OPERATING RECORD REVISION 0

TITLE 40 CFR PART 257 SECTION 257.91

MONITORING WELL BORING LOGS, CONSTRUCTION FORMS, CONSTRUCTION REPORTS, AND WELL DEVELOPMENT DOCUMENTATION

LOCATION: HAVANA POWER STATION LEGAL ENTITY: DYNEGY MIDWEST GENERATION, LLC UNIT IDENTIFICATION NUMBER: 701 UNIT NAME: HAVANA EAST ASH POND (CELLS 1, 2, 3, AND 4) MONITORING WELL BORING LOGS

HAMW BORING NO. 130 DATE 10-29-92 W. &A. FILE NO. 5558	NEY 8	ASS ORPORATED Nebraske	OCIA Avenue S 61604	TES	во	RING	LOG
SHEETOF			LOCA	_{TION} Ha	vana,	Illin	ois
BORING LOCATION N14, 661; E5884			DRILL	ED BY Fe	hl		
BORING TYPHOLLOW-Stem Augers Continuous	Tube	HER CON	DITIONS _	Partiy	Cloud	<u>y & Li</u>	450.
GROUND SURFACE ELEVATION 469.6	_ SEEP		RELEVATI	ONAT	$\frac{24+}{24+}$	UN	454.
BORING DISCONTINUED AT ELEVATION 439.6	_ GROL	ND WATE	R ELEVAT	ION AT CO	MPLETION	N N	-
DESCRIPTION	DEPTH	SAMPLE TYPE	N	Qp	Qu	Da	Mc
Dark Brown SANDY CLAY LOAM Organic						<u> </u>	
Brown SANDY CLAY	5	СТ					
Orange-Brown And Brown, Fine- To Medium-Grained SAND	_ 05						
		ст					
	_ 10						
		CT					-
	_ 15						
		CT					
	_ 20						
		СТ	1	- - 			
Brown Medium-Grained SAND	_ 25			10 M			
Provit Heatam_Brather SYAD		СТ					
	- 20					المندلة ومعروبين	
EXPLORATORY BORING DISCONTINUED							
- BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES S - SPLIT SPOON SAMPLE	·	Qp - CAL Qu - UNC Dd - NAT Mo - NAT	IBRATED I CONFINED URAL DRY	PENETRON COMPRES OENSITY	AETER REASSIVE STRI	 ADING - 1 ENGTH - 1	.S.F. T.S.F.

HAMW BORING NO. 131 DATE 10-28-92 W. & A. FILE NO. 5558 SHEET 2 OF 17	TNEY 2406 Wes PEORIA,	& ASS CORPORATED I Nebraska ILLINOI	Avenue S 61604	ATES 4	во	RING	LO
PROJECT ILLINDIS POWER ASH POND			LOCA	TION Ha	vana,	Illind	ois
BORING LOCATION			DRILL	ED BY <u>Fe</u>	hl		
SOUCIASSIFICATION SYSTEM U.S. B.S. C		THER CON	DITIONS _	Partly	<u>Cloud</u>	iy & Co	<u>iol</u>
GROUND SURFACE ELEVATION430_1	L SEEP L. GROI	AGE WATE	H ENCOU	NTERED A	T ELEVAT ウ4 +	ION	±33 151
BORING DISCONTINUED AT ELEVATION		JND WATE	RELEVAT			- HRS. <u></u> N	<u> z</u> j j
DESCRIPTION	DEPTH	SAMPLE	N		 Ou		
Dark Brown SANDY FLAY LOAK Organic				· · · · ·			<u> </u>
Topsoil	_ 6 *						
Dark Brown And Brown, Fine- To	<u> </u>	CT					ļ
Redium-Grained SAND	-						
orden, rine- to neurum-orained SAND					ĺ		
		ст					
	j		ĺ				
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Light Brown, Fine-Grained SAND		CT				[
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- BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER	···· · · · · · · · · · · · · · · · · ·	⊇o - CALIB	RATED P				F
S - SPLIT SPOON SAMPLE	([Ju - UNCO Dd - NATUS	NFINED C	OMPRESS		NGTH - T.S	5.F.
- SHELBY TUBE SAMPLE	ň	Ac - NATUR	RAL MOIS	TUBE CON			

h

BORING NO.HAMW-131	(CONTINUATIO				DATE	10-28	-92
ROJECT <u>Illinois Power Ash Pond</u> OCATION <u>Havana, Illinois</u>				SHEET W. & A. F	3	_ OF5	17 558
DESCRIPTION	DEPTH IN FEET	SAMPLE	N	Q _p	Qu	Da	Mc
See Sheet 2 of 17							
Light Brown, Fine- To Medium- Grained SAND		ст					
		СТ					
	34						
		ст					
	38						
	-						
	-42	СТ					
EXPLORATORY BORING DISCONTINUED	-46						
	-						
	50						
	-54						
·							
BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES - SPLIT SPOON SAMPLE - SHELBY TUBE SAMPI F		2p - