater passing the boundary of the CCR unit
- Monitor potential contaminant pathways

The groundwater monitoring system at the NC2 Ash Disposal Area was established in June 2016 to meet the requirements of the Federal CCR Rule. The groundwater monitoring network has been updated, as part of this April 2019 revision, to include an additional downgradient monitoring well (NC2-MW-8) that was required by the Nebraska Department of Environmental Quality. This report includes the following sections in support of the certification.

- Section 1.0 Introduction
- Section 2.0 Facility Background
- Section 3.0 Site Hydrogeology Summary
- Section 4.0 Groundwater Monitoring System

2 Facility Background

OPPD has a two-unit (Unit 1 and Unit 2) fossil fuel-fired generating plant at the Station southeast of Nebraska City, Nebraska. This Station has two existing CCR landfills that are permitted under the current NDEQ Title 132 regulations for fossil fuel combustion ash disposal (the NC1 Ash Disposal Area and NC2 Ash Disposal Area).

The NC2 Ash Disposal Area is an existing lined CCR landfill permitted under NDEQ Title 132 regulations for 40.7 acres; Cell 1 was constructed in 2008/2009 with a composite liner and leachate collection system. Construction for NC2 Ash Disposal Area Cells 2 and 3 started before the effective date of the CCR rule – October 19, 2015 – and construction will continue with excavation, structural fill, and installation of a composite liner and leachate collection system. NC2 Ash Disposal Area is an active, existing CCR landfill as defined by the CCR rule.

3 Site Hydrogeology Summary

Based on soil boring advanced at the Station in 2006, the bedrock, in the form of shale, was encountered at a depth of 89 feet below ground surface. The uppermost aquifer, Missouri River Alluvium, depth is anticipated to be from 2 feet to 89 feet below ground surface (bgs).

According to the hydrology assessment conducted at the site in 1995 by SCS Engineers titled <u>Hydrologic Investigations Report</u>. The broad upland areas of the Station are underlain by the unconsolidated wind-blown and glacial deposits of Pleistocene age. The surface of the site is generally overlain by fine-grained or cohesive deposits near the surface, based on a study conducted by D'Appolonia Consulting Engineers in 1975. These deposits consist of silty clays, clayey silts, silty sands and fine sands. The bedrock underlying the Station area is medium hard red to gray shale. Several areas outside the Station area are underlain by a thin formation of limestone interbedded with shale.

Data from the boring logs for the monitoring wells and soil borings at the Station indicates that the subsurface geology at the ash disposal area generally consists of the following:

- 3 feet of light brown to dark grayish brown lean clay (CL) (Fill/Topsoil), overlying,
- Approximately 9 feet of alluvium consisting of light brown to grayish brown silty clayey sand (SM), poorly graded sand with silty sand (SP-SM), silt with very fine sand to silty very fine sand (ML/SM), and high plastic clay (CH), overlying,
- 28 to 77 feet of gray poorly graded sand (SP) to the boring completion depths varying from 40 to 89 feet.
- Some borings indicate that bedrock was encountered at a depth of 103.5 feet.

In the general vicinity of the Station, two primary sources of groundwater are present, Missouri River alluvium and glacial deposits in the upland area west of the Station property. Groundwater in the Missouri River alluvium is found at starting depths of approximately 2 to 17 feet below ground surface (ft bgs) and is largely affected by the river stages. Based on the monitoring reports for the NC2 Ash Disposal Area, groundwater flow was in the south-southeasterly direction. Groundwater levels from the monitoring wells installed on the Station property in 1975 showed a flow direction generally south/southeast.

Slug tests conducted in 1995 on three monitoring wells (MW-1, MW-4 and MW-6) indicate that the horizontal hydraulic conductivity values ranged from 5.7 x 10⁻⁴ cm/sec to 8.2 x 10⁻³ cm/sec. A pumping test was conducted in 2003 by HDR on an 83-foot-deep, 16-inch-diameter well that was installed and pumped at a rate of 1,225 gallons per minute for 72 hours. Water levels were monitored during the pumping period and recovery period in the pumped well and in three observation wells installed for the test. The results of the test indicated that hydraulic conductivity of the aquifer is approximately 2.0 x 10⁻¹ cm/sec, which is in the upper end of the range of literature values for clean sands. It should be noted that the tested interval in the 2003 investigation is deeper (and the sediments coarser) than was tested during the slug tests that were conducted in 1995.

The hydraulic conductivity reported near the NC2 Ash Disposal Area has a range of 1.39×10^{-2} cm/sec to 2.42×10^{-3} cm/sec as reported by HDR in the 2006 Hydrogeologic Characterization Report (HDR 2006). The geometric mean that has been used for groundwater flow velocity calculations at NC2, based on the hydraulic conductivity tests completed in 2006, is 3.4×10^{-3} cm/sec. Effective porosity was reported as 0.405 in HDR 2006. Based on monitoring reports, the gradient has been reported as 0.0017 ft/ft with a velocity of 14.9 ft/year.

From slug test data performed by Terracon (2016) on recently installed well MW-13, the hydraulic conductivity was reported as 3.38×10^{-3} cm/sec. This is within the range of previously recorded data.

4 Groundwater Monitoring System

Based on the site-specific specific hydrogeologic information and groundwater flow to the south-southeasterly direction, the groundwater monitoring system for the NC2 Ash Disposal Area for the detection monitoring program consists of three (3) upgradient/background wells, one (1) crossgradient well, and four (4) downgradient wells. This exceeds the minimum number of monitoring wells required by 40 CFR 247.91(c) (i.e. one upgradient and three downgradient). Three (3) additional wells are included for water level measurements and to serve for future 'nature and extent determinations'. The groundwater monitoring system network for the NC2 Ash Disposal Area is summarized below in Table 1.

The monitoring well locations are shown in the attached Figure 1. The groundwater monitoring wells were constructed of 2-inch-diameter, schedule 40 PVC, flush threaded riser pipe, and machine slotted 10-slot (0.010 inch) screen. The surface completion for each well consists of a steel protective casing, concrete apron, and three bollards/posts. Monitoring well construction logs, registrations or abandonment forms for the groundwater monitoring wells are contained in Appendix A of this report.

Table 1: OPPD NC2 Ash Disposal Area, Groundwater Monitoring Well System

Monitoring	Date	Well	Well	Gradient	Monitoring
Well	Installed	Depth	Depth		Program Use
		(feet bgs) ¹	(feet from		
		0,	TOC) ²		
Monitoring V	Vell Network	(
MW-13	1/26/16	13.0	15.19	Background/Upgradient	Detection
NC2-MW-4	9/8/04	14.0	16.01	Background/Upgradient	Detection
NC2-MW-5 ³	9/16/04	15.2	18.93	Background/Upgradient	Detection
NC2-MW-6	9/7/04	11.0	14.66	Crossgradient	Detection
NC2-MW-2	9/8/04	15.0	18.35	Downgradient	Detection
NC2-MW-3	9/8/04	12.0	15.01	Downgradient	Detection
NC2-MW-7	11/6/13	21.0	23.97	Downgradient	Detection
NC2-MW-8	7/9/18	15.0	18.04	Downgradient	Detection
Water Level	Measureme	nts Only			
NC1-MW-7	1/20/99	40.5	42.53	Downgradient	Water Level/Nature &
(deep well)	' '				Extent Determinations ⁴
NC1-MW-8	1/21/99	20.0	22.46	Downgradient	Water Level/Nature &
				_	Extent Determinations ⁴
MW-14	7/12/18	18.0	21.0	Upgradient	Water Level
Abandoned \	Well⁵		_		
NC2-MW-1	9/7/04	14.0	17.08	NA	NA
(replaced with	(Abandoned				
NC2-MW-7)	11/6/13)				

- Depth from ground surface to bottom of installed well (screen depth). Actual boring depth may be deeper.
- Depth from top of casing to bottom of installed well (screen depth).
 Well repaired on 11/6/13 which raised the top of casing and ground surface.
- Monitoring wells to be sampled for nature and extent determinations if an Appendix IV constituent is detected in one or more of the detection monitoring wells at statistically significant level above groundwater protection standard.
- Abandoned in accordance with State of Nebraska regulations.

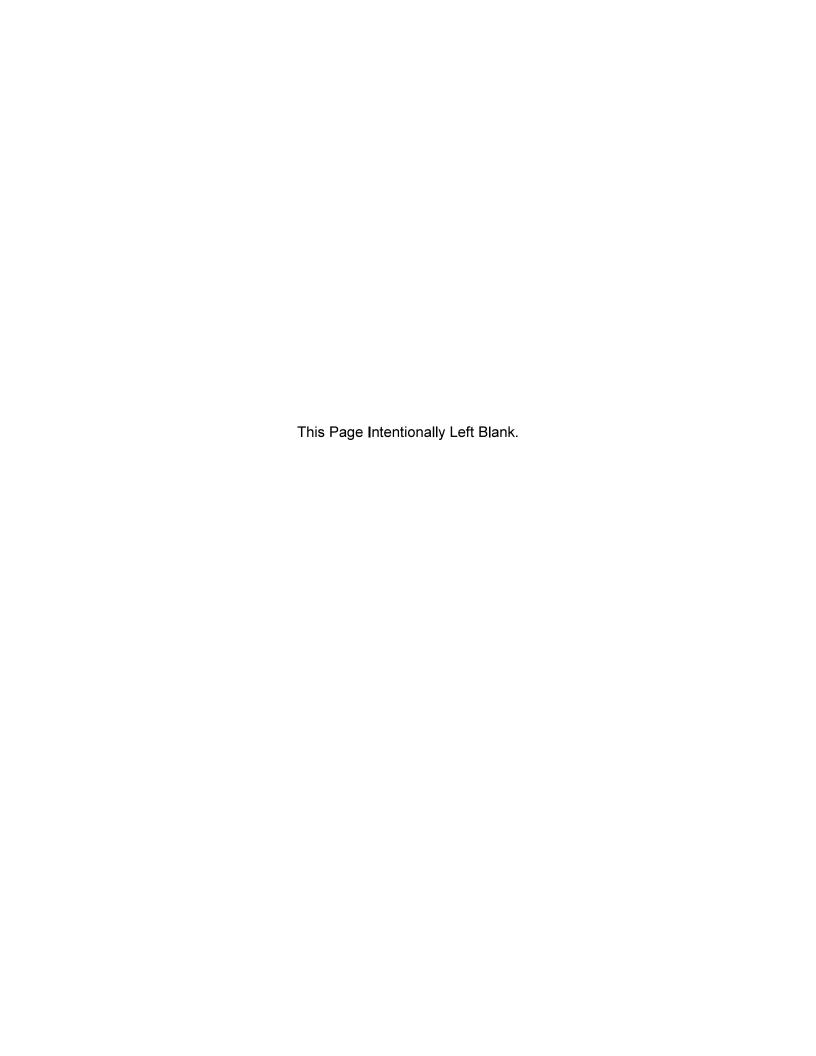
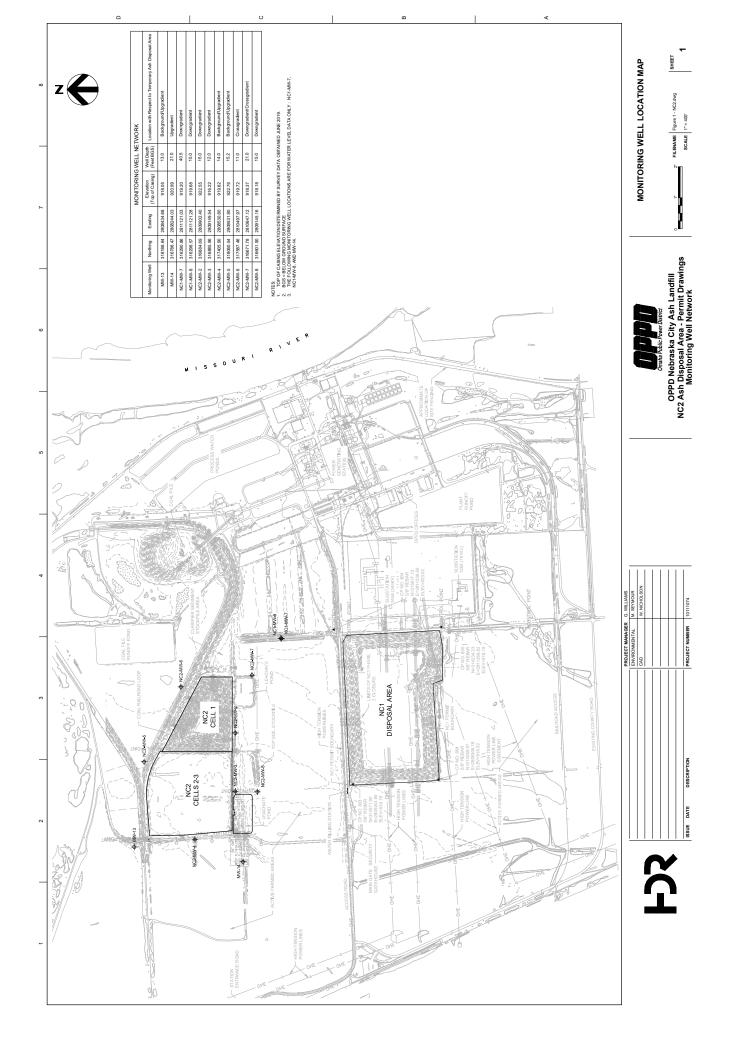
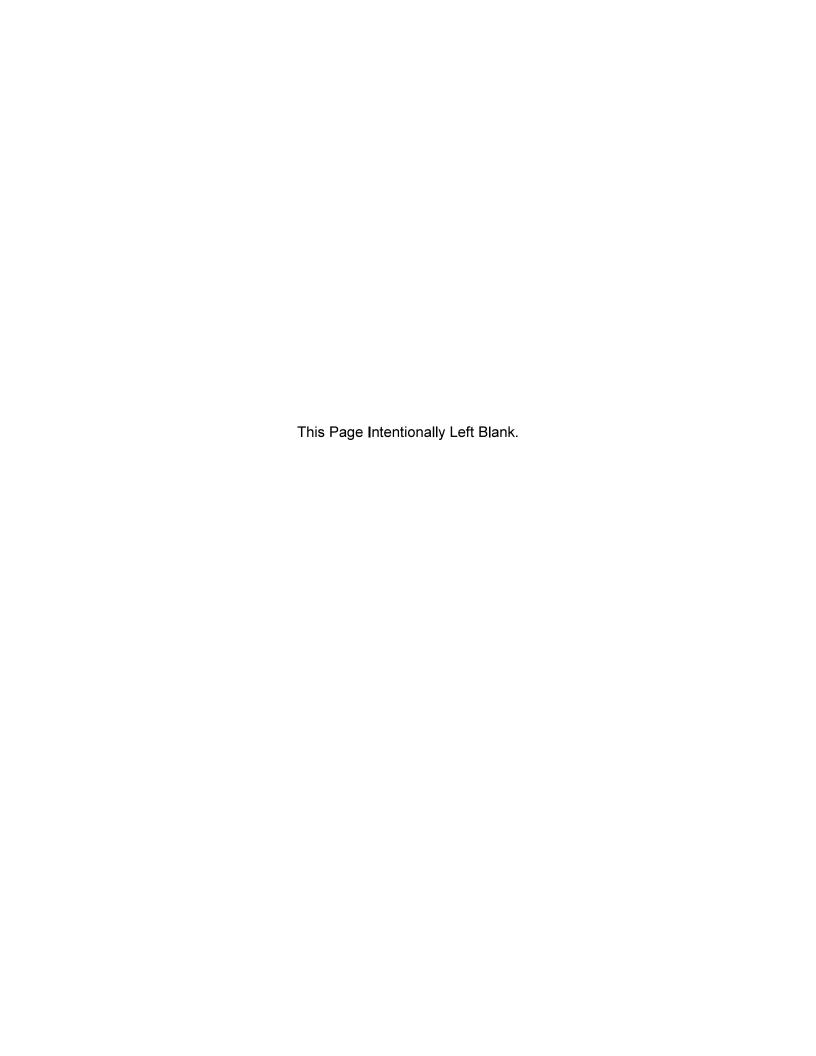


Figure 1 NC2 Ash Disposal Area **Groundwater Monitoring** Network

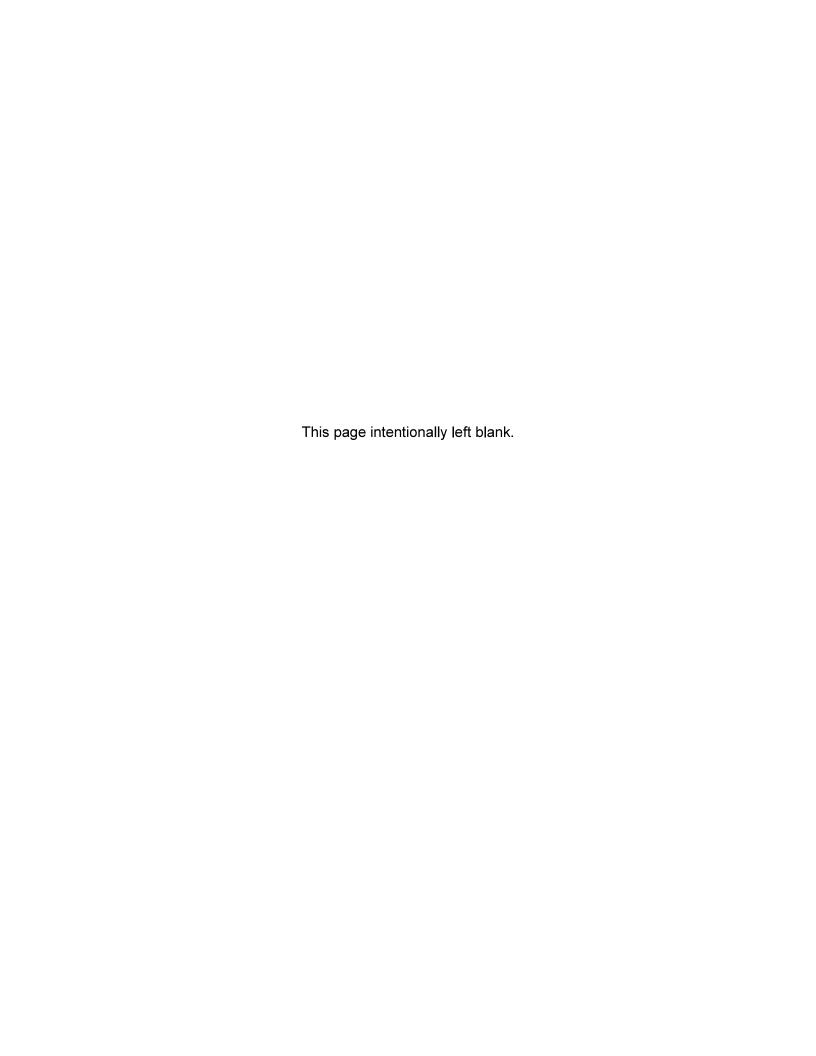


Appendix A Monitoring Well Documentation



			_		-		-		_	BO.	RING NO. MW-1	Page 1	of		
	REHOLE LOCATION ELEVATION DATUM						DRILLER	LOGGER Proper Pirers							
			ocat	ion P	lan	_	SGS				Abel Monnarez		Bruce Birge		
	ING ST		D					APLETE!	ū		DRILL RIG	DRILLING METHOD			
_ :	1-7-0	7-04 9-7-04					_	CMIE-75 SURFACETYPE	4,25" HSA						
			NFT.	to		32						TOTAL DEPTH (FT.) 14			
			1	1.5	TSF	N	F				Berm/Soybean Field				
1	45	-6	BL	ER	7	NI	F		_		WATER LEVEL OBSERVAT	TONS (FT.)			
0	SAMPLE TYPE	RECOVERY, in	PENETRATION RESISTANCE - BLOWS/FT.	POCKET PENETROMETER - TSF	UNCONFINED	MOISTURE CONTENT - %	DRY DENSITY - PCF		GRAFFICLOG	2.5	₹ 7.5 ATD		,		
H	LE T	ER	N	ROI	包	LEE	3	~	IIC.	DEPTH, FT	¥ 8.4 @ 1 Day AD				
SAMPLE NO.	ME	8	ESS	88	200	TSIC	2	OTHER	LA PI	T.			1		
5	SA	KE	PE	25	38	ME	B	5	3	E	DESCRIPTION	Surface Elevation: 918.0			
1	28	24		4,5+		-					Hard/Medium Dense, Slightly Moist, Mixed Low Plastic Silty Clay/Silt/and Poorly Graded Silty Sand, Very Fine Grained (CL/ML/SM) (Berm Fill)				
2	28	24		4.5+						-		, , , , , ,			
2	200			6.5							5.0	913.0			
3	28	15		2,6		1			-=	5-	Very Stiff, Moist, Dark	Grayish Brown,			
				10							Low Plastic Silty Cl 7.0	ay (CL) (Alauvium) 911.0			
4	25	24		1.8 2.8					==	1	7.5 Very Stiff, Very Moist	, Grayish Brown, 2 910.5			
-	-	-					-				Silt (ML) (Alluvium Loose, Wet, Grayish to	1			
5	28	16		-							Silty Clay, Very Fin	e Grained (SM)			
										10-	(Alluvium)				
6	25	18		4							Becomes Less Silty (S. Becomes Very Fine to	P-SM/SP) Fine-Grained.	N.		
9	-										Poorly Graded Sand	with Occasional			
7	20	18								1	Layer of Silty Sand				
1	28	10.		0.00							14.0 Becomes Very Silty (S Grained, with Some	M), Very Fine 904.0	1		
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											Bottom of Boring @ 1	41			
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	7		1 1								Concrete Pad	5 Duek Opiala			
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Mail to DNR PO Box 94676 Lincoln, NE 68509-4676 Phone (402)471-2363

10262004-162824-WWRF Department of Natural Resources (3)

October 2001 DNR Form 145

DEPARTMENT OF NATURAL RESOURCES

WATER WELL REGISTRATION

				FUR DEF	PARTMENT	USE ON	ĻY			
	Re O	egistration Date 👱 wner Code No.	40726 40726	✓ Sequence N Receipt No.	o. <u>1628</u> B1699	<u> </u>	Registrati	on No. <u>J</u> 2. am al	-1304	4 <i>2/</i> 1 NRD
1	. a.	Well Owner's First Company Name Correspondent Nan Address <u>444 Sout</u>	Name Omaha Public Po neOmaha l h 16 th Street Mali	wer District Public Power Dis	_Last Name	Atten	 tion	James J Krajio	cek	
_		City Omaha								
2		Contractor's Licens Contractor's Email Drilling Firm Name Address	Address9312 G	locoabel@cox.n Kleinfelder Court	et	· · · · · · · · · · · · · · · · · · ·		·		
		City Drilling Firm's Ema	Omaha iil Address	State_ bhaven:	<u>NE</u> Zij s@kleinfelder		,	l'elephone	(402 <u>) 33 I</u>	-2260
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7.	Rep a, b, c, e, g,	lacement and abando Is this well a replace Registration number Replacement well is Original well pump of Location of water us	ned well informa ment well? of abandoned we feet f	tion. YesX_No Il rom abandoned vinches	If not regis well, d. A , f. C	tered, date a	bandoned we	ell was constru	icted (m) /(c	/(y)

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		ump installer, pl						
b. Pu	mp Installer's I	License No	P	ump Installer':	s Name			
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Pu.	mp Installer's F	imn Address						
Cit	Ly <u></u>		State	Zip		Tel-	ephone	
Pu	mp Installer's F	irm Email Addr	ess					
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		T			. Length of d	rop pipe	fee	t
f. Pur	mping equipme	nt installed (m)_	/ _{(d/(y)}	2	g. Pump Brand	·i		
h. Thi	is well will be u	ised to pump les	s than 50 gpm	Yes	_No			
9. Well Cor	astruction Infor	mation.						
a. Tota	ıl well depth	~ 14 <u></u>	feet.		b. Static wate	r level 8.	4 feet.	
c. Pum	iping water leve	iNA	feet		d. Well Const	truction began _{(mon}	nth) 9 /(day)	7_/ _{(vear} _2004
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g. Casi	ing and Screen	Joints are Weld	ed Gh	ied	Threaded	X Othe	r	_
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Water Well Contractor's Signaturo

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2	28	24		4.5+							Grained (CL/ML/SM) (Berm F	111)	. - -	
3	2S	15		2.6	į					5-	5.0		913.0	
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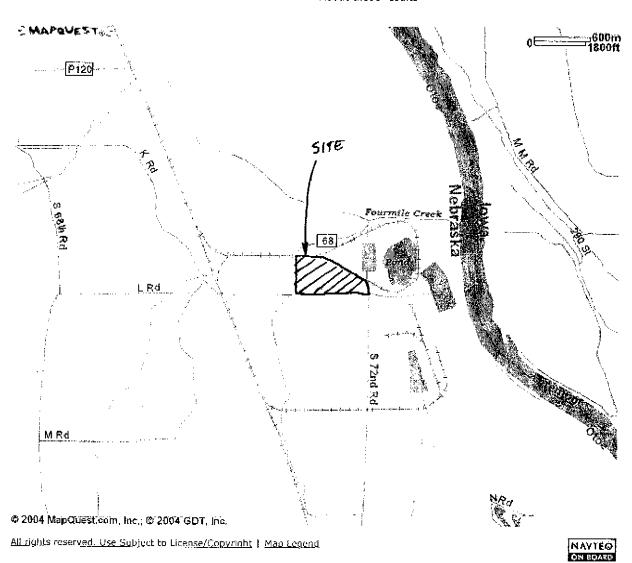
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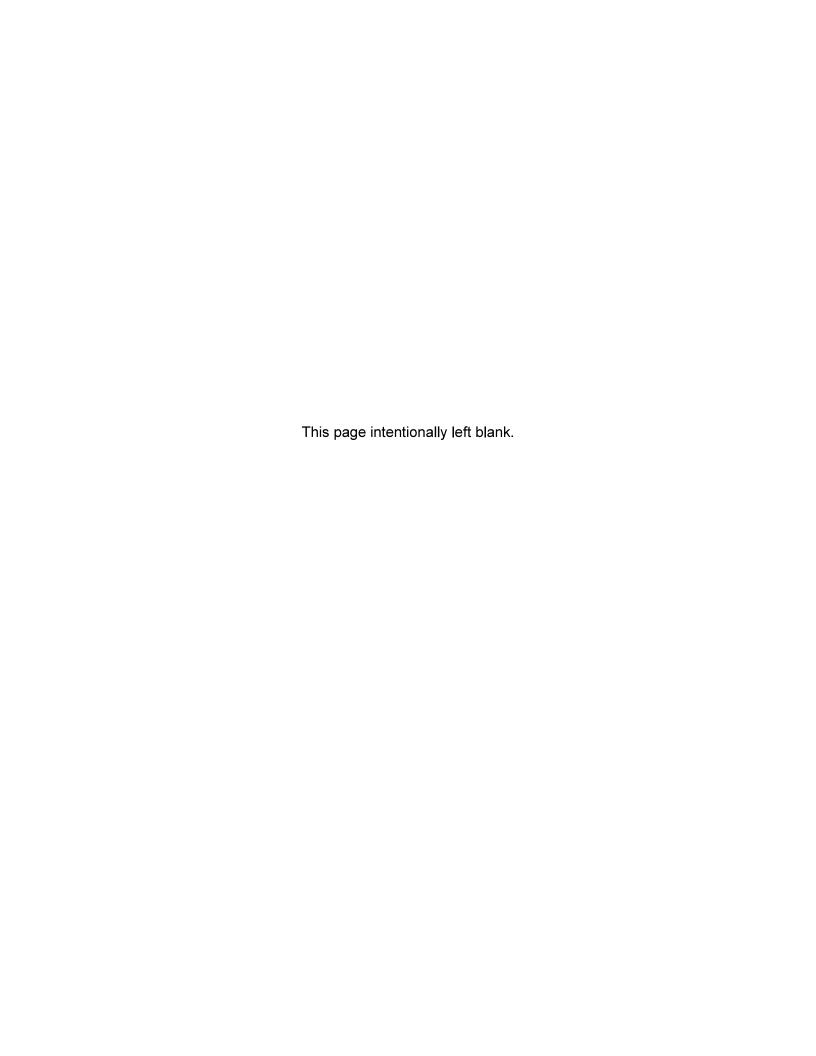


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SITE LOCATION PLAN

6130442 660-1 WELL LOCATION PLA OPPO Nebrosko City, Stotion Unit 2 Soil Borings



Submit To: Department of Natural Resources 301 Centennial Mall South PO Box 94676

Lincoln, Nebraska 68509-4676 Phone: (402) 471-2363

STATE OF NEBRASKA **DEPARTMENT OF NATURAL RESOURCES**

DNR DECO

Oct 2007

This form is required to be filed within 60 days of decommissioning of the water well

NOTICE OF WATER WELL DECOMMISSIONING

	FOR DI	EPARTMENT I	USE ONLY	
	Owner Code No.	49927 eipt		Registration No. 6-130442A NEMAHA NRD
Well Owner's First Name OR Company Name	t Mall	tate NE	Zip 68102	Telephone
2. Contractor (if applicable) Terra Address 15080 A Circle City Omaha Email: dmsvingen@terracor		State NE	Telephone Number Contractor License No Zip 68144	
3 a. Well Registration No. G-130443 3 b. Purpose of Well: Monitoring We 3 c. Date Well Last Operated: 3 e. List complete well location: Legal, Well Location: SE 1/4 of the The well is feet OR Latitude Degree: Longitude Degree: 1 Location of water use Not Appli	Footage and/or GPS Coordinat SE $^{1}/_{4}$ of Section 25 from the (N \square S \square) section 40 Mine	es , Township n line and		14 E W , Otoe County. feet from the (E W) section line
4. Actual Method for Decommiss Placement Depth in Feet From 0 0.5 0.5			gra P\	avel/dirt VC cap ponite grout
Contractor (**owner	gen		e to the best of my ke	owledge. when decommissioning ocapped(VFI)

The Department reserves the right to request verification of the information provided.

UG No. (if applicable):

Terracon Job No.: 05137163

Terracon Well ID: MW-1

JAN 08 2014

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF WATER WELL DECOMMISSIONING UPDATE

Registration Number

G-130442A

Sequence Number

162824

Date

January 17, 2014

Person Processing Update

BJ Green

Information regarding the water well referenced above has been changed in the Department's water well registration records. Please note the following changes and the reason changes were made:

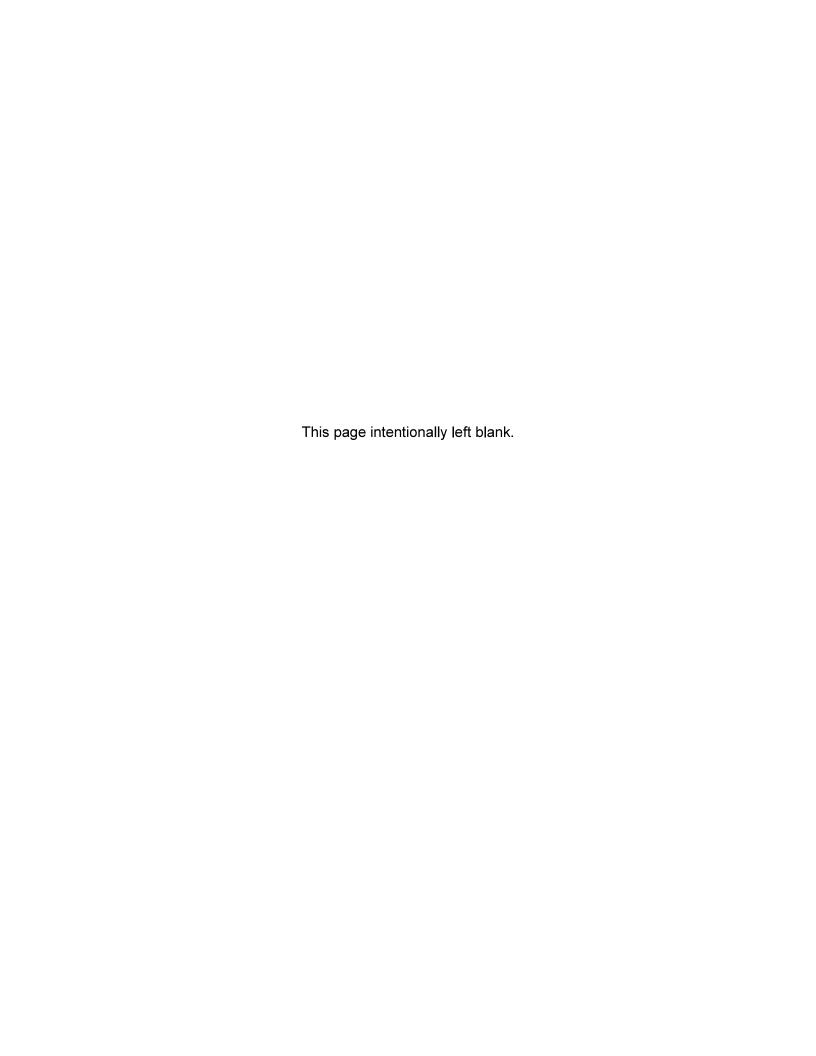
This well is located in subsection NENE, section 36, township 8, range 14. It is within the 150' allowance, as it is 39' south of the line separating the SESE of section 25 and the NENE of section 36.

This change has modified Items 3e of DNR DECO. If these changes are inaccurate, please contact the Department of Natural Resources at P.O. Box 94676, Lincoln, NE, 68509-4676, phone (402) 471-2363.

I certify that this update has been forwarded to the owner of the referenced water well and is now a part of the registration records.

Department of Natural Resources

_		_	_					-		БО	RING NO. MW-2		Page 1	of 1
	See Boring Location Plan USGS										ORILLER	LOGGER		
-								1310			Abel Monnarez	Bruce Birge		
	RING STARTED BORING COMPLETED									DRIII RIG	DRILLING METHOD			
5	9-8-0					1		CME-75 SURFACE TYPE	4.25" HSA TOTAL DEPTH (FT.)					
			SVET	-		30					Cornfield/Berm	15		
			WO	-TS	TSF	ENT	5							
	(+)		N H	TER	- 2	N	-		12		WATER LEVEL OBSERVA	LIONS (FT.)		
Š	[YP]	Y, it	NCE VCE	ME	E S	BCC	SIL		TO	14	₹ 7.7 ATD			C
SAMPLE NO.	TE.	VER	TA	TRO	NE	H	B	Ħ	HIC	H, F	¥ 10.6 AD			WITH L. LOG
AWI	SAMPLE TYPE	RECOVERY, in.	PENETRATION RESISTANCE - BLOWS/FT	POCKET PENETROMETER - TSF	UNCONFINED	MOISTURE CONTENT - %	DRY DENSITY - PCF	OTHER	BRAPHIC LOG	ошти, ят.		Contant Discontinue	010.0	TOTAL STATE
Ö	L/A	=	2.24	24	pu	2	Δ.	u		н	DESCRIPTION Very Stiff, Slightly M	Surface Elevation:	919.0	
1	28	18		3.8					1111		Yellowish Brown, I	ow, Medium &		
										3	High Plastic Clay (CL/CH) (Berm Fill)		
2	28	14		2.6										
	200	.,	-							3	4.2		914.8	
,	20	16		1.6						5-	Stiff, Moist, Grayish I	Brown, High Plastic		
3	25	10		1.0					==	,	Clay (CH) (Alluviu		913.0	
	200		1								Loose, Wet, Grayish I Clay (CH) (Alluviu			E
	25	24								-	City (Cri) (Attuviu	m) \(\overline{\begin{array}{cccccccccccccccccccccccccccccccccccc		E
											Becomes Soft/Loose,	Wet, Brown-Grayish		
5	28	24		0.3							Brown, Interbedded Very Fine Sand, and	d Low Plastic Clay		E
7				_	120	-				10-	with Some Sand (C	L/SM/CL) - Clay 👱		-
5	25	21									Layer @ 8.5-9.5 Becomes Loose/Soft,	Wet, Gravish		
										1	Brown, Silty Sand,	Very Fine Grained		Œ
7	25	21									to Sandy Silt (SM/I Becomes Loose, Wet,			E
4		_	-	-				_			Graded Sand with S	Some Silt		E
									NH.	15-	15.0 (SP/SP-SM) (Alluv Bottom of Boring @ 1		904.0	
											Well Completed Using Concrete Pad	g 3' Stick Up and		
											Senson 1 mg			
												Y		
-														
								-						
_	The si	tratific	ation li	nes rec	prosen	the ar	proxin	nate bo	andery I	ines be	ween soil and rock types. In situ the	ransition may be gradual.		
	- 404 2	- A - MELEN			- Jacob	10)		1000			PROJECT NAME			
	•										OPPD Flyas	h Monofill		
k	1	F	(L	EI	NI	E	L D	ER	0			ty, Nebraska		
											PROJECT NUMBER			
312	G Co	urt. On	naha 1	Vchrus:	km 681	27 (40	2) 331	-2260			47962			



Mail to DNR PO Box 94676 Lincoln, NE 68509-4676 Phone (402)471-2363

10262004-162825 WWRF
Department of Natural Resources (3) DNR Form 145

STATE OF NEBRASKA

DEPARTMENT OF NATURAL RESOURCES

WATER WELL REGISTRATION

	FOR DEPARTMENT USE ONLY
	Registration Date 10-26-2004 Sequence No. 162825 Registration No. 21-130442B Owner Code No. 40226 Receipt No. 816991 Demake NRD
1	a. Well Owner's First Name Last Name b. Company Name Omaha Public Power District c. Correspondent Name Omaha Public Power District Attention James J Krajicek Address 444 South 16th Street Mall
_	City Omaha State NE Zip 68102 Telephone (402) 636-2309
2	. a. Contractor's License No 19245 Contractor's Name Kleinfelder Contractor's Email Address locoabel@cox.net b. Drilling Firm Name Kleinfelder Address 9312 G Court
	City Omaha State NE Zip 68127 Telephone (402) 331-2260 Drilling Firm's Email Address bhavens@kleinfelder.com
3.	a. Well locationSE_1/4 of the SE 1/4 of Section 25 , Township8 North, Range14 East/West, OtoeCounty. b. Natural Resources DistrictNemaha NRD c. The well isfeet from the (North/ South) section line andfeet from the (East/West) section line
	or Latitude Degree 40 Minute 37 Second 29 Longitude Degree 95 Minute 47 Second 12 d. Street address and subdivision, if applicable Block Lot c. Location of water use, if applicable (give legal descriptions) f. If for irrigation, the land to be irrigated is acres, Well reference letter(s), if applicableMW-2
4.	Permits Management Area Permit Number Geothermal Permit Number Transfer Out-Of-State Permit Number Municipal Permit Number Conduct Permit Number Well Spacing Permit Number Other Permit Number
5.	Purpose of well (indicate one)Aquaculture
	Wells in a Series. a. Is this well a part of a series?yes _ Yes go to part b of this sectionNo go to part 7 of this application b. If one or more of the wells in the series is currently registered, give the well registration numberNA c. How many wells in the series are you registering at this time?6
7.	Replacement and abandoned well information. a. Is this well a replacement well?YesXNo b. Registration number of abandoned well If not registered, date abandoned well was constructed /_(u//y) c. Replacement well is feet from abandoned well. d. Abandoned well last operated /_(u) /_(y) c. Original well pump column size inches. f. Completion of original well abandonment on /_(d/y) g. Location of water use of abandoned well

8. Pumo	nformation.										
•		at this time	Yes X	No							
ls pumi	p installed by w	ell owner in sec	tion 12	 /es No	Is munn installe.	d by contractor is	a section 22	YesNo			
· If ount	o installed by p	ump installer, pl	ease till out lic	rense nunher l	is pump mstane bolom	a by contractor n	1 section 2 !	r csNo			
Pu	mp Installer's P	mail Address	1	ump matarier	5 14aiile			• • • •			
Pu	mp Installer's F	irm Name				·					
Pur	mn Installer's I	irm Address									
Cit	v		State	7in		Te.	Lanhono				
Pur	mp Installer's E	irm Email Adda		zıp		16.	repriorie				
c. Pur	mping rate	oalle	ns ner minute		easured	Eutomated					
							<i>C</i>				
f. Pur	nping equipmen	nt installed (m)_				rop pipe 					
h. Thi	is well will be u	sed to pump les	100 /(y) s than 50 opm	Yes							
	struction Inform		gpin	1 cs	140		·····				
			P								
a. Tota c. Pum	u wen depin	- 15 NA	teet.		b. Static water	r level~ 16	0.6 feet.	0 / 2004			
e. Wel	l Construction a	completed		9 / 2004	f Rorah	auction began _{(mo}	onth)	8_/ _{(year} 2004 Bottom <u>_6.5</u>			
g. Casi	ng and Screen J	Joints are Weld	(day) - ed Gh	> , (year200-) ied	TBore n Threaded	X Othe	nenes rop_6.5	Bottom <u>6.3</u>			
			::								
10. Well Cor	ostruction (Casi	ng & Screen)- c	, d, e, & g mea	isirements sho	ould be in inches	to three decimal	l places				
	а	ь	С	d	e	f	g	h			
Plac	ement	Casing or	Inside	Outside	Wall	Type of	Screen Slot	Trade Name			
Depth	in Feet	Screen	Diameter	Diameter	Thickness	Material	Size				
From	To				111111111111111111111111111111111111111						
0	5	ļ <u></u>	3.047	2.295	0.200		3.7.				
		Casing	2.047	2.375	0.328	PVC	N/A	Johnson Screens			
5	1.5	Screen	2.000	2.560	0.560	PVC	0.010	Johnson Screens			
	<u> </u>	i			}						
						· .					
	·				l						
11. Grout and	l Gravel Pack										
Plac	ement Depth in	Feet	· Gra	out or	···	Mater	ial Description				
	To			el Pack		Mater	tat i zescription				
<u> </u>			Benton		3/8" Bentonite Holeplug						
3		15	Gravel	l Pack		12-20 Sand					
	Ì										
		·									
2. Geol	logic Materials	Logged									
Ocpth in Feet			cc Attached Bor	· 1	Though to the	Ts.	t1				
From To		Description Si	ж Анаслен мог	ing Log	Depth in Feet From To		scription				
•					TIOM I	,					
-	- · · .	····									
	<u> </u>							·· .			
			(Addit	ional sheets m	ay be submitted)					
	<u> </u>		(-1447)	WALTER III	,	<u> </u>					
3. I am fan	illiar with the in	Iformation sub-	nitted on this e	egistration an	d to the best of	ny knowledge it	is frue				
1/						, iaio nicago it					

10:13:04 Date

Water Well Contractor's Signature

LOG OF BORING NO. MW-2 Page 1 of 1															
BOI	REHOL	E LOCA	ATION			ELE\	/ATION	DATUM			DRILLER		LOGGER		
Sei	e Bor	ring I	Locat	ion F	lan	ŧ	SGS	3			Abel Monnare	·z	Bruce Birge		
	RING S					BORII	NG CO	MPLETE	5		DRILL RIG		DRILLING METHOD		
	9-8-0	4			ŀ	9)-8-0	4			CME-75		4.25" HSA		
			H			32					SURFACE TYPE		TOTAL DEPTH (FT.)		
				- TSF	fr.	<u> </u>					Cornfield/Ber	m	15		
			PENETRATION RESISTANCE - BLOWS/F1	ER - T	I - TSF	MOISTURE CONTENT -	ORY DENSITY - PCF				WATER LEVEL O	BSERVATIO	NS (FT.)		
ġ	SAMPLE TYPE	RECOVERY, in.	E E	POCKET PENETROMETER	UNCONFINED	003	SITY		GRAPHIC LOG	Į.	▽ 7.7 ATD				Ð
Ä	LE	VEF		開開	E	1 E		55	Ĭ	H, F	▼ 10.6 AD				רוכ
SAMPLE NO.	AME.	ECO	ESIS	EKG PGG PEG	NO.	4OIS	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	OTHER]RAI	DEPTH, FT.	PROGRAMMA	e.	urface Elevation:	010.0	ме г т соб
φ,	Δ,	<u> </u>	111,111	<u> </u>	20				 	lected Section 10 cm	DESCRIPTION Vary Stiff 5		, Dark Gray to	919.0	
Ī	2S	18		3.8		-				-	Yellowisi	h Brown, Low	/, Medium & /CH) (Berm Fill)		
2	28	14		2.6						-					
			<u> </u>			<u> </u>	<u> </u>				4.2		991 4 501 .1	914.8	
3	28	16		1.6						5 -	Stiff, Moist,	, Grayish Brov () (Alluvium)	wn, High Plastic		Ш
							<u> </u>] :	6.0			913.0	\exists
4	2S	24								-	Loose, Wet, Clay (CH	Grayish Brov () (Alluvium)	vn, High Plastic ▽		
5	28	24		0.3						10-	Brown, It Very Fine	nterbedded Sa e Sand, and Lo	t, Brown-Grayish ndy Silt, Silty ow Plastic Clay M/CL) - Clay		
6	28	21								-	Layer @ Becomes Lo	8.5-9.5 oose/Soft, Wei	, Grayish		
7	2S	21								-	to Sandy Becomes Lo	Silt (SM/ML) oose, Wet, Gra	ıy, Poorly		
										-	l :	and with Som M) (Alluvium		004.0	
										15-	15.0 (SP/SP-S Bottom of B			904.0	
												eted Using 3'	Stick Up and		
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						- 1									
	The st	tratific	ation li	nes rep	resent	the ap	proxit	nate bou	mdary li	meş bet	ween soil and rock types.	In situ the transi	tion may be gradual.		
											PROJECT NAME	.2 97			
											I OP	PD Flyash M	onotili		



OPPD Flyash Monofill

LOCATION

Nebraska City, Nebraska PROJECT NUMBER

47962

9312 G Court, Omaha, Nebraska 68127 (402) 331-2260

- MAPQUEST. =

Send To Printer Back to Map Nebraska City NE US

Notes:		

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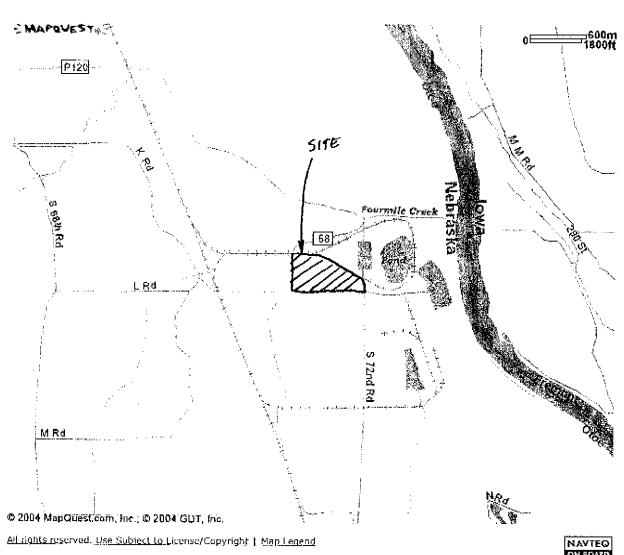
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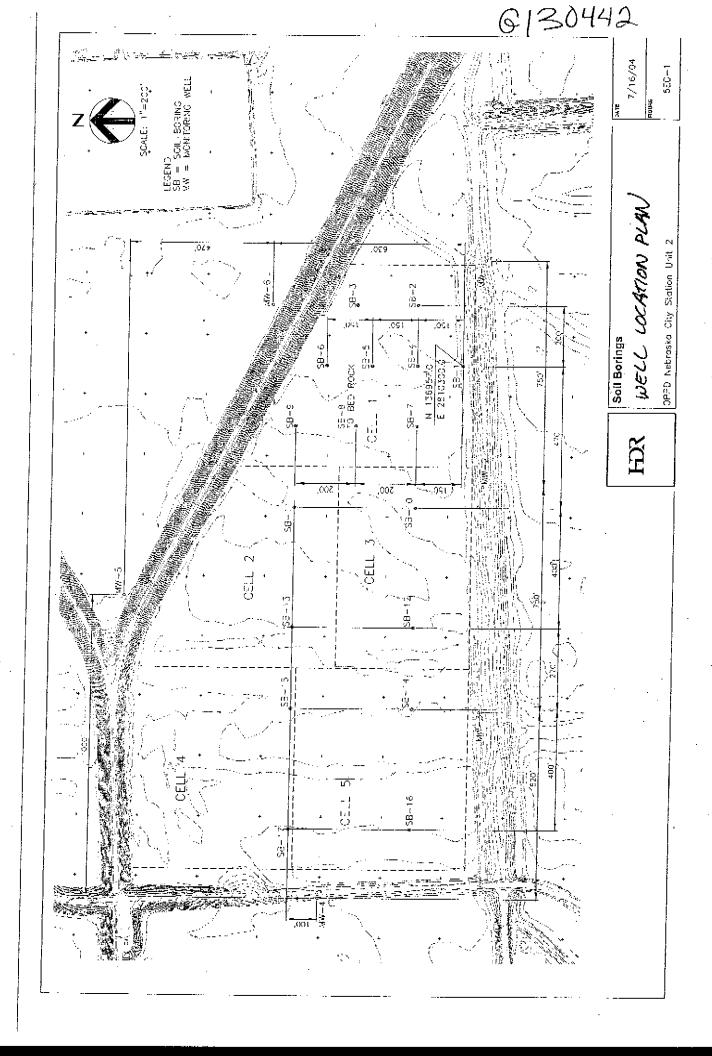
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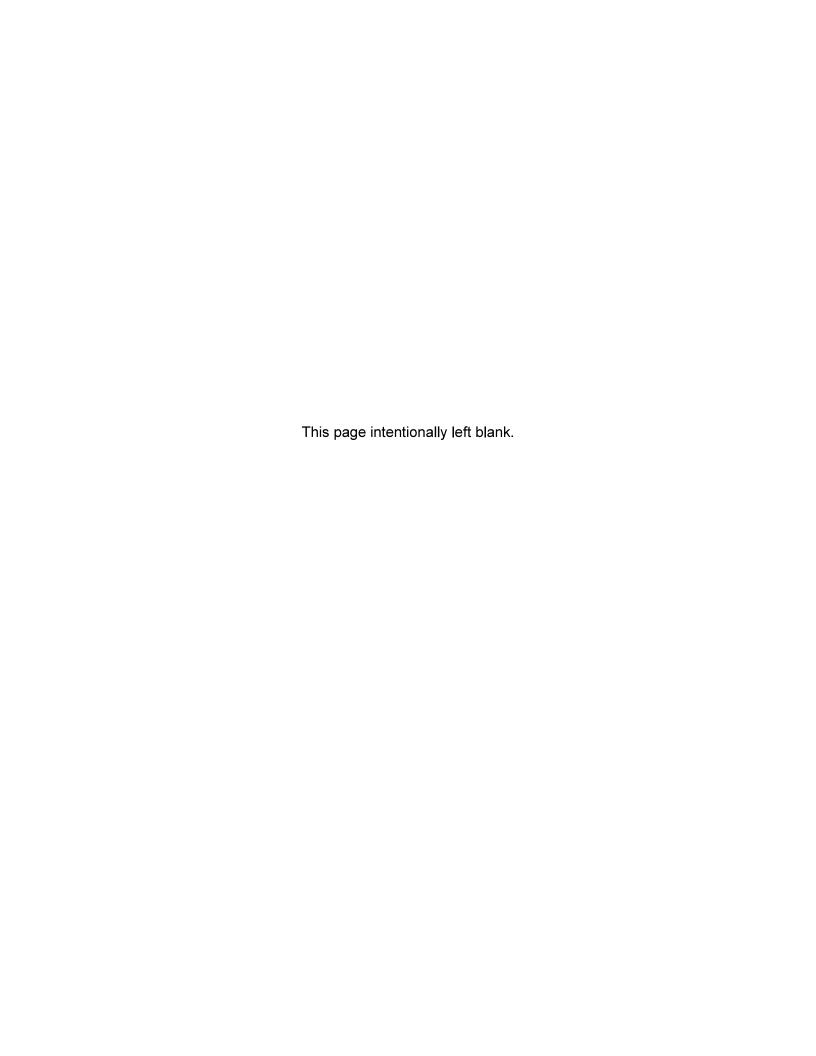
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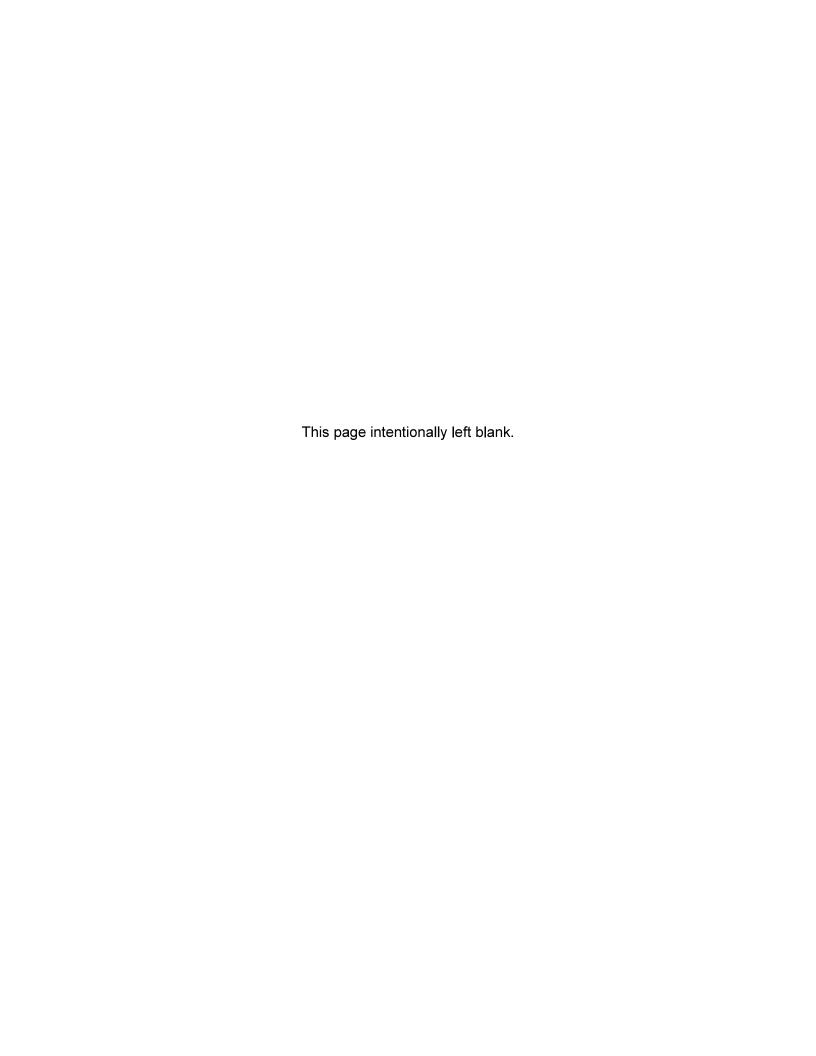
SITE LOCATION PLAN





					_	man hard		-		501	RING NO. MW-3	Page 1	OLI		
See Boring Location Plan USGS								LIATUM		Abel Monnarez Bruce Birge					
See Boring Location Plan BORING STARTED				lan	- 2		PLETE	n .		Abel Mobinarez Bruce Birge DRILL RIG DRILLING METHOD	_				
						-8-04	W 5 - W -			CME-75 4.25" HSA					
3	0-8-0	-	Li	-		1 (5.70)	-0-04				SURFACE TYPE TOTAL DEPTH (FIL)				
		1	SAF	1-		1			1 1		Cornfield 12				
			89	2-1	- TSF	E	Ö				WATER LEVEL OBSERVATIONS (FT.)				
	2	ď	N.	TEB	O.Z	NO	7		2		♥ 3.5 ATD				
N N	H	KY.	ATI	ONE	INE	REC	E S		27	E	▼ 3.8 AD		8		
E.E.	SAMPLE TYPE	JAE	ETA	FEE	PRI	STU	DRY DENSITY - PCF	田	GRAPHIC LOG	DEPTH, FT.	- 3.6 AD	-1	OCT TOWN		
SAMPLENO	SAM	RECOVERY, in.	PENETRATION RESISTANCE - BLOWS/FT.	POCKET PENETROMETER - TSF	UNCONFINED	MOISTURE CONTENT - %	DRY	OTHER	GRA	DE	DESCRIPTION Surface Elevatio		1		
1	28	13		1.3							1.0 Stiff, Moist, Very Dark Grayish Brown to Yellowish Brown, Medium to High Plastic Clay (CL/CH) (Topsoil) Loose, Very Moist, Light Brown, Poorly	912.0			
2	2S	24		П						1	Graded Sand, Very Fine to	¥			
		3.1						-			Becomes Wet and Mostly Fine-Grained				
3	28	24								5-					
4	28	24									Becomes Medium Dense				
5	28	24									Becomes Loose				
6	28	24								10	10 -	10-			
	-				_						12.0 Bottom of Boring @ 12	901.0	E.E		
											Well Completed Using 3' Stick Up and Concrete Pad				
7	7	l	KL	ΕI	N	FE	L D	mate by E		ines be	PROJECT NAME OPPD Flyash Monofill LOCATION Nebraska City, Nebraska PROJECT NUMBER 47962				

10.



Mail to DNR PO Box 94676 Lincoln, NE 68509-4676 Phone (402)471-2363 Department of Natural Resources

October 2001

STATE OF NEBRASKA DEPARTMENT OF NATURAL RESOURCES

WATER WELL REGISTRATION

FOR DEPARTMENT USE ONLY

	Registration Date 1026-2004 Sequence No. 162826 Registration No. Owner Code No. 40226 Receipt No. R16991	9-130442 C NRD
ı	1. a. Well Owner's First Name Last Name b. Company Name Omaha Public Power District Attention James J K c. Correspondent Name Omaha Public Power District Attention James J K Address 444 South 16 th Street Mall State NE Zip 68102 Telephone	Krajicek
2	2. a. Contractor's License No 19245 Contractor's Name Kleinfelder Contractor's Email Address locoabel@cox.net b. Drilling Firm Name Kleinfelder Address 9312 G Court City Omaha State NE Zip 68127 Telephone	e(402) 331-2260
	Drilling Firm's Email Address <u>bhavens@kleinfelder.com</u>	
3.	3. a. Well location <u>SW_</u> ¼ of the SE ¼ of Section _25_, Township 8 North, Range14_ East/Wes b. Natural Resources District <u>Nemaha NRD</u> c. The well is feet from the (North/ South) section line and feet from the section line and feet from the section line and feet from the section line and feet from the section line and feet from the section line and feet from the section line and feet from the section line and feet from the section line and feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section feet from the section	he (East/West) section line
	or Latitude Degree 40 Minute 37 Second 30 Longitude Degree 95 Minute 47 Second 21 d. Street address and subdivision, if applicable Block Lot e. Location of water use, if applicable (give legal descriptions)	
	f. If for irrigation, the land to be irrigated is acres. g. Well reference letter(s), if applicableMW-3	
4.	4. Permits Management Area Permit Number Geothermal Permit Number Municipal Permit Number Well Spacing Permit Number Surface Water Permit Number Industrial Permit Number Transfer Out-Of-State Permit Number Conduct Permit Number Other Permit Number	
5.	5. Purpose of well (indicate one)Aquaculture Commercial/Industrial Dewate	ering (over 90 days)
		igation Injection
6.	 6. Wells in a Series. a. Is this well a part of a series?yesYes go to part b of this sectionNo go to part 7 of this appli b. If one or more of the wells in the series is currently registered, give the well registration numberN c. How many wells in the series are you registering at this time?6 	
	7. Replacement and abandoned well information. a. Is this well a replacement well? Yes X_No b. Registration number of abandoned well If not registered, date abandoned well was conc. c. Replacement well is feet from abandoned well. d. Abandoned well last operated (m). e. Original well pump column size inches. f. Completion of original well abandoned. g. Location of water use of abandoned well	nment on (m) $/(y)$

Q	13044	20
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		to the same					(7/_	<u> </u>				
•	nformation.											
	nump installed		YesX_									
Is pump) installed by w	ell owner in sec	tion I? Y	'esNo	Is pump installe	d by contractor in	section 2?	YesNo				
		ump installer, pl										
b. Pա	np Installer's I	.icense No	P	ump Installer'	s Name							
Pur	np Installer's F	Email Address										
Pur	np Installer's F	'um Name										
Pur	Pump Installer's Firm Address											
			State	Zip		Tel	cphone					
Pur a Du-	np installer's f	irm Email Addı	ess									
		gallo										
		r		€		rop pipe						
h. This	nping equipme: s well will be n	nt installed (m)_ sed to pump les	/(d /(y) e than 50 ann	Yes	у. Ршпр Бтанс - No	d						
	struction Infor		s man 50 gpm	1 cs								
			0. 4		1 0/15	1 1 0	0 0					
			leet.		b. Static water	er level 3.5 truction began _{(mor}	8 leet,	9 / 3004				
e. Well	Construction (completed		2004	u. wen consi I f Boreh	ndenon began _{(mon} iole diameter in in	nth <u>)/(day).</u> sches Top_ 6.5	6_7 _{(year} 2004 Bottom <u>_6.5</u>				
g. Casir	ng and Screen .	Joints are Wold	ed Glu	red	Threaded	X Othe	T					

10. Well Con	struction (Casi		<u>, d, e, & g mea</u>		ould be in inches	s to three decimal	places					
<u>-</u>	ä <u></u>	Ь	С	d	е	ſ	g	h				
Place	ement	Casing or	Inside	Outside	Wall	Type of	Screen Slot	Trade Name				
Depth	in Feet	Screen	Diameter	Diameter	Thickness	Material	Size					
From	То											
υ	2	Casing	2.047	2.375	0.328	PVC	N/A	Johnson Screens				
2	l ii	Screen	2.000	2.560	0.560	PVC	0.010	Johnson Screens				
			17,000	2.300		<u>-</u>	0.010					
						<u> </u>						
	<u> </u>	<u>.</u>					<u> </u>					
11. Grout and	Gravel Book											
	ement Depth in To	l Feet		out or		Mater	ial Description					
From	То			cl Pack								
0		Ī	Benton	ite		3/8" Bentonite	Holeplug	\ <u></u>				
)		11	Gravel	Pack	12-20 Sand							
				- ··								
	<u>1</u>											
l2. Geol	ogic Materials	Logged						· · · · · ·				
Depth in Feet			ee Attached Bor:	ing Log	Depth in Feet	Due	scription					
rom To		Description	co Attached Bot.	ing Log	From T		scription					
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			"									
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			(Additi	ional sheets m	ay be submitted	I)						
7 I F	. I i al a a a a a a a a a a a a a a a a a		7 1	1		,						
3. I am fam	moar with the i	mormation subn	nitted on this re	egistration, an	d to the best of:	my knowledge it i	is true.					
1/ //	//											
//.h.s.//		(10-13-0	4								
Water W	ell-Contractor's	s Signature		, 1								
			2-1110									

								LOC	OF	BO	RING NO. MW-3	.,,_,_,	Page 1	of 1
K	BORLHOLE LOCATION ELEVATION DATUM											OGGER	-	-
			Locat	ion I	Plan	USGS					Abel Monnarez	Bruce Birge		
BORING STARTED						BORING COMPLETED					1	RILLING METHOD		
9-8-07						, 9	9-8-0	4		, · · · -	CME-75 4.3	25" HSA		
			<u> </u>			38		•			SURFACE TYPE TO	FAL DEPTH (FT.)	Ì	
			S.A	TSF	124	l į	l				Cornfield	12		
			1 28	H.	I - TSF	Ĕ	- PCF	ĺ			WATER LEVEL OBSERVATIONS	(FT.)		
Ģ		Ϋ́, ii.	CE:	MET	E SE	E CO	YTI8		907	<u> </u>	□ 3.5 ATD			ď
PLE 1	PLE 1	VER	TRA	12E	NES	I GE	EŽ.	 %	HIC	H, FJ	▼ 3.8 AD			ŎΊ
SAMPLE NO.	SAMPLE TYPE	RECOVERY, in.	PENETRATION RESISTANCE - BLOWS/FT	POCKET PENETROMETER - TSF	UNCONFINED COMPRESSION	MOISTURE CONTENT	DRY DENSITY	OTHER	GRAPHIC LOG	DEPTH, FT.		ce Elevation:	913.0	WELL LOG
1	28	13		1.3							Stiff, Moist, Very Dark Grayi Yellowish Brown, Medium	ı to High 🔝 👝	<u>912.0</u>	
						-					Plastic Clay (CL/CH) (Top Loose, Very Moist, Light Bro	osoil) / own, Poorly		
2	2S	24									Graded Šand, Very Fine to Fine-Grained (SP) (Alluviu	ıın) <u>¥</u>		目
3	2S	24								5 -	Becomes Wet and Mostly Fin	e-Grained		\blacksquare
					-								; ;	
4	28	24				,	ļ				Becomes Medium Dense		- -	
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5	2S	24		•	ı					-	Becomes Loose			目
6	28	24			<u></u>					10-				
	2	X+-1								-	12.0		901.0	
			}								Bottom of Boring @ 12'			
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 -	The str	ratifica	tion lii	nes rep	resent	the ap	proxir	nate bou	ndary li	nes bet	veen soil and rock types. In situ the transition of	nay be gradual.		
											PROJECT NAME			İ



9312 G Court, Omaha, Nebraska 68127 (402) 331-2260

OPPD Flyash Monofill

LOCATION

Nebraska City, Nebraska

PROJECT NUMBER

47962

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Send To Printer Back to Map Nebraska City NE US

Notes:		
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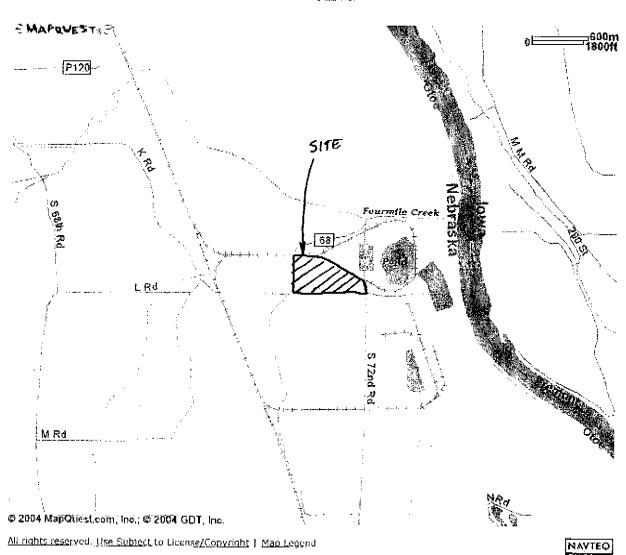
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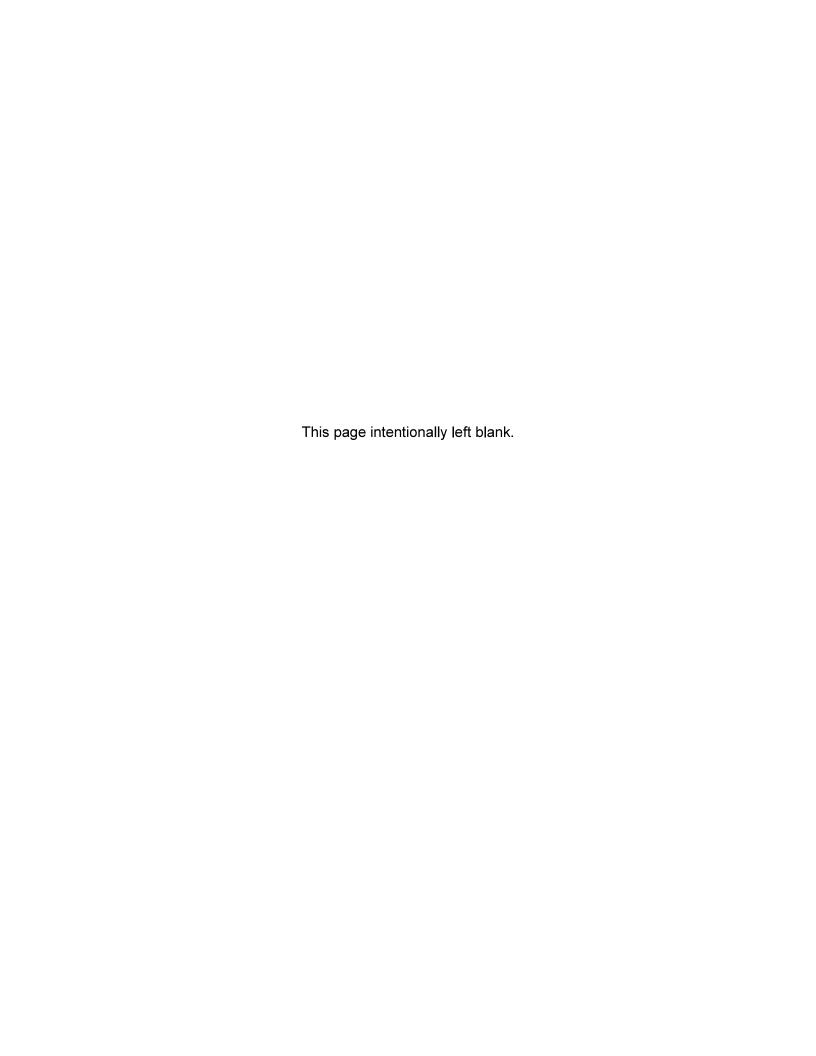
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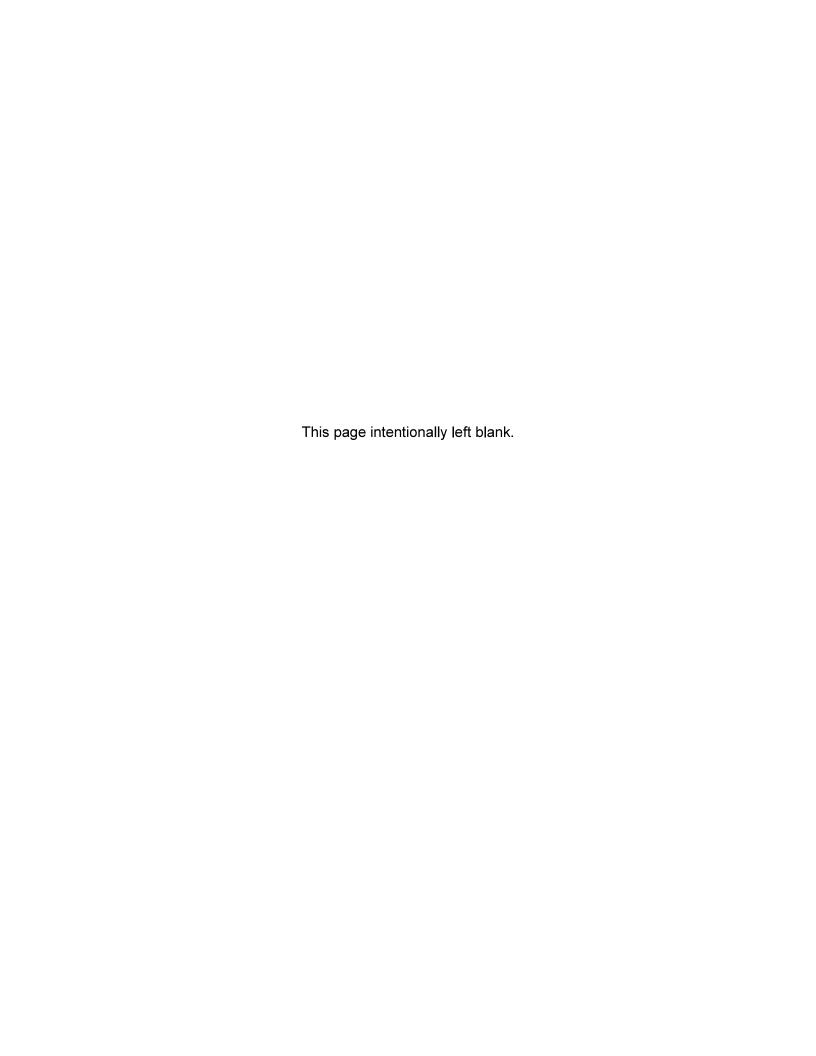
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SITE LOCATION PLAN

6130442 7/16/04 550-1 WELL LOCATION PLA OPPD Neproska Dity Station Unit 2 Soil Borings HX 59-11 : | [] []



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		E LOCA						DATUM			DRILLER	LOGGER		
_		-	Locat	ion I	tan		SGS	MPLETE	n	_	Abel Monnarez	Bruce Birge		
	-9-	TARTE	u			1	10-0		L)		CM E-75 DRILLING METHOD 4.25" HSA			
- 1	7-7-	7	L			-	iero	-	T		SURFACE TYPE	TOTAL DEPTH (FT.)		
			SVE	15		1-2					Weedy, Grassy Shoulder	Market Charles at 10,000		
			WO	-TSF	- TSF	EN	Ö				WATER LEVEL OBSERVATION	Contract of the second		
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SAMPLENO	SAMPLE TYPE	RECOVERY, is.	PENETRATION RESISTANCE - BLOWS/FT	POCKET PENETROMETER	UNCONFINED COMPRESSION-	MOISTURE CONTENT - %	DRY DENSITY - PCF	OTHER	GRAPHIC LOG	DEPTH,	DESCRIPTION	Surface Elevation: 91	6.5	
1	25	16		3.0							Very Stiff, Moist, Light Brown, Low Plastic S	Brown to Grayish ilty Clay to Silt		
		-							111		(CL) (Roadbed Fill)			
2	25	5		2.1										
3	28	18		2.6						5-	5.0		1.5	
-		113		4.5+							6.0 Hard, Slightly Moist, Da Gray, Low Plastic Silt	rk Brownish	0.5	
	28	24		0.5				1,1	1//		(Buried Soil)			
4	28	6.4		U.3					11/1	1	Firm to Soft, Well Comp Stick Up and Concrete	e Padery Moist		
		2.7							111	3	Gravish Brown, Silt w	ith Very Fine	7.5	
									X.E		Sand to Silty Very Fin	e Sand (ML/SM)	-	
						10-	Becomes Wet							
5	28	24									Loose, Wet, Grayish Bro Graded Sand with Son	wn, Poorly		
	-			=							Fine-Grained (SP/SP-	SM) (Alluvium)	E	
								3						
									PA 200		Bottom of Boring @ 14'		2.5	
											Alluvium	nt canny		
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	N.	F	L	EI.	N	E	LD	ER	-		Nebraska City,	Nebraska		
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3312	G Co	art, Or	naha, N	rebras	ca 681.	27 (40	4) 331.	1100			47962			



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Phone (402)471-2363

1026209 -162827-WWRF
Department of Natural Resources (3)
October 2001
DNR Form 145

STATE OF NEBRASKA DEPARTMENT OF NATURAL RESOURCES

WATER WELL REGISTRATION

		FOR DEPARTMENT USE ONLY
	Reg Ow	ner Code No
1	b. с.	Well Owner's First Name Last Name Company Name Omaha Public Power District Correspondent Name Omaha Public Power District Attention James J. Krajicek Address 444 South 16th Street Mall
_	1	City Omaha StateNE Zip68102 Telephone (402) 636-2309
2	b. 3	Contractor's License No19245 Contractor's NameKleinfelder Contractor's Email Address
3	. a. b. :	Well location SW 4 of the SE 4 of Section 25, Township 8 North, Range 14 East/West, Otoe County. Natural Resources District Nemaha NRD The well is feet from the (North/ South) section line and feet from the (East/West) section line
	d. S F e. 1 f. 1	(circle one) or Latitude Degree 40 Minute 37 Second 37 Longitude Degree 95 Minute 47 Second 32 Street address and subdivision, if applicable Block Lot Location of water use, if applicable (give legal descriptions) If for irrigation, the land to be irrigated is acres. Well reference letter(s), if applicableMW-4
4.	Geoth Muni	Surface Water Permit Number Industrial Permit Number Industrial Permit Number Transfer Out-Of-State Permit Number Cipal Permit Number Conduct Permit Number Spacing Permit Number Other Permit Number
5.		pse of well (indicate one)AquacultureCommercial/IndustrialDewatering (over 90 days) _Domestic Ground Heat Exchanger Groundwater Source Heat PumpIrrigationInjection _LivestockXMonitoring ObservationPublic Water Supply (with spacing (46 698)) Public Water Supply (without spacing) Recovery Other (indicate use)
	a. Is b. I c. F	s in a Series. s this well a part of a series?yes _ Yes go to part b of this sectionNo go to part 7 of this application f one or more of the wells in the series is currently registered, give the well registration numberNA How many wells in the series are you registering at this time?6
7.	a. 1sb. Rc. Re. C	cement and abandoned well information. s this well a replacement well?Yes X No legistration number of abandoned well

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8. Pumo	Information.						<u> </u>	0 1 12 1	
-		at this time	Van V	Nlos					
Is num	pamp instance n installed by w	at uns une		190	1	.11		**	
If num	p mistalled by w	ump installer, pl	anon fill out to	cs No	is pump installe	ed by contractor i	n section 2?	YesNo	
b Pu	mn lostaller's I	icence No	ease nn out nt	.cuse number .cuse Installac	ociow 'a Nama				
ν. Tu	mp Installer's I	Imail Address		ump mstaner	s Name				
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c. Pu	mpino rote	nin Gilali Addi	CSS.		····				
d. Dr	on nine diamete	gano er gano	os per minute .			Estimated			
f. Pu	op pipe ammete nning eaginmet	nt installed _(m)	menes			lrop pipe			
h. Th	is well will be n	sed to pump les	/(d/(y) c.thus=50.cssss			d		···	
			s man 50 gpm	Yes	No			·	
	istruction Inform		_						
a. Tota	il well depth	14	feet.		b. Static water	er level~ 6	.1 feet.		
		l NA		7 2004	d. Well Cons	truction began (me	onth)/(day)	/ _{(year} 2004	
g. Casi	ng and Screen i	Joints are Weld	/(day)/ ed GIv	(yenr, 2004	I. Bore note	diameter in inche X Oth	s lop_6.>	Bottom <u>6.5</u>	
- S Cab.		TOMES ARE WELL	Od (Jii		_ Threaded	<u> </u>	Cr		
IO. Well Cor	nstruction (Casi	ng & Screen)- c	, d, e, & g mea	surements sho	ould be in inche	s to three decima	l places		
	a	Ь	c	d	e	f	g	h	
Plac	ement	Casing or	Inside	Outside	Wall	Type of	Screen Slot	Trade Name	
Depth	in Feet	Screen	Diameter	Diameter	Thickness	Material		Trade Name	
From	To -	Sercon	15100Hetel	Diameter	THICKHESS	Material	Size		
	 			ļ		ļ			
0	4	Casing	2.047	2.375	0.328	PVC	N/A	Johnson Screens	
4	14	Screen	2.000	2.560	0.560	PVC	0.010	Johnson Screens	
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11. Grout and	d Gravel Pack								
	cment Depth in								
	То	Feet		out or		Mater	ial Description		
From	То		Grav	el Pack					
0		2	Benton	ite		3/8" Bentonite	Holeplug		
2		14	Gravel	Pack		12-20 Sand			
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2. Geo	logic Materials	Logged							
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I am fan	mar with the ir	ποπηαtion subπ	nuted on this re	egistration, an	d to the best of	my knowledge it	is true.		
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Water Well Contractor's Signature

G130442D

<u></u>								LOC	3 OF	BO	RING NO. MW-4	Page I of 1
íl –			ATION Loca		Plan		ATION JSGS	N DATUK	Л		DRILLER LOGGER	,, ,
		TARTE			1411			MPLETE	FD.		Abel Monnarez Bruce Birge ORILL RIG DRILLING METHOD	· ·-
2 3 4 SAMPLE NO.	2S 2S 2S 2S	16 5 18 24 24	PENETRATION RESISTANCE • BLOWS/PT	3.0 2.1 2.6 4.5+ 0.5 PENETROMETER - TSF	1 2	TENT - %	DRY DENSITY - PCF	OTHER	GRAPHIC LOG	10 DEPTH, FT.	SURFACE TYPE Weedy, Grassy Shoulder of Gastvel Road WATER LEVEL OBSERVATIONS (FT.) ✓ 8.0 ATD ✓ 6.1 @ 1 Day AD DESCRIPTION Very Stiff, Moist, Light Brown to Grayish Brown, Low Plastic Silty Clay to Silt (CL) (Roadbed Fill) 5.0 6.0 Hard, Slightly Moist, Dark Brownish Gray, Low Plastic Silty Clay (CL) (Buried Soil) Firm to Soft, Well Completed Using 3' Stick Up and Concrete Padery Moist, Grayish Brown, Silt with Very Fine Sand to Silty Very Fine Sand (ML/SM) (Alluvium) Becomes Wet Loose, Wet, Grayish Brown, Poorly Graded Sand with Some Silt, Very Fine-Grained (SP/SP-SM) (Alluvium)	911.5 910.5 907.5
	The str	atificat	tion lin	ies rept	esent t	ће арр	roxim	ate bom	ndary lin	es betw	en soil and rock types. In situ the transition may be gradual.	
	H			·				ΕR			PROJECT NAME OPPD Flyash Monofill LOCATION	
312 (i Cour		aha, Ne								Nebraska City, Nebraska PROJECT NUMBER 47962	

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Nebraska City NE US

Notes:		
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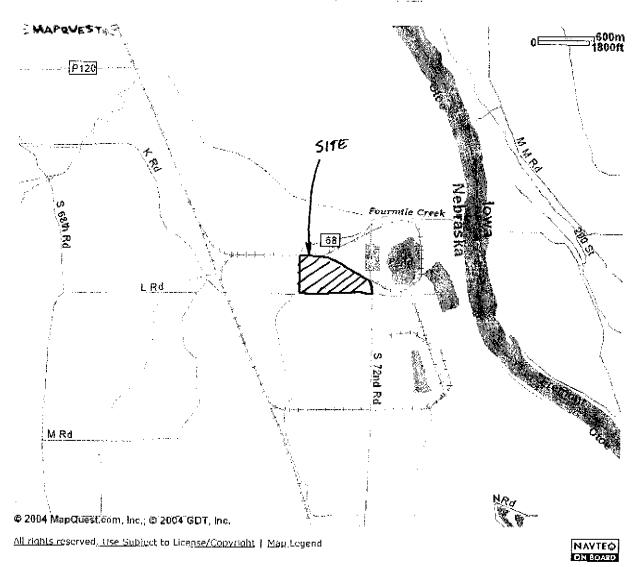
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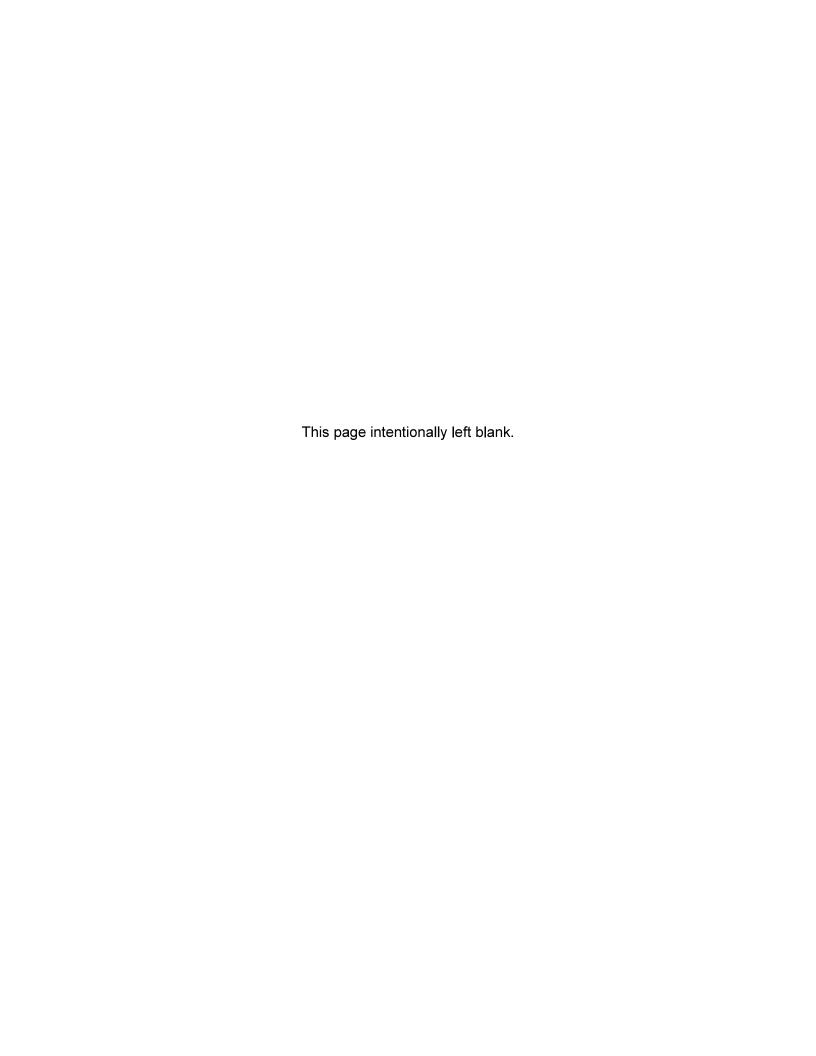
About these results



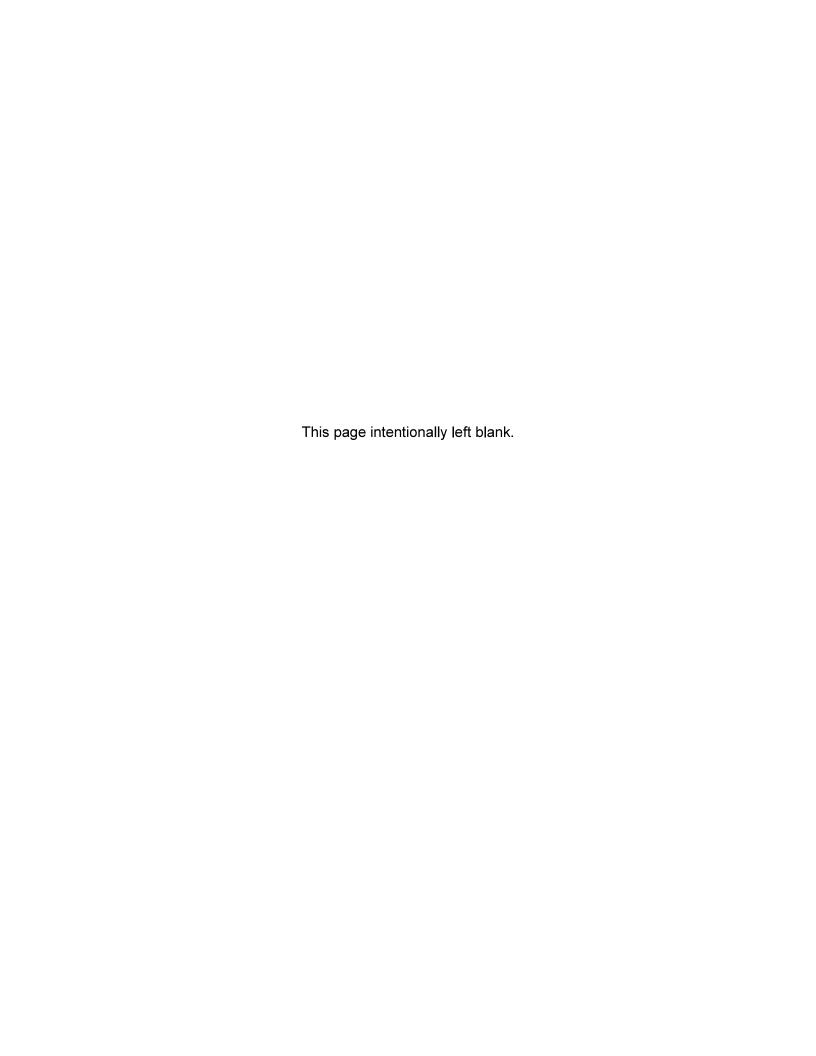
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SITE LOCATION PLAN

6130442 560-1 WELL LOCATION PLAN CPPD Mebraska City Station Unit 2 4۷0, Soil Borings EX



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	REHOLI		*******					DATUM			DRILL		LOGGER				
_	Bor ung s		Locat	ion P	lan		SGS	APLETE	7	-	_	bel Monnarez	Brace Birge DRILLING METHOD				
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	7-10-	04	1 2				-10-0	14				CETYPE	TOTAL DEPTH (FT.)				
			E/E	1		-					Th. C.	Cindery Road	14				
			0	T.	- TSF	EN	B			50	1 1	1			WATER LEVEL OBSERVATIONS (FT.)		
	2	á	3.	TER	O.N.	LNO	Y-1		9		N. V. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C. Carlotte, C.						
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SAMPLE NO.	SAMPLE TYPE	RECOVERY, in.	PENETRATION RESISTANCE - BLOWS/FT	POCKET PENETROMETER - TSF	UNCONFINED	MOISTURE CONTENT - %	ORY DENSITY - PCP	отнек	GRAPHICLOG	DEPTH, FT	DEC	CRIPTION	Surface Elevation:	917.0			
		-	-		-		-		Ť		DES	Very Stiff, Slig	htly Maist, Reddish to	247.00			
I	28	16		3,9								Dark Grayish	Brown, Low to Medium with Trace of Fine Debris				
				_	-				111			and Cinders	(CL) (Fill)	6			
2	25	15		3.5								3.5			913.5		
			-									210	Very Stiff, Slig	htly Moist, Grayish Brown,			
3	25	18		3.3						5.5		um Plastic, Silty Clay (CL)	911.5				
1	22	-		100					3.04		2.	Medium Dense	, Wet, Grayish Brown,	911.3			
4	20	18								-		Poorly Grade	ed Sand, Fine-Grained (SP)				
4	25	12								1/2		(Alluvium)					
		75										Danamas I acco	e, Poorly Graded Sand with				
5	28	18									1	Silt to Silty S	Sand, Very Fine Grained				
							-			10-		(SP-SM/SM)					
6	28	15							除關								
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10262014-162828-WWR F
Department of Natural Resources (3)

October 7001 DNR Form 145

STATE OF NEBRASKA DEPARTMENT OF NATURAL RESOURCES

WATER WELL REGISTRATION

			FOR DEPART	WENT US	SE ONLY			
	R O	Registration Date 10-26-26 Owner Code No. 40226	Sequence No	16 28 22 6991	S Regi	stration No.	1- ₁₃₀ 443	3 € NRD
1	. а.	a. Well Owner's First Name	Lass c Power District tha Public Power District	t Name				
		City Omaha	State <u>NE</u>	Zip	68102	Telephone (40	<u>)2) 636-2309</u>	1
2		Contractor's License No 1920 Contractor's Email Address Drilling Firm Name 931	locoabel@cox.net Kleinfelder 2 G Court					
		City <u>Omaha</u> Drilling Firm's Email Address	State <u>NE</u> <u>bhavens@</u> kle	Zip infelder.cor	681 <u>27</u> n	Telephone	<u>(402)</u> 331 <u>-2</u>	<u>260 </u>
3	a. b.	. Natural Resources District	Nemaha NRI	<u>)</u>				
	c. d, e. f. g.	or Latitude Degree 40 M Longitude Degree 95 M Street address and subdivision, if Block Location of water use, if applicat If for irrigation, the land to be irr	inute 37_ Second inute 47Second applicable	42	Lot	·	(circle one)	. <u>-</u> .
4.	Ma Geo Mu	ermits lanagement Area Permit Number eothermal Permit Number lunicipal Permit Number /ell Spacing Permit Number	<u>-</u>	Industrial P Transfer Or Conduct Pe	'ermit Number ut-Of-State Per ermit Number _	mit Number		
5.	Pur	urpose of well (indicate one) Domestic Ground HeaLivestockXMonPublic Water Supply (without spacing)	t Exchanger Ground	tion	ce Heat Pump Public Wat	Irrigatio	(over 90 days) n	Injection
	a. b. c.	If one or more of the wells in the How many wells in the series are	scries is currently registered you registering at this time	d, give the v	vell registration	number NA		
7.	Rep a, b, c, e,	eplacement and abandoned well info	rmationYes _X_No I well If n set from abandoned wellinches.	ot registered d. Aband f. Comp	l, date abandor loned well last letion of origin	ned well was constru operated (m)	cted (m)/(d	, (v)

								_ •
8. Pump h								
		lled at this time						•
Is pump	installed	by well owner in sec	tion 17Y	esNo	ls pump installe	d by contractor in	n section 2?	YesNo
		by pump installer, pl						
b. Pur	np Installe	r's License No.	P	ump Installer'	s Name			
Pur	op Installe	r's Email Address						
Pur	up installe	r's rirm Name 📗						
יוטיינ	np installe	r's Firm Address						
City	/		State	Zip		Tel	lephone .	
		r's Firm Email Add						
		gailo						
d. Dro	p pipe dia	meter	inches	·	:. Length of d	гор ріре	fee	Ĺ
f. Pur	iping equi	pment installed (m)_	/(d/(y)	٤	g. Pump Brane	d		
		be used to pump les	s than 50 gpm	Yes	_No			
		nformation.						
a. Total	l well dept	h 14	feet.		b. Static water	r level~ 7_	feet.	
c. Pumj	oing water	level NA	feet		d. Well Const	truction began _{(me}	лth)9/ _{(dлу).}	16/ _{(year_2004}
e. Well	Construct	ion completed (month)	9 / _(dny)	17_/ _{(year} 200	4_ f. Bore h	ole diameter in in	iches Top_6.5_	Bottom <u> 6.5</u>
g. Casir	ig and Scr	een Joints are Weld	iea Gr		Threaded	X Othe	er	
10 Well Con	struction (Casing & Screen)- c	r d e & o mea	enremente ch	vild be in inches	r to three decimal	nlaces	*11
	<u></u>	b	c c	d d	e e	f	g	h
Place	ment	Casing or	Inside	Outside	Wall	-	 	
						Type of	Screen Slot	Trade Name
	in Feet	Screen	Diameter	Diameter	Thickness	Material	Size	
From	То							
0	3	Casing	2.047	2.375	0.328	PVC	N/A	Johnson Screens
3	13	Screen	2.000	2.560	0.560	PVC	0.010	Johnson Screens
	·		-				 	1 ****
							 	
,	<u> </u>	<u> </u>	<u> </u>			<u> </u>		
1 624 1	O							
1. Grout and		 <u></u> -						
		th in Feet	Gre	out or		Mater	ial Description	
rom		То	Grav	el Pack				
0	"	1.5	Benton	ite		3/8" Bentonite	Holeplug	
1.5		<u></u>	Gravel	Pack	•	12-20 Sand		·-··
		··						
								<u></u>
n Cool	onio Mutu	-i-1- T 4						
2. Geol	ogic Maic	rials Logged						
epth in Feet		Description S	ee Attached Bor	ing Log	Depth in Feet	Ďс	scription	
rom To					From To	0		
************				}				
		· · · · · · · · · · · · · · · · · · ·						
			(Addit	ional sheets m	ay be submitted)		
1 I F	iline misk :	t := C			d			
2. 1 dill 1311/)	mar with	the information subr	nuica on this r	egistration, an	a to the best of t	my knowledge it	is true.	
_								

Water Well Contractor's Signature

10.13.04 Date

G130442E

LOG OF BORING NO. MW-5 Page 1 of 1												of 1		
BOI	REHOL	E LOC	AHON			ELE	/AT!O	DATUM			DRILLER	LOGGER		
Se	e Bor	ring l	Locat	ion F	Plan	Į	JSG8	3			Abel Monnarez	Bruce Birge		
BO	RING S	TARTE	D			BORI	NG CO	MPLETE	D		DRILL RIG	DRILLING METHOD		
	9-16-	04			Į	9)-16-	04			CME-75	4.25" HSA		
			E	Ţ <u></u>	[8					SURFACE TYPE 1	OTAL DEPTH (FT.)		
	ļ		NS.	- TSF	i.,	<u>-</u>					Cindery Road	14		
			PENETRATION RESISTANCE - BLOWS/FT	ER - 1	- TSF	MOISTURE CONTENT.	DRY DENSITY - PCF	İ			WATER LEVEL OBSERVATION	S (FT.)		
ġ	SAMPLE TYPE	RECOVERY, in.	NOE S	POCKET PENETROMETER	UNCONFINED	600	TLY		507		Ÿ 7.0 ATD			(7)
ĹĒ.	TE 1	Æ	IAN IAN	ET	NESS.		EŽ		걸	H H H	Ā AD			ğ
SAMPLE NO.	AME	029	ESIS	SK SK SK		SIOI	RY I	OTHER	GRAPHIC LOG	DEPTH, FT.				WELL LOG
91	0,	₩		1	120		_ <u>_</u>)	Г.	"		face Elevation:	917.0	₽
1	28	16		3.9					<u> </u>		Very Stiff, Slightly Moist, I Dark Grayish Brown, Lo Plastic Clay with Trace o and Cinders (CL) (Fill)	w to Medium		
2	28	15		3.3						-	3.5		913.5	
										-	Very Stiff, Slightly Moist, C Low to Medium Plastic,	Grayish Brown, Silvy Clay (CL)		
3	28	18		3.3					<u></u>	5 –	5.5 (Alluvium)	omy Clay (CL)	911.5	H
		·] -	Medium Dense, Wet, Grayi	sh Brown,		
4	28	18								-	Poorly Graded Sand, Fine (Alluvium)	e-Grained (SP)		H
										-	,			H
5	28	18								10 -	Becomes Loose, Poorly Gra Silt to Silty Sand, Very F (SP-SM/SM)			
6	28	15				İ					(01-01/11/01/1)		:	
7	2S	18											ļ	
\dashv			-				-			_	14.0 Becomes Poorly Graded Sar Medium Grained (SP)	nd, Fine to	903.0	<u>•</u> ,
							•				Bottom of Boring @ 14'			
											Well Completed using 3' Sti Concrete Pad	ick Up and		
İ								İ						
									1					
ļ					[/		ļ				
											the sale is the sale sale sale sale sale.			
_	The st	ratifica	tion li	oes rep	resent	the ap	proxii	nate bou	ndary li	nes betv	een soil and rock types. In situ the transition	n may be gradual.		<u> </u>
											PROJECT NAME OPPD Flyash Mor	nofill		
	\Box	n					_	E D			LOCATION			



Nebraska City, Nebraska

PROJECT NUMBER

47962

9312 G Court, Omaha, Nebraska 68127 (402) 331-2260

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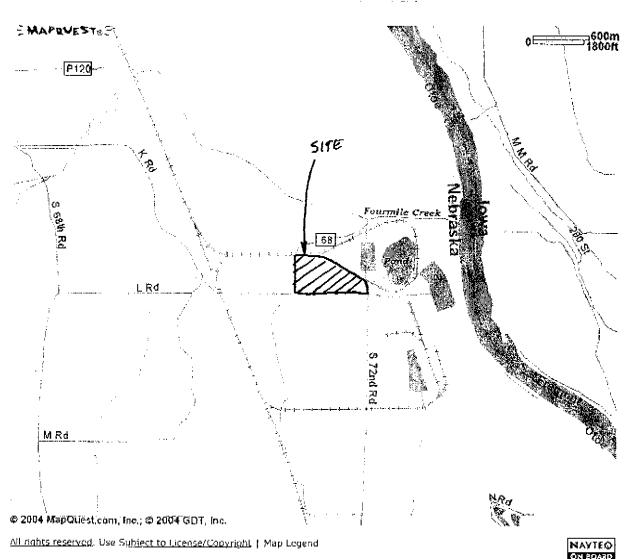
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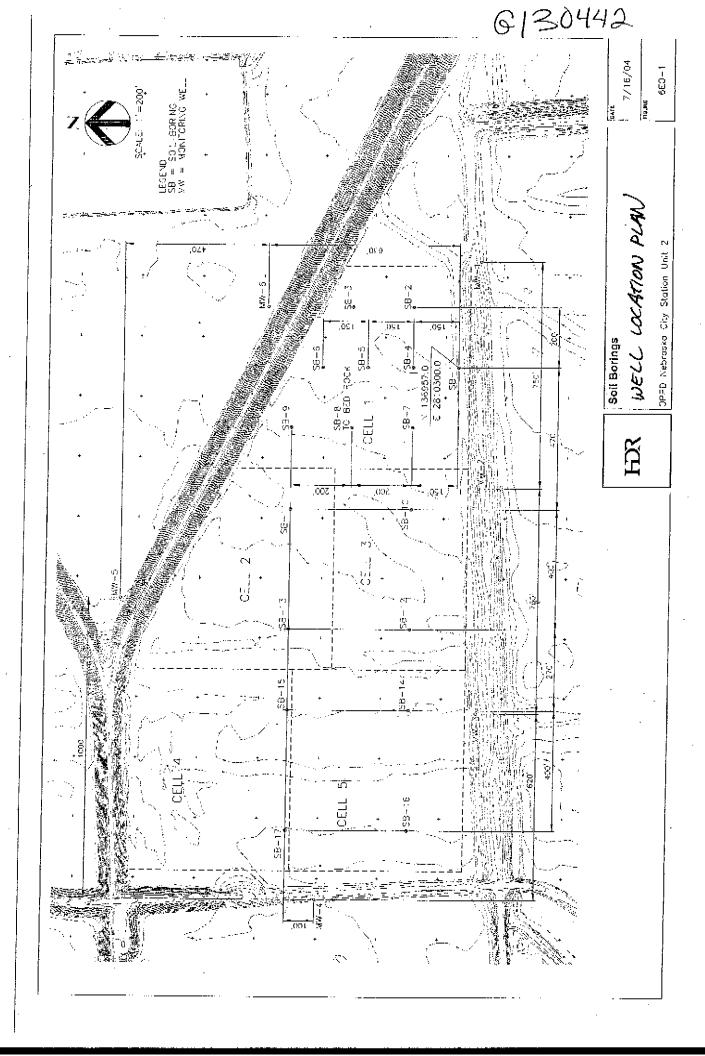
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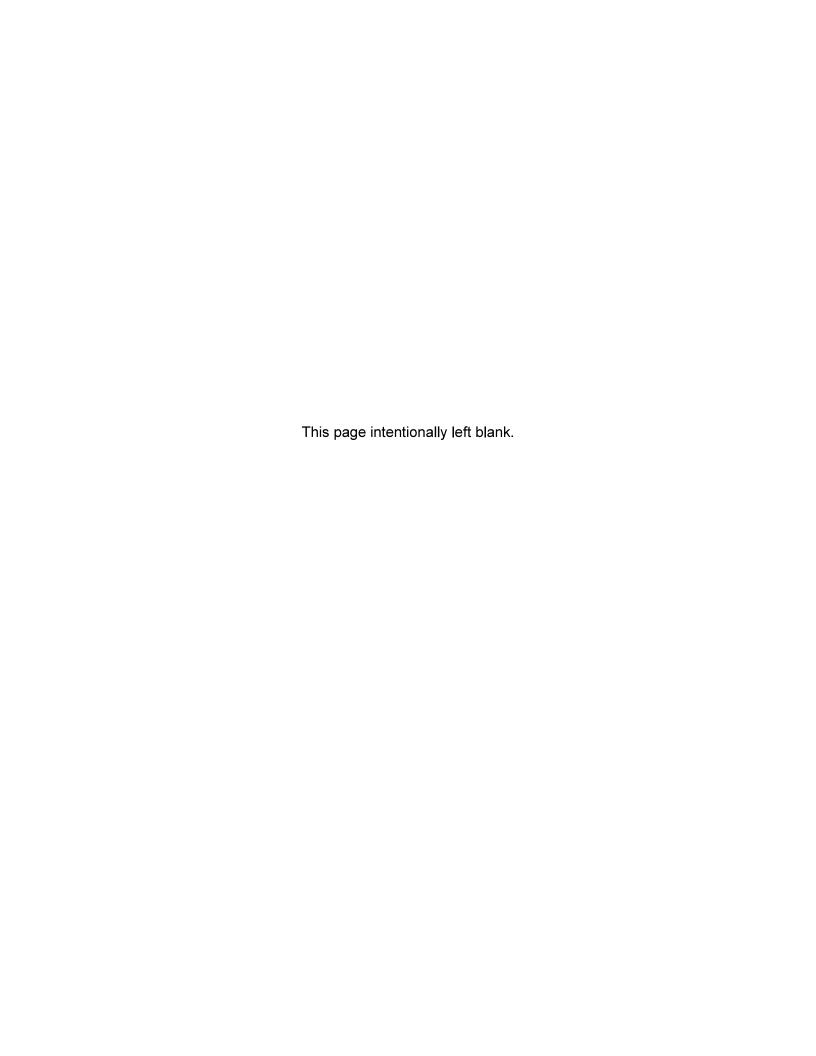
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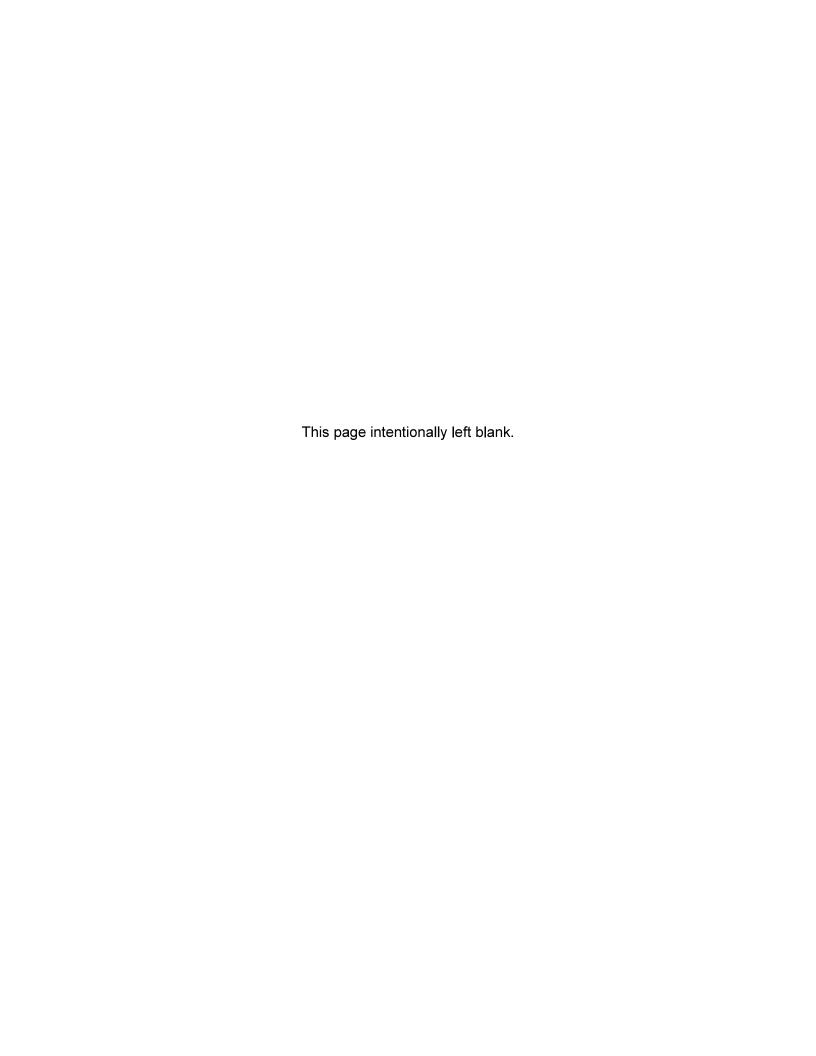
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SITE LOCATION PLAN





BOREHOLE LOCATION ELEVATION DATUM See Boring Location Plan USGS					ORILLER Abel Monnarez	LOGGER Bruce Birge								
BOF	UNG S	TARTE				BORI		VPLETE	D		DRILL RIG CME-75	ORILLING METHOD 4.25" HSA		
			PENETRATION RESISTANCE - BLOWS/FT.	22	E.	%-				Ī	SURFACE TYPE Unpayed Road	TOTAL DEPTH (FT.)		
			BLO	SR.	-13	NTE	-PC				WATER LEVEL OBSERVAT	IONS (FT.)		
Ó	YPE	7.	CES.	MET	E S	3 CO	Ž.		מסת	4.1	¥ 5.0 ATD			100
LED	LE 1	VER	TAN	TRO	ESS.	TUR	SEN	e/	HIC	H.F	₹ 6.5 AD			P
SAMPLE NO.	SAMPLE TYPE	RECOVERY, ic.	RESIS	POCKET PENETROMETER - TSP	UNCOMPINED COMPRESSION - TSP	MOISTURE CONTENT	DRY DENSITY - PCF	OTHER	GRAPHICLOG	DISPTH, FT.		Surface Elevation:	916.0	WELLLOG
1	28	22									0.5 Very Stiff, Moist, Light Plastic Silty Clay wi Veneer (CL) (Roadb	th Slag Gravel ed Fill)	915.5	
2	25	24								-	Medium Dense, Slightl Medium Grayish Bro Sand with Some Silt	wn. Poorly Graded		
3	25	18								5-	(Alluvium) Becomes Loose and We	Z.		
4	28	22									With Layers of Soft, Sa	■ Inde Silt to Slit		
							-		計問		8.0 Sand (ML/SM) Very Soft, Wet, Grayisi	_	908.0	
5	25	24		<0.2				Ш		10-	Gray, Interbedded Lo High Plastic Clay wi (CH/CL/ML) (Alluvi	ow, Medium, & th Silt Layers		
6	28	21							11/1		11.0 (CH/CL/ML) (Allivi 12.0 Loose, Wet, Dark Gray Sand, Very Fine Gra	-	905.0 904.0	H
7	28										(Alluvium) Bottom of Boring @ 12			
		7					70 1	Fp2.						
										nes bet	oven seil and rock types. In situ the tra PROJECT NAME OPPD Flyash			
			L I					E R			Nebraska City PROJECT NUMBER 47962	, Nebraska		



Mail to DNR PO Box 94676 Lincoln, NE 68509-4676 Phone (402)471-2363

102620H-162829-WWR F Department of Natural Resources (3)

STATE OF NEBRASKA

DEPARTMENT OF NATURAL RESOURCES

WATER WELL REGISTRATION

				FOR DEPAR	CIMILINI O	OL ONE!			
	Re Ov	egistration Date wner Code No.	10-26-2009 4022U	Scquence No Receipt No	16782 16991	2 <u>9 </u>	gistration No) 1- <i>130442 F</i> Ni	- RD
]		Well Owner's Fir Company Name_ Correspondent Na Address <u>444 So</u>	st NameOmaha Public <u>P</u> ameOmaha ulh 16 th Street Ma	La ower District Public Power District I	ast Name	Attention		uck	
2		Contractor's Lice Contractor's Ema Drilling Firm Nan Address	nse No <u>19245</u> il Address nc <u>9312 G</u>	_ Contractor's Name_ locoabel@cox.net Kleinfelder Court	Kleinf	elder			
		Drilling Firm's Er	nail Address	bhavens@k	leinfelder.co	in	rerepriorie	(402) 331-2200	
	e. f. g. Pern Man Geo Mun	Natural Resources The well is or Latitude Degree Longitude Degree Street address and Block Location of water If for irrigation, th Well reference letter its magement Area Peri	s District feet fro e 40 Minu s 95 Minu subdivision, if applicable to be irrigate er(s), if applicable mit Number ber	Nemaha NI m the (North/ South) s	s)s Surface W Industrial I Transfer O Conduct Pe	ater Permit Numbut-Of-State Fermit Numbe	Tumberermit Number	ast/West) section line (circle one)	-
5.	Рип 	Livestock	· —	xchanger Grouding Observ		ce Heat Pum Public W	p Irrigatio /ater Supply (with spacing (46)		תנ
6.	a. b.	If one or more of the	ne wells in the seri	es is currently register	ed, give the v	well registrat	part 7 of this application numberNA		
7.	Repl a, ; b, ; c, ; e. ;	lacement and aband Is this well a replac Registration numbe Replacement well i	loned well informate tement well? to of abandoned we sfeet to column size	tion. Yes X No ell If from abandoned wellinches,	not registere	d, date aband doned well la	loned well was constru ast operated _(m) ginal well abandonmen	cted (m) /(d, /(y)	

G130442	F
---------	---

8. Pump Ii	nformation.							
a. Is p	oump installed	at this time	Yes X	_No				-
					Is pump installe	d by contractor in	n section 2?	YesNo
If pump	installed by p	ump installer, pl	ease fill out Jic	ense number	below	-		
b. Pur	np Installer's I	license No	P	ump Installer	s Name			
Pur	np Installer's F	Email Address						
Pur	np Installer's F	Firm Name						
Pun	np Installer's I	Firm Address						
CH	у		State			Te	lephone	
Pun	np Installer's F	firm Email Addr	ess					
C. Pag	приід гале	gano.	ns per minute_	M	.easured	Estimated		
		ET		(e. Length of d	тор ріре	fee	Ĺ
f. Pun h. This	nping equipme	nt installed (m)	_/(d/(y)	17	g. Pump Bran	đ		
		ised to pump les	s than 50 gpm	Y CS	_No			
	struction Infor		_					
a. Total	l well depth		feet.			r level~6.		
e. Pumj e. Well	Construction	ompleted	leet	2 / 2004	d. Well Cons	truction began _{(me}	onth)9/(day)_	_7/ _{(year_} 2004 Bottom <u>6.5</u>
g. Casir	e and Screen	Joints are Weld	(day)0 edGh.	5_/ _{(year} 2004) ned	Threaded	Note diameter in i	nches Top, 6.5	Bοποm <u>6.5</u>
· · · · · · · · · · · · · · · · · · ·	·-				1110000	71 (711)		
10. Well Con	struction (Casi	ing & Screen)- c	, d, <u>e, & g me</u> a	surements sho	ould be in inche	s to three decima	l places	
	a	ь	C	d	e	f	g	h
Place	ment	Casing or	Inside	Outside	Wali	Type of	Screen Slot	Trade Name
Depth	in Feet	Screen	Diameter	Diameter	Thickness	Material	Size	
From	То	1						-
. 0	0.5	Casing	2.047	2.375	0.328	PVC		Johnson Screens
0.5	11	Screen	2.000	2,560	0.560	PVC	0.010	
		- Gereen	2.000	2.300	0.360	FVC	0.010	Johnson Screens
 [<u>-</u>	ļ·	<u>.</u>					
		<u> </u>					1	
								· VI. V -
	Gravel Pack							
Place	ement Depth ir	i Feet	Gre	out or		Mater	ial Description	
rom	То		Grav	el Pack				
0		0.5	Benton	ite		3/8" Bentonite	Holeplug	
0.5		12	Gravel	Pack		12-20 Sand	1 0	
· · -						13 30 04114		 -
	—·							
·-· .								
2. Geolo	ogic Materials	Logged			1010			
	ogio maccinals							
epth in Feet rom To		Description Se	ee Attached Bor	ing Log	Depth in Feet		scription	
				ľ	From T	O		
				- }				

			(Additi	ional sheets m	ay be submitted	1)		
					-			·
3. I am fam	iliar with the h	nformation subm	nitted on this re	gistration, an	d to the best of:	my knowledge it	is true.	

16-13-04 Date

Water Well Contractor's Signature

G130442F

				•		1 1 11		LOG	OF	ВО	RING NO. MW-6	<u> </u>	Page 1	
BOI	REHOL	E LOC	ATION			FLE	/ATION	N DATUM			DRILLER	LOGGER		<u> </u>
Sec	е Воз	ing)	Locar	tion I	Plan	τ	ISGS	,			Abel Monnarez	Bruce Birge		
BOF	RING S	TARTE	D			BORI	NG CO	MPLLIL	D		DRILL RIG	DRILLING METHOD		
!	9-7-0	4				ç)-7-() ₋	4			CME-75	4.25" HSA		
		ŀ	H]		l		1		SURFACE TYPE	TOTAL DEPTH (FT.)		Γ'
			53	- TSF	,.	f •		i		İ	Unpaved Road	12		
			1 5	1 :	- 1SF	🖺	iC.]	WATER LEVEL OBSERVATION	NG /RT \		1
	ந்	c	PENETRATION RESISTANCE - BLOWS/FT	POCKET PENETROMETER.	loż	MOISTURE CONTENT	DRY DENSITY - PCF		0	-				
SAMPLE NO.	SAMPLE TYPE	RECOVERY, in.			UNCONFINED COMPRESSION -) B)	SIT		GRAPHIC LOG					U
PLE		VE.		HĔ	EE			24	<u>Ħ</u>	DEPTH, FT.	<u>▼</u> 6.5 AD			WELL LOG
4MI	🖁	000		SS	<u> </u>	OIIS	l Æ	OTHER	RAP	E 1				ELL
S	S	~~~	모포		ಟರ	Z	△	Ģ	ی	ā		rface Elevation:	916.0	25
,	20		ĺ								0.5 Very Stiff, Moist, Light B	rown, Low	915.5	
'	28	22] -				_	Plastic Silty Clay with S Veneer (CL) (Roadbed)	Siag Gravei		
					<u> </u>					_	Medium Dense, Slightly N	Aoist, Dark to		
2	25	24				[Medium Grayish Brown	a, Poorly Graded		
				ļ						-	Sand with Some Silt (SI (Alluvium)	r-sm/sr)		
3	2S	18								5 –	-	V		
-				ĺ						<i>-</i>	Becomes Loose and Wet		ļ	
										4		Y .		H
4	25	22								. 7	With Layers of Soft, Sand	v Silt to Slit	{	
-										-	$\frac{8.0}{100}$ Sand (ML/SM)	_	908.0	
5	2S	24		<0.2					_=-	1	Very Soft, Wet, Grayish B	rown to Dark	ļ	
									=	10	Gray, Interbedded Low, High Plastic Clay with S	Silt Lavers	ŀ	
			-							707	H _{.0} (CH/CL/ML) (Alluvium	1)	905.0	H
6	25	21	ļ							†	Loose, Wet, Dark Gray, Si	lty Clayey	1	·. — ·:
			·i						227	1	Sand, Very Fine Grained	d(SM)	904.0	
7	2S			ľ		- 1	ļ				(Alluvium) Bottom of Boring (a) 12'			
										ĺ	2-2			
		}	ļ			}				}				
	- 1		ŀ	ļ		ŀ								
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	t	1_			<u> </u>	J								
	The str	atifica	tion lir	gęs rep	resent	the apr	roxim	rate bour	dary lin	ies betw	een soil and rock types. In situ the transiti	on may be gradual.		
				<u> </u>		<u>-</u>					PROJECT NAME	and an Heaten		
-		_									OPPD Flyash Mo	nofill		
^	4	K	<u> </u>	F 1	V F	FI	D	E R			LOCATION			
		I ''			٠,						Nebraska City, N	Nebraska		
)317 (G Con	rt Orn	uho N	chrock	a 6817	7 (402	1221	2260			PROJECT NUMBER 47962			
\	<u> </u>	n, van	ana, N	00) 85K	<u>a 001</u> 2	./ (402	<u>, 231-</u>	ZZ0V			1 197,704			

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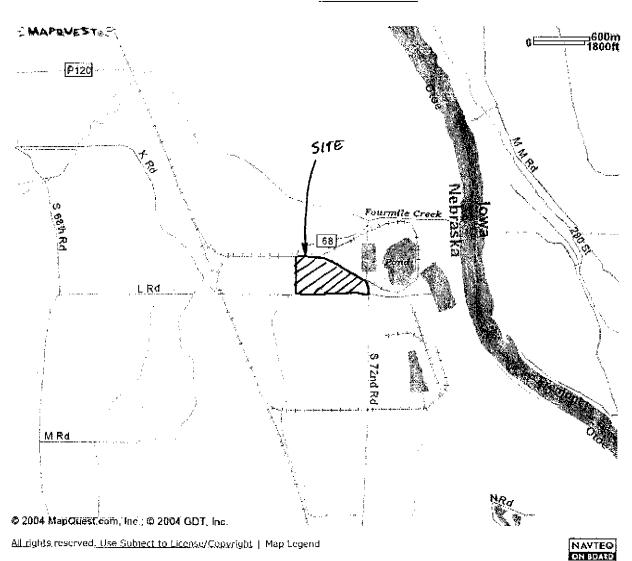
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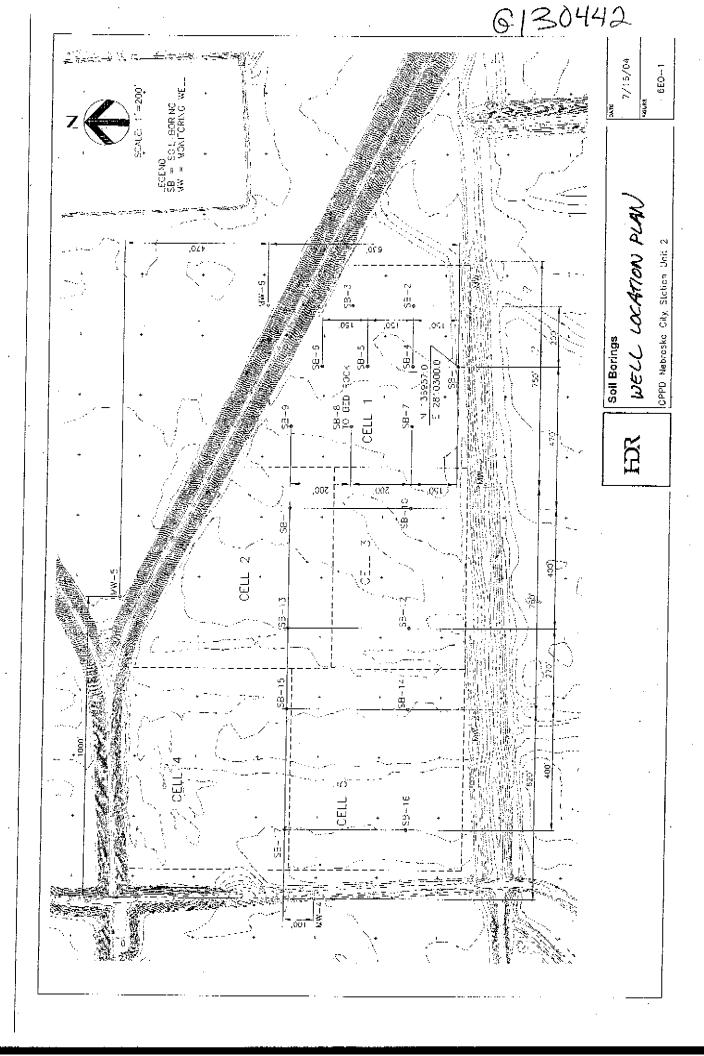
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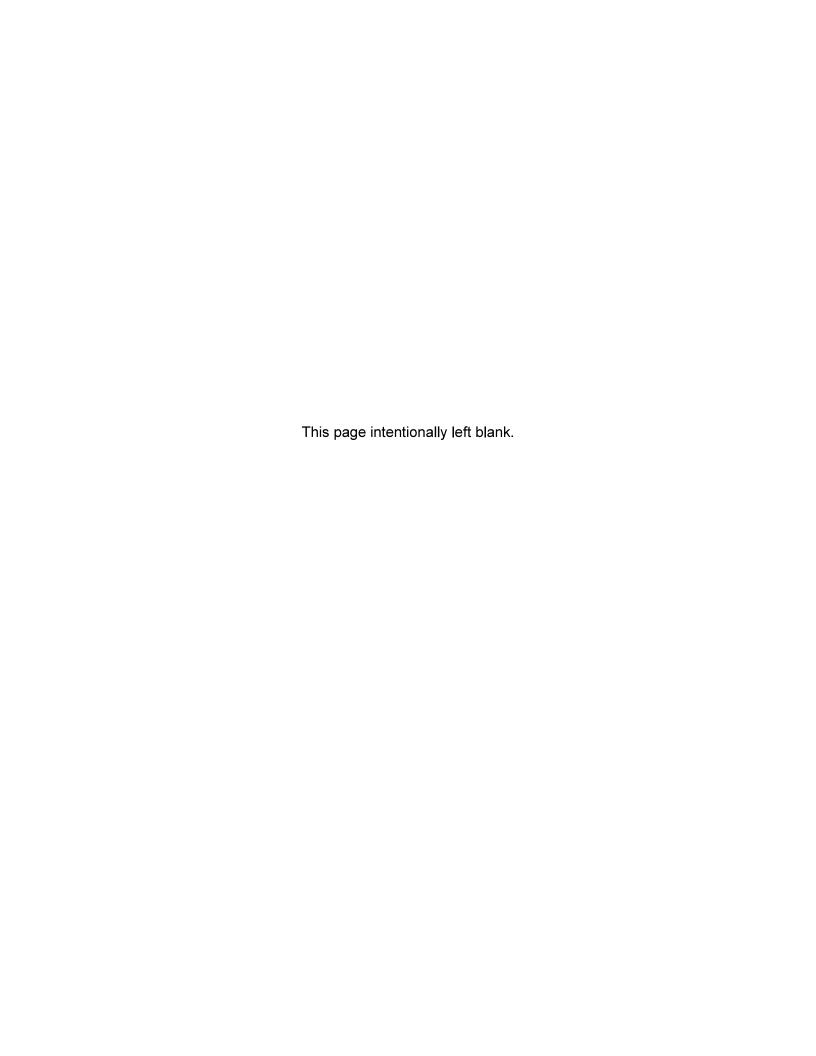


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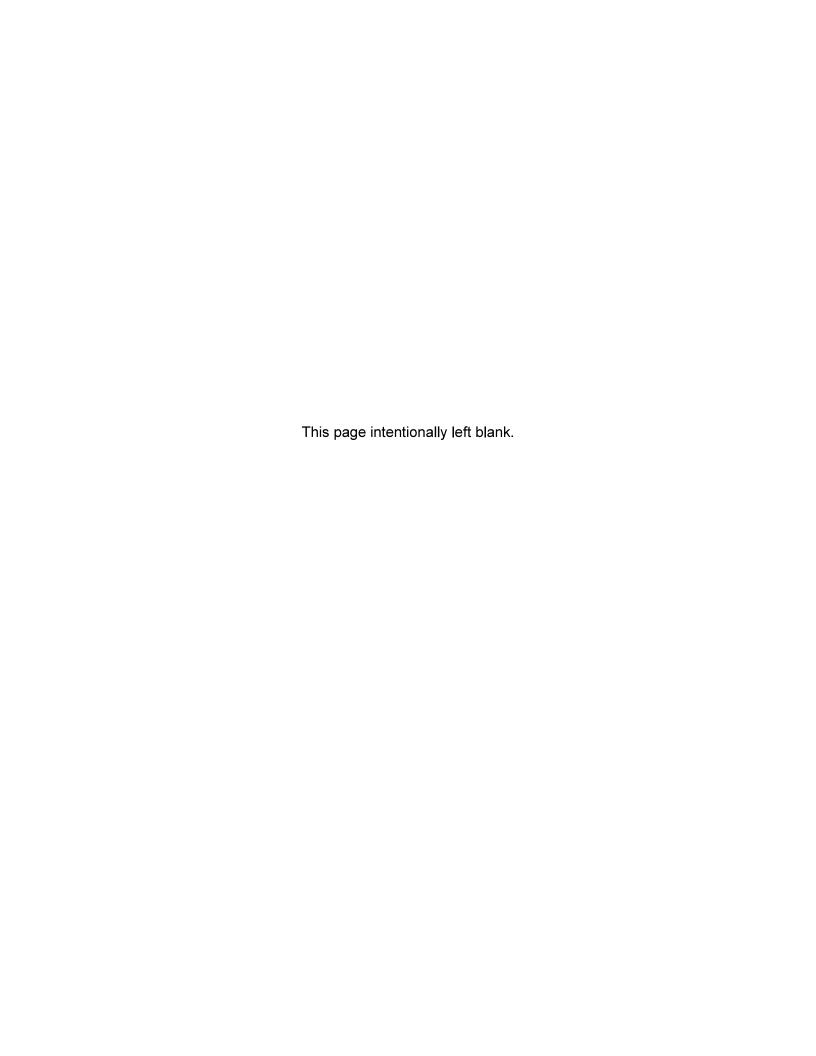
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SITE LOCATION PLAN





	· · · · · ·		WELL LC	OG NO. MW-7	7		Pε	ige 1	of 1	
PR	OJECT:	OPPD Nebraska City Station Unit 2	1	CLIENT: Omaha Omaha,		rict				
SIT	ГЕ:	7264 L RD Nebraska City, NE								
GRAPHIC LOG		N Site Map .624142° Longitude: MATERIAL DE		Surface Elev.: 914.8	INSTALLATION DETAI Well Completion: (Ft.)	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	OVA/PID (ppm)
	7.0 MEDII 13.0 FINE S	CLAY (CL), yellowish-brown UM TO FINE SAND (SM), light brown SAND (SM)	DRA		-TOC - 917.97 Concrete Seal Bentonite 3/8" chips -Riser Pipe 2"	- -				
4¼-ir Abando	ement Metho	em (8¼-Inch hole diameter)	r at different depths than sh See Appendices for desc procedures and additional See Appendices for explainabtreviations.	No: This indicate of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		el bollards i	installe	ed.		
		R LEVEL OBSERVATIONS		1M/all	Started: 11/6/2013	Mall Cor	mplotor	1. 44 <i>C</i> C	12042	
V.	15 ft, While	e Drilling	llerra	ren -	Started: 11/6/2013 Rig: DR#958	Well Con Driller: M			12013	_
·			15080 A Omaha, N	Circle	oct No.: 05137163	Exhibit:	B-1			



Mail to Department of Natural Resources PO Box 94676

Lincoln, NE 68509-4676 Phone (402)471-2363

138679632229200

DRAFT

January 2011 DNR Form 145

STATE OF NEBRASKA DEPARTMENT OF NATURAL RESOURCES

WATER WELL REGISTRATION

Please indicate NA for items unknown

		FC	OR DEPART	MENT USE O	NLY	
Da	te F	FiledOwner Code No.		Re	gistration No.	
		Well ID			1.2.4.000	
1.	a.	Well Owner's First Name		Last Name _		
	OF	R Company Name OMAHA PUBLIC POWER	DISTRICT			
	b.	Attention Name		PATRICK FIN	IGAN	· · · · · · · · · · · · · · · · · · ·
	c.	Street Address	444	SOUTH 16TH	ST MALL	
		Address 2/PO Address				
		City OMAHA	_State_NE	Zip 68102	2-0000 Telepho	one <u>402 636 2521</u>
2.	a.	Contractor's License No 39325 Contra	ctor's Name_D	AVID M SVIN	GEN	
		Contractor's Email Address <u>LEBAZER@TE</u>				
,	b.	Drilling Firm Name <u>TERRACON CONSUI</u>				74.4
		Address 15080 A CIR				<u> </u>
		City OMAHA			44 Telepho	one 402 330 2202
		Drilling Firm's Email Address <u>DMSVINGE</u>				
3.	a.	Well location <u>NE</u> ¼ of the <u>NE</u> ¼ of Section			Range 14 IEAST	OTOE County
		Latitude Degree 40 Minute			GPS	Location of well for a pit is
1	ь.	Longitude Degree95 Minute Natural Resources District			I I	the location of the pump
	c.	The well is: feet from the				om the (Fast/West) section line
	Ч		(circle one)			(circle one)
	d. e.	Street address and subdivision, if applicable _ Location of water use (give legal descriptions				
	f.	If for irrigation, the land to be irrigated is				
	g.	Well reference letter(s), if applicable	MW-7	HHSS PW	SID	THE TOTAL OF THE TITLE
		mits		Surface Water Pe	ermit Number	
		nagement Area Permit Numberothermal Permit Number		Industrial Permit	Number State Permit Number	
1	Muı	nicipal Permit Number				
	Wel HH:	ll Spacing Permit Number		Other Permit Nur NDEQ	mber	
		pose of well (indicate one) Aquacult		ommercial/Indust	rial Deu	vatering (over 90 days)
		Domestic Ground Heat Exchanger		water Source Hea		Irrigation Injection
-			ervation	Pit (for irrigation	on) Public Wa	ter Supply (with spacing (46-638))
-		Public Water Supply (without spacing)Recov		her on of use can be prov	rided under other)	(indicate use)
<i>-</i> -	17 ·	Ilain a Coulog	(on or and our by prov	- and office	(manonte dao)
	we. a.	lls in a Series. Is this well a part of a series? Yes go to	part b of this sec	ction v No	go to part 7 of this ar	pplication (Y/N required)
).	If one or more of the wells in the series is cur	•			pproduct (1/11 required)
(2.	How many wells in the series are you register	ring at this time	? d.	How many total well	s in the series?

7. Replacement and decommissioned/modified well information. a. Is this well a replacement well?YesXNo go to part 8 of this application b. Registration number of original well If not registered, date original well was constructed (m)/(d/(y) c. Original well last operated (m)/(d)/(y) d. Replacement well is feet from original well.
e. Location of water use of original well
f.1. Criginal water well decommissioned on (m) /(d /(y) OR
 I hereby certify that the original water well will be decommissioned within 180 days after such construction of the replacement water well. OR
3. 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. It will be used for one of the following: a. Livestock b. Monitoring c. Observation d. nonconsumptive or de minimus use approved by the applicable natural resources district. State use:
If 3d is chosen. NRD signature is required. (Signature can be submitted on NRD Approval form to DNR prior to registration)
NRD signature Date OR
4. Decommission/Modification Certification form is submitted by landowner. (Must be submitted before registering well)
8. Pump Information. (Pump information is required if registering a pit) a. Is pump installed at this timeYesxNo Is pump installed by well owner in section 1?YesNo Is pump installed by contractor in section 2?YesNo Is this a free flowing wellYes(no pump to be installed)xNo If pump installed by pump installer, please fill out license number below b. Pump Installer's License No Pump Installer's Name_ Pump Installer's Firm Name_ Pump Installer's Firm Address City State Zip
9. Well Construction Information.
a. Total well depth 21 feet. b. Static water level 15 feet. (required)
c. Well Construction Began (m) 11/606/201/3 d Well Construction Completed (m) 11/606/2013
Wells drilled prior to stays or NRD signature Date
moratoriums require NRD signature (Signature can be submitted on NRD Approval form to DNR prior to registration)
e. Bore hole diameter in inches Top 8.25 Bottom 8.25
f. Casing and Screen Joints are Welded Glued Threaded X Other
g. Capacity of Well gallons per minute (to be used to determine sustainability of aquifer)
h. Pumping water level at this capacity feet

a		b	С	d	e	\mathbf{f}	g	h
Placement Depth in Feet		Casing or Screen or	Inside Diameter	Outside Diameter	Wall Thickness	Screen Slot Size	Type of Material	Trade Name
From	То	Open Hole						. <u> </u>
			<u> </u>					
					•			
					- Luc-			

Additional information for Double cased or Nested wells:

	a	ь	С	d	e	f	g	h
Placement Depth in Feet		Casing or Screen or	Inside Diameter	Outside Diameter	Wall Thickness	Screen Slot Size	Type of Material	Trade Name
From	То	Open Hole						
					~			**** <u></u>

11. Grout and Gravel Pack (must start at zero)

ent Depth in	Grout/Gravel/	Material Description	Quantity gravel	Volume & Type Grout		
Feet	Open Hole	*See Desc for gravel	*See Desc	*See Desc		
То]					
				· · · · · · · · · · · · · · · · · · ·		
				······································		
	Feet	Feet Open Hole	Feet Open Hole *See Desc for gravel	Feet Open Hole *See Desc for gravel *See Desc		

Desc: 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

Quantity #cubic yards, #tons, #sacks, - (for drilling cuttings and soil backfill estimate quantity) Calculation assistance available on web Volume & Type: #gallons of a slurry, #barrels of a slurry, #sacks used in the slurry, #bags of non-slurry bentonite (chip-pellet —granular) Additional information for Double cased or Nested wells:

Placement Depth in Feet		Grout/Gravel/ Open Hole	Material Description *See Desc for gravel	Quantity gravel *See Desc	Volume & Type Grout *See Desc		
From	То		***				
				*			
					····		

WELL CONSTRUCTION LOG - 138679632229200

To -	From	Case/Screen	I.D.	O.D.	Thk.	Mat.	Slot Trade Name
0.0 ~	11.0	Casing	2.07	2.38	0.15400	PVC	0.000 Titan
11.0 -	21.0	Screen	2.07	2.38	0.15400	PVC	0.010 Titan

GROUT AND GRAVEL PACK - 138679632229200

From -	To	Grout/Gravel	Material Desc.	Qty Gravel	Volume/Type Grout
00.0 -	00.5	Grout	Concrete	0	O, NA
00.5 -	09.0	Grout	Bentonite grout	3 bags	3 bags, 3/8" chips
09.0 ~	21.0	Gravel	#20-40 Sand	8 bags	8 bags, NA

GEOLOGICAL LOGS - 138679632229200

From -	To	Туре	Hardness	Color	Other/Drilling Action
00.0 -	07.0	Clay		Brown	-
07.0 -	13.0	Sand fine-med		Brown	
13.0 -	21.0	Fine Sand		Brown	

rom	То	Туре	Hardness	Color	Other/Drilling A	ction	
				1			
							- 11 CA 1821 - 1824 - 1 ABA
						-	
		8		-			
				<u> </u>			
-							
				-			

							14.
	Ty	ype	<u>Hardness</u>	1	C	<u>olor</u>	
lay		Sand fine-med	Cemented		Black	Pepper	
lay Stone obbles		Sand med-coarse Sand with grave	Consolidat Dense/Stif		Blue Brow n	Red Tan	
ine Sand		Sand with grave	Hard	1	Gray	White	
ravel		Shale	Soft		Green	Yellow	
imestone oss Circula	tion	Silt Siltstone	Unconsolid Very Hard		Orange		
chre (weat	hered shale)	Top Soil	, or y than				
andy Clay	1(0:1)	Other	l				
and with C	iay/Siit		***				
			(Additional sl	heets may be su	bmitted)		
	1 .10 -1						
3. I here	by certify the	nat the information prov	ided on this registra	ation is true and	accurate to the bes	t of my knowledge	Э.
117 - 1	LIK!	notorio Signatura	Data		W-11 C C'	···-	
Water Well Contractor's Signature (not required for pits)			Date	(if Contract	Well Owner's Sig		Date
			(if Contractor is unknown or Deceased or for p (Not required if signed by Contractor)				"
				(- · - · · ·		, ,	

Owner Registering well drilled prior to 2002: Minimum Required Sections - 1, 3(a,b,c,e,f), 5, 6, 7, 8(a,f,h), 9e

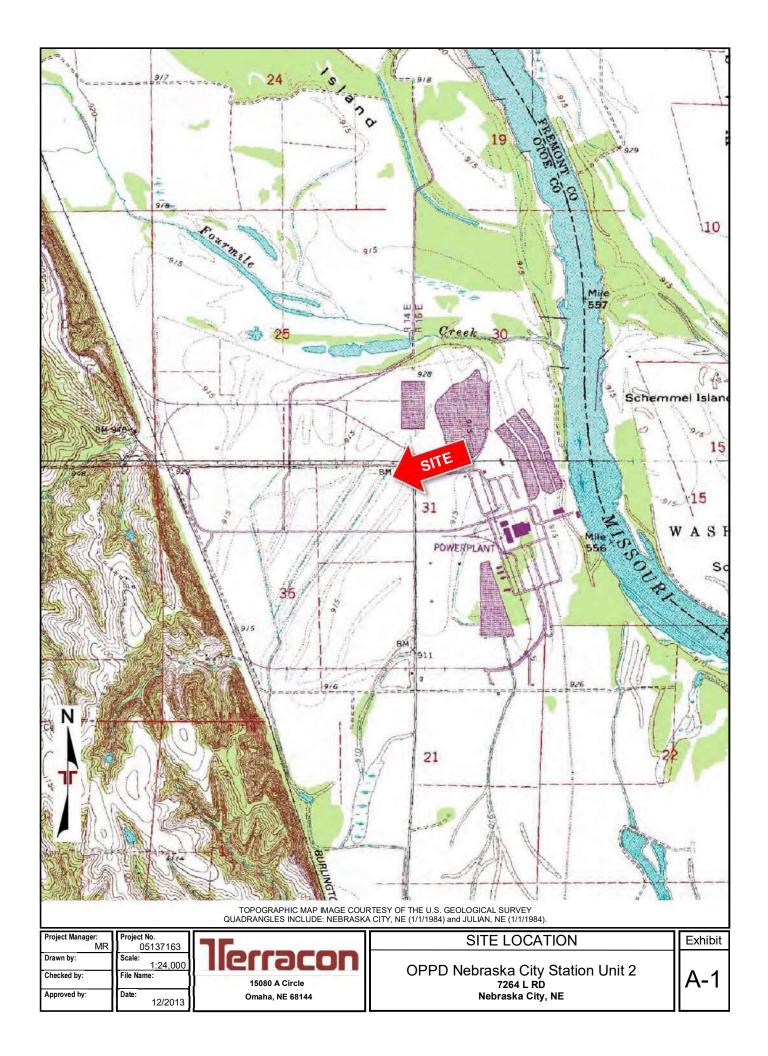




DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager:

Approved by:

05137163 Drawn by: AS SHOWN File Name: Checked by:

12/2013



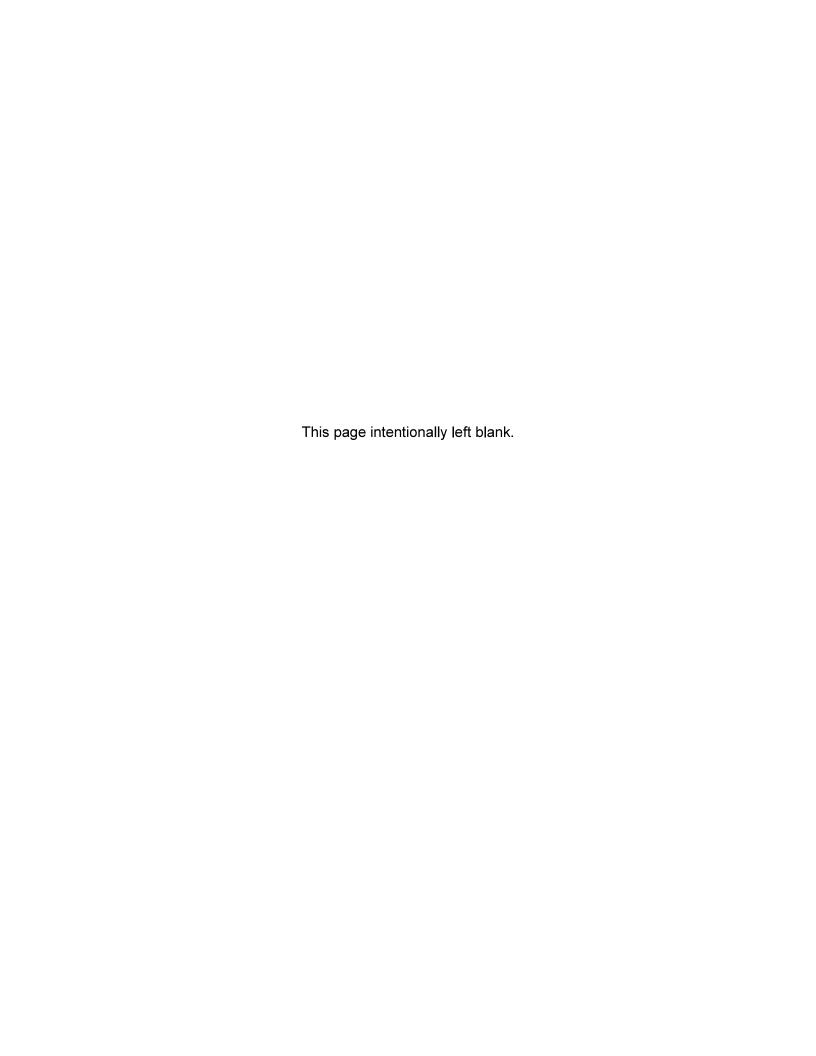
AERIAL PHOTOGRAPH

OPPD Nebraska City Station Unit 2 Nebraska City, NE

Exhibit

A-2

			WELL LOG NO. MW-	-13	F	⊃age	1 of 1
	PR	OJECT: OPPD Nebraska City Station	CLIENT: Omar	na Public Power Distri	ct		
l	SIT	E: 7264 L RD Nebraska City, Nebraska					
	GRAPHIC LOG	LOCATION - Latitude: 40.6286073° Longitude: -95.7921889° DEPTH MATERIAL DESCRIP*	Surface Elev.: 915.5 (Ft.) FION ELEVATION (Ft.)		WATER LEVEL OBSERVATIONS SAMPLE TYPE	RECOVERY (In.)	SPT N-VALUE
		LEAN CLAY (CL), with organics, brown, Grass at 2.0		-Concrete → Seal hydrated → chip bentonite		10	2-2-2-3 N=4
		LEAN CLAY (CL), light brown	3.00	Riser Pipe 2" diameter schedule 40 PVC. Flush		12	3-4-4-4 N=8
16		5.0 SILTY CLAY WITH SAND (CL-ML), fine	910.5	PVC Screen 5		18	2-2-2-2 N=4
N2012.GDT 2/4/16		7.0 SILTY SAND (SM), fine	908.5	-Filter Material silica sand.		20	1-2-2-5 N=4
05157663 LOGS.GPJ TERRACON2012.GDT				-Screen 2" diameter schedule 40 PVC slotted screen, 0.010" slot 10		18	2-5-7-5 N=12
5157663 LOGS.				screen, 0.010" 10		20	2-1-2-2 N=3
		13.0	902.5				
THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG		The stratification lines represent the approximate transition I		Hammer Type: Automatic			
SEPAR,	\dvc=	types; in-situ these transitions may be gradual or may occur					
IS NOT VALID IF S	Holl Aband	cement Method: ow Stem Auger, 8.25-inch diameter borehole conment Method: Well installed	See Appendices for explanation of symbols and abbreviations.	Notes: Soil descriptions are based on vifield crew. Actual conditions ma		ations n	nade by the
10 LOG		WATER LEVEL OBSERVATIONS		Well Started: 1/26/2016	Well Compl	eted: 1	/26/2016
BORIN	$\frac{}{}$	5 ft while sampling 1 ft bgs on 2/4/16	lerracon	Drill Rig: 770	Driller: JM		
THIS		 	15080 A Circle Omaha, Nebraska	Project No.: 05157663	Exhibit:	1	



Well Reg	gistration o	r Area	Permit		Fee Paid: DNR Cash Fund					
Source:	Nebraska On Line	Import Status:	Accepted	Use:	Monitoring (Ground Water Quality)	Owner ID:	<u>49927</u>			
Import ID:	14551191495806	Status:	Active Registered Well	Decommission Date:	_	Registration Number:	<u>G-178697</u>			
Well ID:	241806	NRD:	<u>Nemaha</u>			Registration Date:	2/19/2016			
Last Change User:	hmcpherson	Call Up Code:	_	Call Up Date:	_	Last Change Date:	2/19/2016			
Owner:										
Select Contact										
Display			egin Date End Dat 19/2016	te Name Omaha Public P	lower District					
Edit DISPIAY					ower District,					
Contractor:	Certificate ID Firs 39570 Mich	tName Las hael B Rei								
Drilling Firm:	Employe 159781	erID Emplo Terrac	yer on Consultants, In	ic.						
Township !	ion: <u>NW1/4SE1/4</u> <u>8</u> North, Range <u>14</u> esource District: <u>Ne</u>	(<u>East</u> E/V								
Lat/Long D	: feet from the		1 -95.7 n line and fee	° 47' 31.88" '9219 t from the	GPS Required section line. Block No Lot					
E. Location of	water use, if appli	icable (give	e legal description	n): <u>NWSE S25</u>	<u>Γ8 R14E</u>					
G. Well refere	ence letter(s) if app	olicable: M	W-13							
Well In A Serie										
Well Part of a	Series with Site P	lan: <u>Yes</u>								
Series # of W	/ells Reg Total # W	ells Acres	Acres Cert NRD A	ppr StartDate E	ndDate Comment Series Re	g Num (Externa	al Source) Code	Description	Wells in the Se	ries
244881 1	2		No No	1/26/2016	G-126717		DEQ	Part of a DEQ site		StartDate EndDat
								plan for	158167 G- 126717	2/19/2016 7
								spill or underground	2 <mark>41806</mark> G- 178697	1/26/2016
Dormita								storage	170097	1
Permits			Apple	d Date(s)		Annyo	d Date(s)			
Area Permit			Apiv		SWater App Code	Aprivo	Date(s)			
GeoPermit			_		Industrial					
MWF					Transfer					
WSP			_	:	Swater Conduct Code					
HHSS					Other					
HHSS PWS ID	_				ITN					
NDEQ		12, NE020	4421							
-										
5. Purpose of	Well <u>Monitoring (C</u> Other Use	<u>Ground Wa</u>	ter Quality) —							
	Notes		_							
·	ent well information				Well Considered a replacen RegCD)	nent by NRD(W	ellID,			
	a Replacement we in number of aband				Well Replacement Reg CD bandoned well was constru	ıcted				
C. Abandoned	d well last operated	i	D. Repla	cement well is	feet from abandoned we	ell.				
E. Original we	ell pump column siz	ze: incl	nes.							
[] I here the repla [] I here	cement water we	e original II. e original	water well will b	e modified and	oned within 180 days afted					
[] Live	•	. construc	a.o.i oi die repia	Sometic Water						

	roved by the applicable natural resources district m is submitted by landowner (Must be submitted before registering
G. Location of water use of original well:	
Decommission Information Decommission Date: By	
3. Pump Information.	
A. Is Pump installed at this time? No	Pump present but Well Inactive: <u>No</u>
Free Flowing Well: No	Well active, no pump installed: <u>Yes</u>
B. License No.	
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: 13 feet.	B. Static water level 1 feet.
C. Well Construction began: 1/26/2016	D. Well Construction Completed: 1/26/2016
E. Bore hole diameter in inches. Top 8.25 Bottom 8.25	<u>3.25</u>
F. Casing and Screen Joints are: <u>Threaded</u>	Other Joints description:
H. Total Estimate Capacity of Well gallons per minu	ute. I. Pumping water level at capacity: 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
241806 0	3	casing	2.07	2.38	0.154		PVC	EMI
241806 3	13	screen	2.07	2.38	0.154	0.01	PVC	EMI

^{*} are in Feet, all else is in inches

11. Grout and Gravel Pack

Record Count = 3

WellID Fro	omDepth	ToDepth	Grout/Gravel	Material Description ¹	Quantity Gravel ²	Volume &Type Grout ³
241806 0		0.5	grout	Concrete and well vault		Concrete and well vault
241806 0.5	5	2	grout	non-slurry bentonite		1.5 bags
241806 2		13	gravel	#16-30 Silica sand	5 bags	

^{*} are in Feet, all else is in inches

12. Well Geologic Materials Logged

	. 000.09.01.0					
WellID	FromDepth*	ToDepth*	Туре	Hardness	Color	Other/Drilling Action
241806	0	5	Other		Brown	Lean Clay
241806	5	7	Other		Brown	Sily Clay w/sand
241806	7	13	Other		Brown	Silty Sand

^{*} are in Feet.

 $^{^{1}}$ 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

 $^{^{2}}$ Quantity #cubic yards, #Tons, #Sacks - (for drilling cuttings and soil backfill estimate quantity) Calculation assistance available on web

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

DRILLING LOG

					LUG	<u>'</u>				
Project Nam Omaha F	<u>Public Power Distric</u>	ct - Nebraska	<u>City. Neb</u> ra	ska			pject Num		Boring Number MW- 7	<i>,.</i>
Boring Loca	ition Description Fly ash disposa	d area	Borin NE	a Location	1'/4 Sec :				Page 1 of 3	
	ace Elevation To bove NGVD (surv.) 91	p of Well Casing Eleva 8-9 It above NGVE	tion Borin	a Location	Coordinates			· . <u> </u>	Total Footage 42.0 4	—— 64.
	Irilling Method (s)	Borehole Size	Overburden Foot		ock Footage	1	01 Sampi	es N	o. Core Boxes Depth to)	
6	3 1/4" ID HSA	8	42.0 feet		0 feet		None	<u> </u>	None See Rem	arks
	Layne, Inc. Omaha, N	<u> </u>						, Rick K	erth	
	Acker Soilmax 80 Tru	ick Mounted	·		Type of Sampler	Con	tinu	ous		
	01/20/99	Date Complete	01/20/	99					OCKLEY	
Depth in Feet	Descri	iption	USCS Class.	Blow Count	Recovery	Depth in Feet	Sample No.	PID (ppm)	Remarks	
2 3 4 5 6 7 8 9 10 11 12 13 14	SAND, dark to fine grain graded, mediv wet, mostly with rock	prownish ed, medium z and rock st. Bove grey, medium ned, well m density, quartz	SM SW			2 3 4 5 6 7 8 9 10 11 12 13 13 13 13 13 13 13 13 13 13 13 13 13			AUGER CUTTINGS WET AT 9.0 feet	

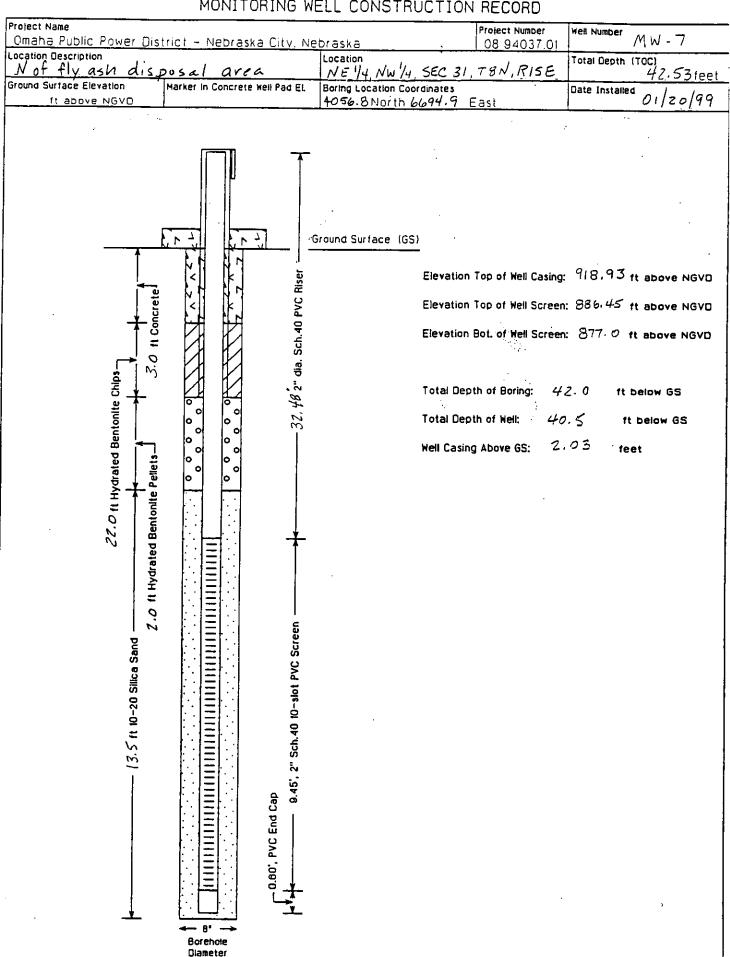
Drilling Log, continued

Project Na Omaha	<u> Public Power District - Nebraska Cit</u> v	. Nebra	ska		Pro	ject No. 8 940:		Boring Number MW - 7
Boring Loc	cation Description fly ash disposal area	Borin	o Location	1/4 , SEC	-			Page 2 of 3
Depth in Feet	Description	USCS Class.	Blow Count	Recovery	Depth in Feet	Sample No.	PID (ppm)	Remarks
15-	SAME AS ABOVE				15-			
16		* **			16	.		
17 -	· ·	 - -			17	7		
18 -	·				18-		5. 7.	
19-					19		;·	
20					20-		Ż	
21-	SAME AS ABOVE				21-		İ	
22	·				22		;	
23					23-			
24-					24			
25					25			
26-	SAND, light grey, medium to coarse grained,				26			
27-	medium to coarse grained, well graded, medium to loose, wet, quartz and rock grains with oval				27			
28-	rock grains with oval shaped, rounded pebble				28-			
29	site rock grains				29-			
30 =					30-			
31 -	SAME AS ABOYE				31 -			

Drilling Log, continued

Project Name Omaha Pu	iblic Power District - North Omaha,	Nebrask	a g Location			lect No. 8 9403	37.02	Boring N	// W -	7
Joring Location N of	on Description disposal area	NE	g Location 1/4 , 1/4 1/4	SEC 31	TBN	1, R15	E :	Page .	3 of 3	
Depth in Feet	Description	USCS Class.	Blow Count	Recovery	Depth in				Remarks	
32-	SAME AS ABUVE	sw			32-					
33-					33-					
34					34-		÷			
35					35					
36-	SAME AS ABOVE	. S₩			36		<u>.</u>			
37 = 1					37-		; ;	=	•••	.
38-					38-					
39-					39					
40					40					
41-	SAME AS ABOVE	500			41-					
42	BOTTOM OF BORING			:	42-					
43	DOMONI V. BOKING				43-					
44					44-					
45					45					
46					46					
47-					47		v			
48					48					

MONITORING WELL CONSTRUCTION RECORD

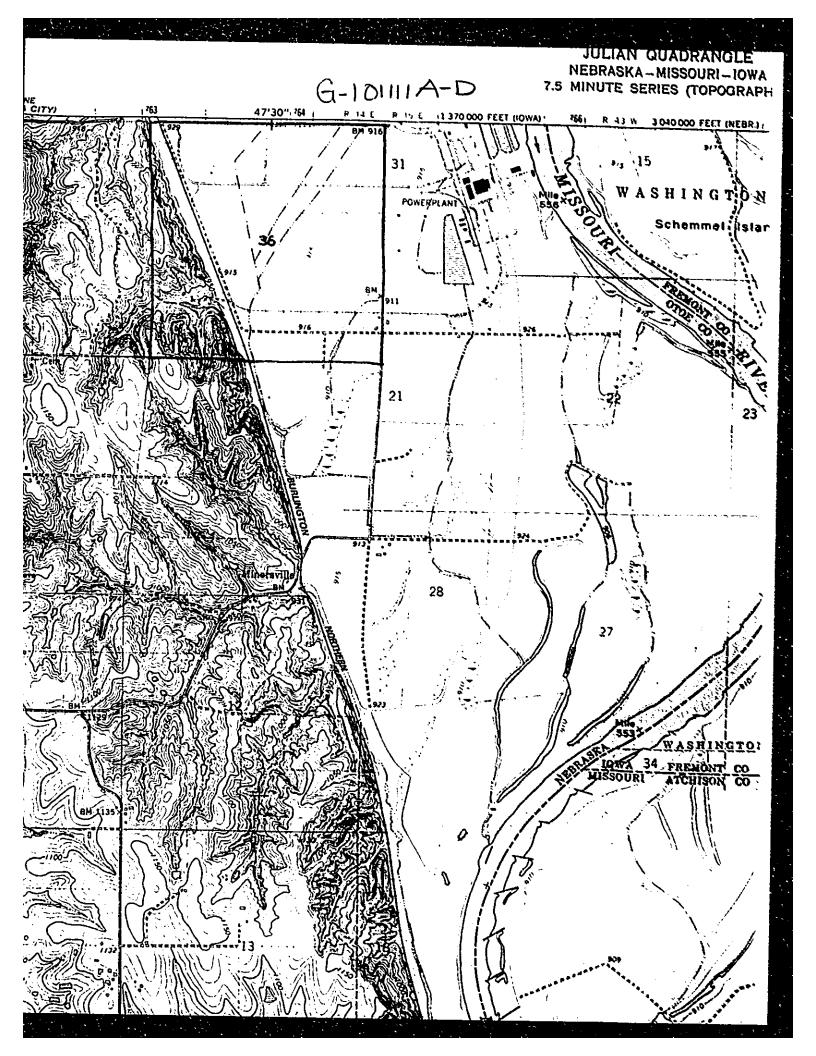


STATE OF NEBRASKA DEPARTMENT OF WATER RESOURCES WATER WELL REGISTRATION

Registration Da Owner Code N	te <u>7-1-99</u> Sequillo. <u>40226</u>	ence No	18729 02035 102039		egistration No		III A
			10205°				
1. Well Owner	Omaha Public Pov	var Dietriet	Telephon	a Northern	(400)		
Address	444 South 16th St	reet Mall	_ releption	ne Number	(402)	636-2304	
City	Omaha	Star	e N	E Zip Code	68102	+	224
. Drilling Firm_	Lavne-Western Comp	nnv	Talanha				·
Address	25450 Highway 275, P	O. Box 597	Contrac	one number ctor's Licens	n No	(402) 359-2	
City	Valley		NE_Zp	Code	68064	39266 + 059	
. Permit Numb	er(s)						
Purpose of wel	er Source Heat Pump Indus	ing (over 90 days) strial <u>Injectio</u>		n Lh	Geothermal	Monstoring	K Exchanger
Other			(Indicate use)	Vator Supply N	(Chort speced)	Recovery _	Ydnacngn
A. Is this well C. Replaceme E. Original we		mation. EX No Ebendoned well. inches.	D. Abandon	ed well lest op	abendoned well: erated well abendonmen		19
	NE 1/4 of the NE 1/4 of Sec		nehip8	North, Rang	c /5 (Ess) West	t Otoe Count	λ.
C. Street address	or block, lot and subdivision, if a	pplicable:	Omaha Publi	c Power Distri	d		
D. Location of	water use, if applicable (gi	ve legal densi	Nebraska	City Station			
E. If for imigation	on, the land to be imigated	is su ielai descrii	nions); N/A	N/A			~
F. Well referen	ce letter(s), if applicable:	Monitoring			_ acres.		
Pump Informat	lion.			 	 		-
	ed at this time?	Yes X	No				
If Yes, comp	lete items A through F.		•				
If No, comple	ete items A and D with est	imated informa	tion for thos	ie wells in v	hich pump wi	il be installe:	dl.
Use Acmail bottibit	ing tare, it abblicable:		gallons per i	minute.	Measured	Estmate	
3. Pump column 3. Pumping equip		inches.			f pump column		feet.
z. rumping equip Pump installed				E. Brand/Ty			
	-y. Conductor	Owner 🔲	Pump Inste	Mer	License No.		

F. Bore l G. Plain Wall	Construction to the casing: Double thickness:	iter: iameter 0.	20- 8 2.1 ID 15 inches.	inches.	2.4 OD inc	hreeded/C	of Mate	•		20-Jan	Moasu 1999	red .
H. Scree	n:	2	o) depth from 2.1 ID	2.4	30 fee OD inc	et. hes. Type	of Mate	feet vial:	to (feet.	*****
Lengt I. Grave	th(s) and p I pack inte	lacement(s rval(s) from): 0.010* s) depth from 1 26 feet to	40 feet.	lame:			Guides at	pet to		feet. feet. 20-40	-
J. GIOUR	ed/Sealed f	om <u>0</u>	feet feet	to	4 feet 26 feet	with_		Cement C (type Sentonite	9)	· · · · · · · · · · · · · · · · · · ·		
M. Well o	g method: Jevelopme	nt techniqu	Hollow 5	and metho	id):	nilling fluid Surus	t: t		pe)	· · · · · · · · · · · · · · · · · · ·		
N. Will ch	hemicals, f	ertilizer or a	antifreeze b	e injected o	r utilized in t	he system	?	Yes		No	· · · · · · · · · · · · · · · · · · ·	
II yes, Geologic M Depth in	Materials Lo	ogged	DESCRIPT	TION		pth in Fee		C	ESCF	RIPTIO	N	
II yes, Geologic M Depth in	feet To 5 10 25 30	ogged Topsoll Clay - bn Fine Sand	DESCRIPT cwn d d with grav		From	_	et o	C	ESCF	RIPTIO	N .	
Geologic N Depth in From 0 5 10 25	feet To 5 10 25 30	ogged Topsoll Clay - bn Fine Sand	OESCRIPT own d d with grav d with med	el lum gravel	From	T		C	ESCF	RIPTIO	N	

JULIAN QUADRANGLE NEBRASKA-MISSOURI-10WA G-101111 A-D 7.5 MINUTE SERIES (TOPOGRAPHIC) R 43 W. 3040000 FEET (NEBR.) 95"45" .15 370 000 FEET WASHINGTON. POWEFPLAN STOOM FEEL STOOM 21 1. 67 H 28 27 FREMONT CO ATCHISON CO 35 USSOURI



STATE OF NEBRASKA

G-101111 A-D



Mike Johanns Governor

June 10, 1999

IN REPLY REFER TO

Roger K. Patterson

DEPARTMENT OF WATER RESOURCES

Omaha Public Power District 444 South 16th St. Mall Omaha, NE 68102-2247

LOCATION OF THE WELLS:

Otoe County

The following items were submitted to register the four wells but are being returned to you:

Water Well Registration Forms

- \$120.00 Fee (State Auditors require that checks be returned for all unregistered wells.)
- · Quadrangle map

The four wells have not been registered for the following reasons:

- · The Water Well Registration form is incomplete. Please complete items 6A and 6B.
- · Township 67 is not in Nebraska. The wells are either in Township 7 North or Township 8 North.
- · Please mark the location of the wells on the map.
- . The fee should be \$240.00. Please refer to the enclosed instruction sheet.

Please resubmit the enclosures along with the items requested by July 12, 1999. As required by law, we are obligated to inform you that failure to register the well is a Class IV misdemeanor. If not promptly resolved, matters involving unregistered wells may be sent to the county attorney for possible prosecution. If you have any questions, please call me.

Sincerely,

Stacey Evans

Accounting Clerk, Ground Water

(402) 471-4084

pjb

clrshare\ground water\returns

ACETAL NO. 1 1011790

301 Centennial Mail South, 4th Floor • P.O. Box 94676 • Lincoln, Nebraska 68509-4676 • Phone (402) 471-2363 • Telefax (402) 471-2900 An Equal Opportunity/Affirmative Action Employer



June 29, 1999 99-EA-143

State of Nebraska Department of Water Resources P.O. Box 94676 Lincoln, NE 68509-4676

Please find enclosed Water Well Registration forms for four groundwater monitoring wells installed at our Nebraska City Station. Also enclosed are two checks, each for \$120 for the registration fees.

If you have any questions regarding the enclosed material, please contact John Buckley at (402)636-2318 or me directly at (402)636-2313.

Sincerely,

D. C. Hutchens

Manager - Environmental Affairs

Environmental & Governmental Affairs

JEB:dn

Encl.

WATER WELL REGISTRATION CORRECTION

FOR DEPARTMENT USE ONLY

Registration Number

G-101111A

Sequence Number

<u>118</u>729

Correction Date

<u>September 13, 1999</u>

Person Processing Correction

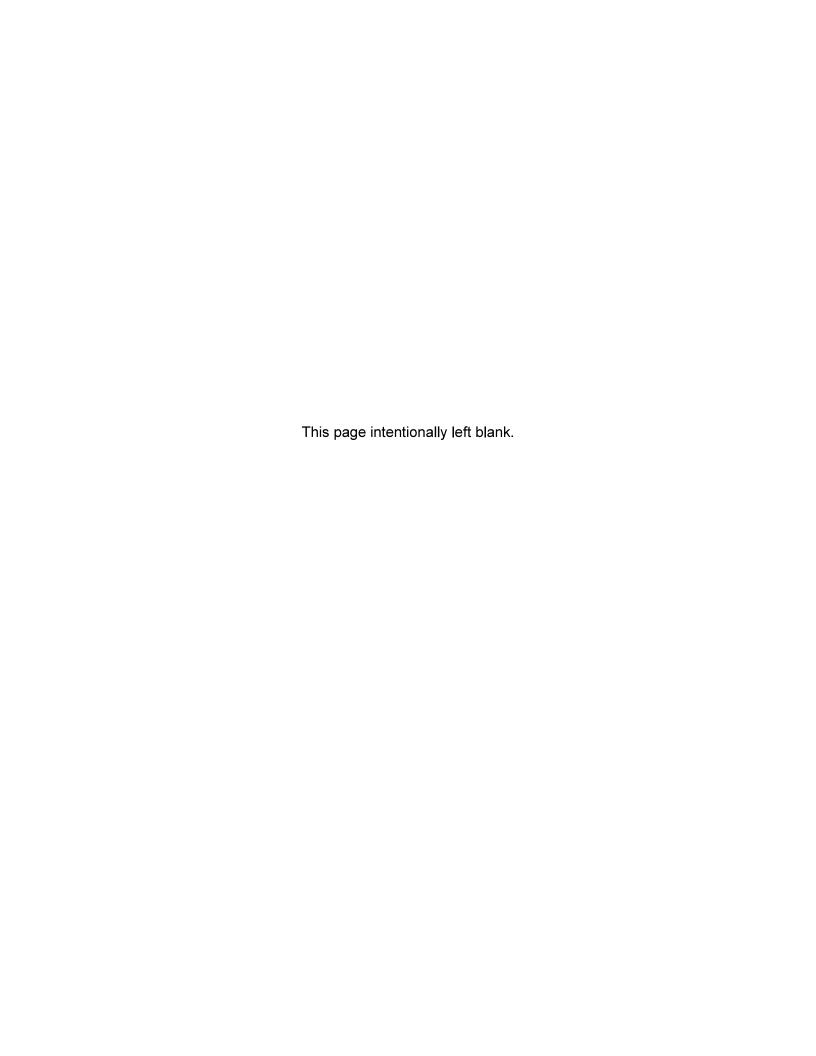
Wendy Evans

information regarding the water well referenced above has been changed in the Department's water well registration records. Please note the following changes and the reason changes were made:

Well Location (Item 6A) and Footage (Item 6B); According to the marking on the quadrangle map, the well is estimated to be located in Range 14E, Section 36 in the NE¼ of the NE¼, 475 feet from the North section line, and 10 feet from the East section line (475S 10W).

This correction has modified section(s) 6A and 6B of DWR Registration Form #145. If these changes are inaccurate, please contact the Department of Water Resources at P.O. Box 94676, Lincoln, NE, 68509-4676. Phone (402)471-3458.

I certify that this Correction Form has been forwarded to the owner of the referenced water well and is now a part of the registration records.



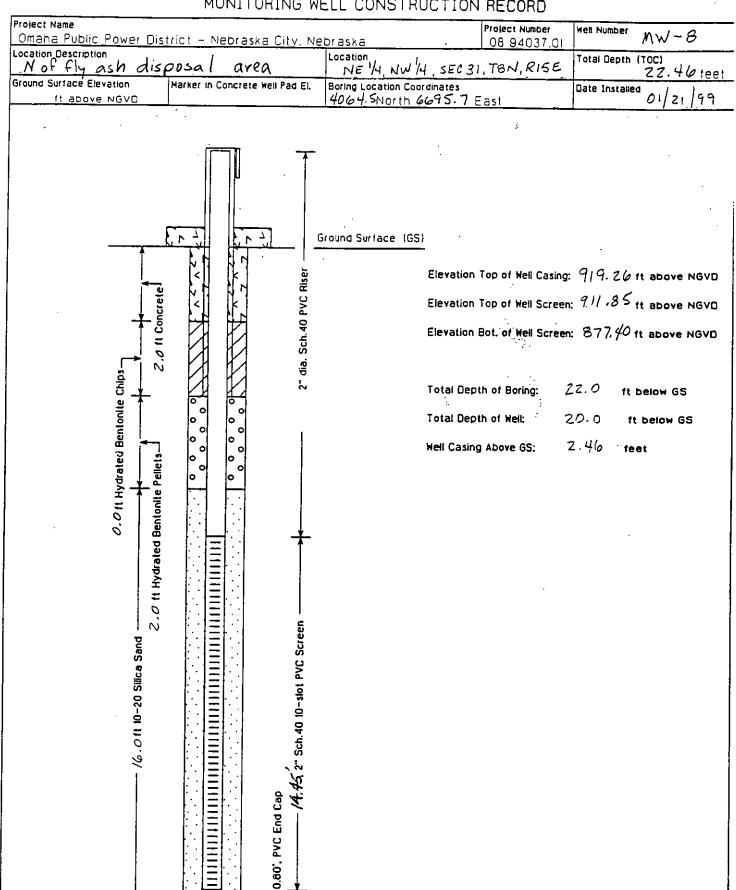
DRILLING LOG

				LIIA	G LUG	,				
Project N Omaha	Name B Public Power Distric	ot – Nebraska (lity Nebra	ask a	- <u></u>		oject Num		Boring Number	MW-B
lBorina La	ocation Description of fly ash disp		Bori	ing Locati	ion NW14, SE		<u>18 940</u> ⊤a√		Page (of Z
Ground Si	urface Élevation To	op of Well Casing Eleva	tion Bori	ing Locati	ion Coordinates			<u> </u>	Total Footage	
110.01	Drilling Method (s)	19.3 It above NGVD Borehole Size	Overburden For		orth 6695. Edrock Footage		of Sample	es N	o. Core Boxes	22.0 ft.
	6 1/4" ID HSA	. 8	22.0 fee		0 feet	†	None		None	See Remarks
Orllling Co	o. Layne, Inc. Omaha, N	Vebraska .	-		Orllier (s	s) Lyle	Porter.	, Rick K	eith	
Orilling Rig	g Acker Soilmax 80 Tri	uck Mounted		=-	Type of Sampler	Co	atinu	2005		
Date Star	rted 01/21/99	Date Completed	01/21	99			ه ل (د)	NH1	3UCK LEY	
Depth in			uscs	Blow		Depth	Sample	PID		
Feet	Descr	iption	Class.	Coun	t Recovery			(ppm)	R	emarks
. 1—	SANDY SILT, loose, well g	brownish gre	y, ML			1-		a. T		
2-	sand and sil	t, moist				2-		;·		
3		· · · · · · · · · · · · · · · · · · ·				3-		;		
4-	_	, brownish raded, medium tz i rock grain	SM			4-				
5	SAME AS		5M			5 7 7 7 7 6				
7-						7-			·	
8-1						8-				
9 1						9-		ļ		CUTNAGS T 9.0 feet
10-1	SAND. dark to fine grain graded, medi	ned well um density,	sw			10 - 11 - 11				
12-	wet, mostly with rock go	_				12				
14			· 			14		į		

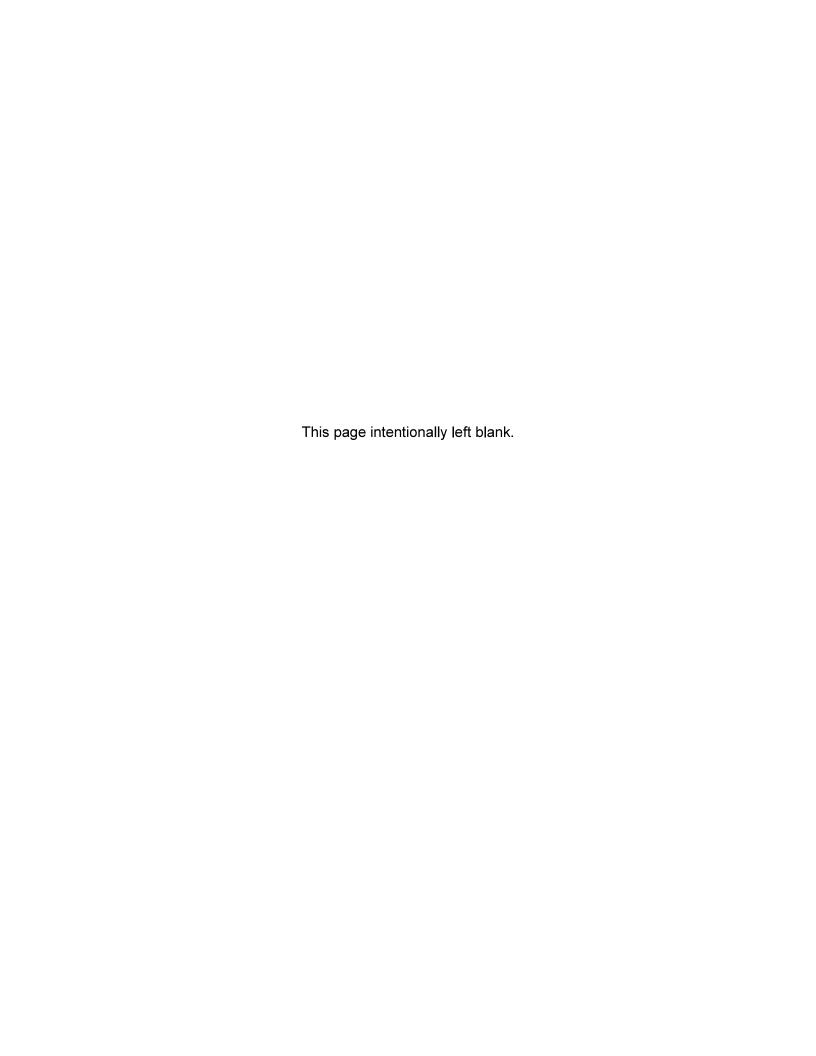
Drilling Log, continued

Project Name Omaha Pub	ilic Power District — Nebraska Cit	v. Nebra	ska		· LO	ject No. 8 940:	37.01	Boring Number MW - 8
N of f	Description disposal area	Borin NE	g Location	1/4 , SEC	31 , T	8N, R	15E	Page ZofZ
Depth in Feet	Description	USCS Class.	Blow Count	Recovery	Depth in Feet	Sample No.	PID (ppm)	Remarks
15 - 16 - 1	SAME AS ABOVE	SW (15 16			
17 - 1	•				17		<u>.</u> <u>≽</u> .	
19-					19			
21-	SAME AS ABOVE	WZ		i	21			
22	BOTTOM OF BORING				23			
25-					24-			·
26-					26-			
27 - 28 <u>- </u>					27			
9					28-			
0					30-			

MONITORING WELL CONSTRUCTION RECORD



Borehole Diameter

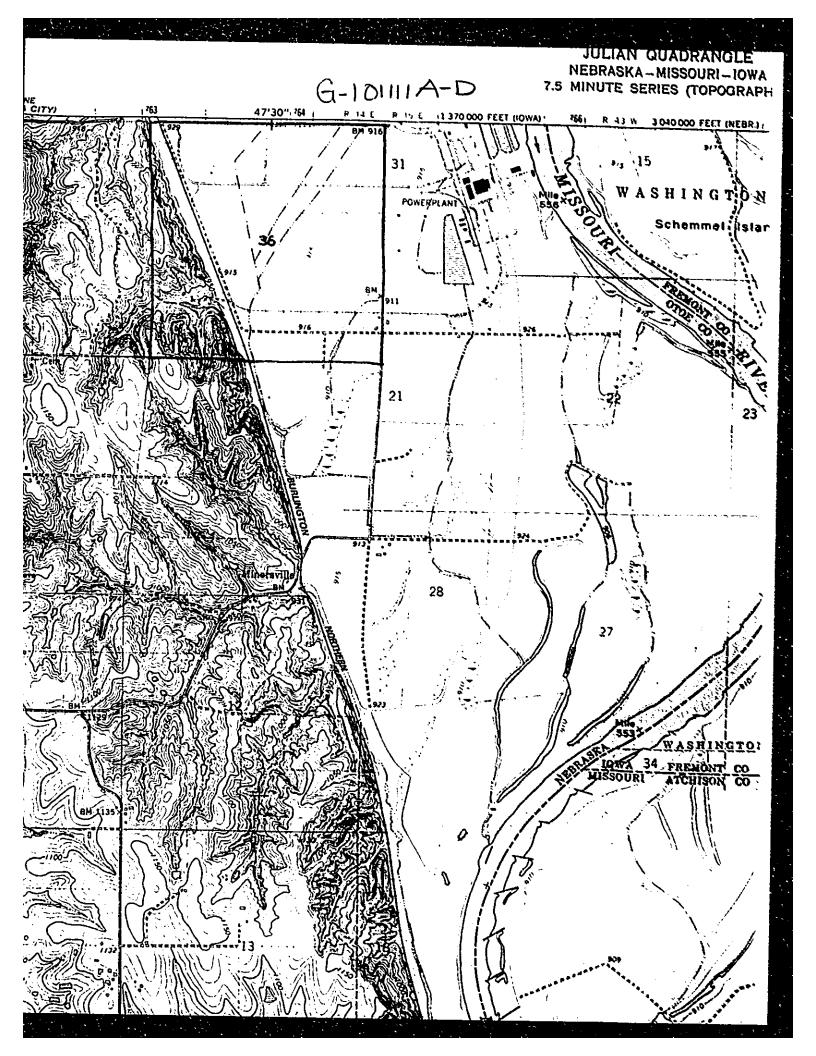


STATE OF NEBRASKA DEPARTMENT OF WATER RESOURCES WATER WELL REGISTRATION

Registration Owner Co	n Date 7-1-99 s de No. 40226	Sequence No. 10	57:30 02038 02039	Registration Nema	No.G-1011 hanri	
1. Well Own Address City	Omaha Publi 444 South 16 Omaha	c Power District th Street Mall Stat	Telephone I		636-2304 102 +	2247
Address	irm <u>Layne-Westem C</u> 25450 Highway 2 Valley	75, P.O. Box 597	Telephone Contractor NE Zip Coo	's License No.	(402) 359-204 39268 364 + 0597	12
3. Permit N	umber(s)					
Ground	of well(indicate one) Deli Water Source Heat Pump vation Public Water Sup	owatering (over 90 days) Industrial Injection ply (won specing (48-838))		Geothermal Livestock X r Supply (wereur sescre)	Ground Heet E Monitoring Recovery A	chachtric
A. is this C. Repli E. Origin		Yes X No I from abandoned well, Inches,	D. Abandoned v	number of abendoned veil lest operated foriginal well abendoni	, 19	·
C. Street ad D. Location E. If for irri	tion: NE 1/4 of the NE 1/4 545 feet from the (Nondress or block, lot and subdivision of water use, if applicating ation, the land to be irrigerence letter(s), if applica	pr or sourn) section line a on, if applicable: ple (give legal descrip lated is	nd <u>1950</u> fe Onieha Public Pi Nebraska Ch itions): N N/A	et from the (East on Ve ower District	West, Otoe County.	
If Yes, c	stalled at this time? omplete items A through implete items A and D wit umping rate, if applicable:	th estimated informat		weils in which pump ute. Measured		

		Il Construction	Informat	tion.						- (G-10	\mathbf{H}		
	A.	Total well dep	th:	20	feet. B.	Static wa	ter lev	el: 9	feet.		imping we			feet.
	_				_						Estimate			loot.
		Well Construc		an:	21-		988	E. Well (Constru		completed		21-Jan	
		Bore hole dian			. 8	inches								· · · · · · · · · · · · · · · · · · ·
	G.	Plain casing:			2.1 ID		2.4	OD inches	_Type	of Mat	teriat:	₽١	VC	
		Wall thickness		0.15	inches.	Joints-W	elded/C	Slued/Three	Ovpebe	ther.				
	u	Length(s) and	placeme					5 feet.			feet	to		feet.
	п.	Screen:	2		ID	2.4		OD inches.				P	/C	
		Screen openin	igs (slot	SIZO):	0.010"	Trade	Name			offex	Guides a	1		feet.
		Length(s) and	placeme	ent(s) (depth from	m <u>15 ft. i</u>	_	20	feet	from	i1	eet 1	to	foot.
	l. 1	Gravel pack in	tervai(s)						feet.	to	fee	t. Gr	ada siza:	2040
	J.	Grouted/Sealed	d from	0	feet	to	31	feet	with_		Cement			
			f	_							(ty			
			from _	3	feet	to	41	eet	with_		Bentonit	-		
		Dellia	•-								(ype)		
		Drilling method			Hollow	Stem Aug	er	L. Drilli			None		_	
!	147. Na	Well developm	ient tech	eupin	(total time	e and met	nod):	,	Surge	e, beil	pump	1 hou	irs	
,	ν.	Will chemicals	, temilize	roran						?	Yes	X	_ No	
		If yes, what wi	II De Use	a:						 . <u>.</u>				
		logic Materials	Logged	Di	ESCRIP	TION	1	Depth	in Eas		,	DECC	SDIDTI	
	0 5 10	5 10	Topso Clay - Fine S	brov	vn			From				DESC	CRIPTIC	DN
	5	5 10	Clay -	brov		itional sho	eets m	'	T	o ————————————————————————————————————		DESC	SKIPTIC	DN
	5	5 10	Clay -	brov		itional she	eets m	From	T	o ————————————————————————————————————			SKIPTIC	ON .
	5 10 am	5 10	Clay - Fine s	nation	(Add		egistrat	From	mitted	o) sst of m		ige it	is true.	6-1-94 Date

JULIAN QUADRANGLE NEBRASKA-MISSOURI-10WA G-101111 A-D 7.5 MINUTE SERIES (TOPOGRAPHIC) R 43 W. 3040000 FEET (NEBR.) 95"45" .15 370 000 FEET WASHINGTON. POWEFPLAN STOOM FEEL STOOM 21 1. 67 H 28 27 FREMONT CO ATCHISON CO 35 USSOURI





June 29, 1999 99-EA-143

State of Nebraska Department of Water Resources P.O. Box 94676 Lincoln, NE 68509-4676

Please find enclosed Water Well Registration forms for four groundwater monitoring wells installed at our Nebraska City Station. Also enclosed are two checks, each for \$120 for the registration fees.

If you have any questions regarding the enclosed material, please contact John Buckley at (402)636-2318 or me directly at (402)636-2313.

Sincerely,

D. C. Hutchens

Manager - Environmental Affairs

Environmental & Governmental Affairs

JEB:dn

Encl.

STATE OF NEBRASKA

G-101111 A-D



Mike Johanns Governor

June 10, 1999

IN REPLY REFER TO

Roger K. Patterson

DEPARTMENT OF WATER RESOURCES

Omaha Public Power District 444 South 16th St. Mall Omaha, NE 68102-2247

LOCATION OF THE WELLS:

Otoe County

The following items were submitted to register the four wells but are being returned to you:

Water Well Registration Forms

- \$120.00 Fee (State Auditors require that checks be returned for all unregistered wells.)
- · Quadrangle map

The four wells have not been registered for the following reasons:

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- · Please mark the location of the wells on the map.
- . The fee should be \$240.00. Please refer to the enclosed instruction sheet.

Please resubmit the enclosures along with the items requested by July 12, 1999. As required by law, we are obligated to inform you that failure to register the well is a Class IV misdemeanor. If not promptly resolved, matters involving unregistered wells may be sent to the county attorney for possible prosecution. If you have any questions, please call me.

Sincerely,

Stacey Evans

Accounting Clerk, Ground Water

(402) 471-4084

pjb

clrshare\ground water\returns

ACETAL NO. 1 1011790

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WATER WELL REGISTRATION CORRECTION

FOR DEPARTMENT USE ONLY

Registration Number

G-101111B

Sequence Number

118730

Correction Date

September 13, 1999

Person Processing Correction

Wendy Evans

Information regarding the water well referenced above has been changed in the Department's water well registration records. Please note the following changes and the reason changes were made:

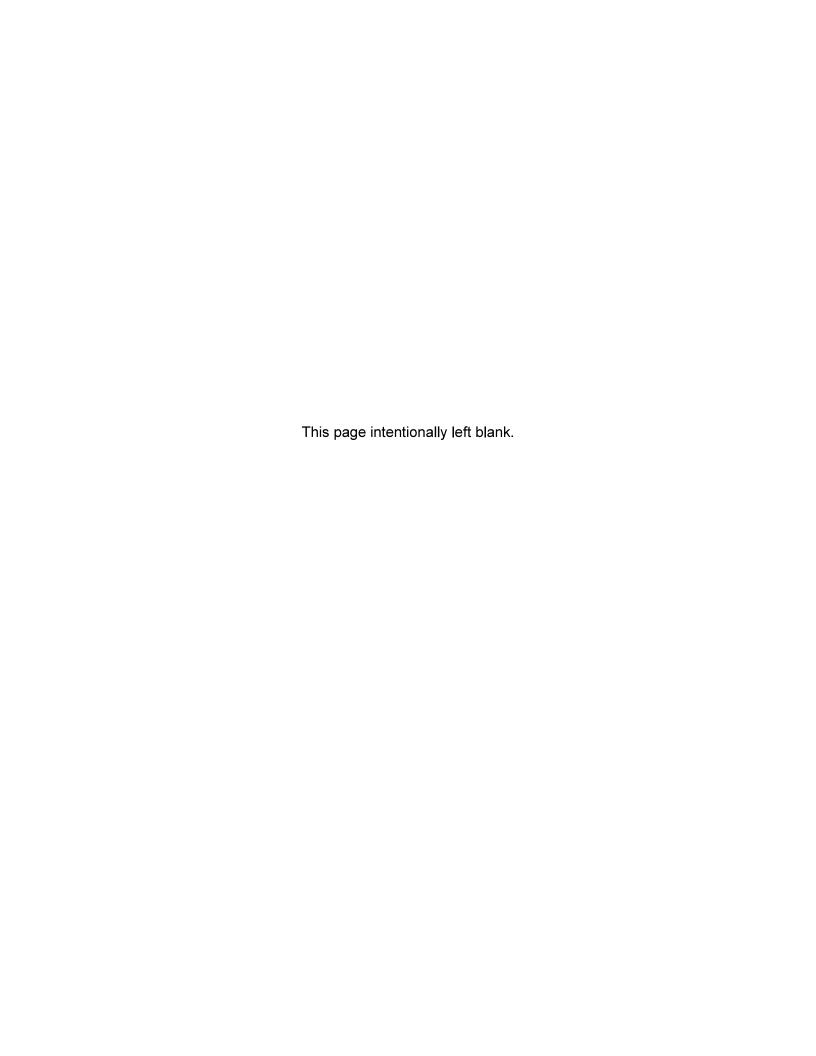
Well Location (Item 6A) and Footage (Item 6B): According to the marking on the quadrangle map, the well is estimated to be located in Range 14E, Section 36 in the NE¼ of the NE¼, 600 feet from the North section line, and 10 feet from the East section line (600S 10W).

Casing Length & Placement Depth (Item 8G): Based on the total well depth and the length and placement depth of the screen, the length and placement depth of the casing is estimated to be 0 feet to 15 feet.

This correction has modified section(s) 6A, 6B and 8G of DWR Registration Form #145, if these changes are inaccurate, please contact the Department of Water Resources at P.O. Box 94676, Lincoln, NE, 68509-4676. Phone (402)471-3458.

I certify that this Correction Form has been forwarded to the owner of the referenced water well and is now a part of the registration records.

Department of Water Resources



	BORING LOG NO. NC2-MW-8 Page 1 of 1										
		OJECT: OPPD Nebraska City- Monitorin Installation	ng Well	CLIENT: HDR E	ngineering, Inc. , NE						
	SIT	E: 7264 L Rd Nebraska City, NE									
	GRAPHIC LOG	LOCATION: See Exhibit A-1 Latitude: 40.6242° Longitude: -95.7899° DEPTH		Surface Elev.: 913.5 (Ft.) ELEVATION (Ft.)	INSTALLATION DETAILS -3' stick up	DEPTH (Ft.) WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS			
		Grass at surface <u>LEAN TO FAT CLAY (CL/CH)</u> , gray		ELEVATION (I.I.)	-Concrete		X	2-2-4-2 N=6			
18					-Seal hydra ted ► bentonite chips		X	2-3-3-3 N=6			
E.GDT 8/13/18		4.5 5.0 SILTY CLAY (CL/ML), gray FINE SAND (SP), grayish brown		909	-Riser Pipe 2" diameter schedule 40 PVC. Flush threaded to	5	X	2-6-6-5 N=12			
4TATEMPLAT					schedule 40 PVC Flush threaded to PVC Screen		\bigvee	2-6-6-5 N=12			
RRACON D					diameter schedule 40 PVC slotted screen, 0.010"	10-	\bigvee	2-1-1-2 N=2			
A CIT GPJ TE					-Filter Material ►		\bigvee	1-2-2-3 N=4			
D NEBRASK					silica sand 16/30 grade		X	1-2-2-1 N=4			
19 OPP		15.0 Boring Terminated at 15 Feet		898.5	1	15					
THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-WELL D9185019 OPPD NEBRASKA CIT.GPJ TERRACON_DATATEMPLATE.GDT		Stratification lines are approximate. In-situ, the transition may	be gradual.		Hammer Type: Automatic						
EPARA	A =1		gradddi.								
OG IS NOT VALID IF S	41∕₄-i Aband	cement Method: nch ID Hollow Stem Auger conment Method: I installed			Notes: Bottom of well at depth of 14. Concrete pad, protector pipe, surface. Top of casing elevation of 91 Energy Transfer Ratio 84.6% 1.41 (October, 2017).	and 3 bolla 6.54 feet rep	oorte	d by client.			
ING LC	$\overline{\nabla}$	WATER LEVEL OBSERVATIONS 5 ft. after boring completion	7600	acon B	oring Started: 07-09-2018	Boring (Comp	eted: 07-09-2018			
3 BOR		on, and boning completion			rill Rig: 929	Driller:	K. Sn	nithhisler			
Ϊ			1508 Oma	0 A Cir ha, NE	roject No.: D9185019						

	BORING LOG NO. MW-14 Page 1 of 1									
PR	OJECT:	OPPD Nebraska City- Monitori Installation	ing Well	CLIENT: HDR E Omaha	ngineering, Inc. a, NE					
SIT	ΓE:	7264 L Rd Nebraska City, NE								
GRAPHIC LOG		N: See Exhibit A-1 248° Longitude: -95.7929°		Surface Elev.: 917 (Ft.) ELEVATION (Ft.)		WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS		
	Grave	el at surface <mark>/ CLAY (CL/ML)</mark> , dark gray		ELEVATION (Ft.)	-Concrete		X	1-3-3-2 N=6		
118	4.0			913	-Seal hydra ted > bentonite 3 chips			4-7-7-11 N=14		
TE.GDT 8/13/18	<u>LEAN</u>	I TO FAT CLAY (CL/CH), dark gray				5—	M	3-5-5-7 N=10		
TERRACON_DATATEMPLATE.GDT	8.0	/ OLAY (OLAN)		909	-Riser Pipe 2" → diameter schedule 40 PVC. Flush			3-5-8-8 N=13		
ERRACON_D	SILI	<u>/ CLAY (CL/ML)</u> , gray			threaded to PVC Screen	θ-		2-1-1-2 N=2		
A CIT.GPJ T					-Filter Material silica sand. 16/30 grade			1-1-1-1 N=2		
D9185019 OPPD NEBRASKA CIT.GPJ								1-1-1-1 N=2		
9185019 OPF					-Screen 2" 1 diameter schedule 40 PVC slotted	5		0-0-0-0 N=0		
	18.0			898	screen, 0.010"		X	0-0-0-0 N=0		
SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-WELL		ng Terminated at 18 Feet								
EPARAT		on lines are approximate. In-situ, the transition ma	ay be gradual.		Hammer Type: Automatic					
H QITAN AUTON Aband	lonment Meth Il installed	w Stem Auger lod:			Notes: Bottom of well at depth of 18 Concrete pad, protector pipe, surface. Ground elevation estimated u Energy Transfer Ratio 84.6% 1.41 (October, 2017).	and 3 bolls sing Goog	le Ear	th.		
ING LC	WATE 6 ft. while	R LEVEL OBSERVATIONS	1600	acon	Boring Started: 07-12-2018	Boring	Comp	eted: 07-12-2018		
S BOF	2 Willio			O A Cir	Orill Rig: 929	Driller:	K. Sr	nithhisler		
Ĕ					Project No.: D9185019					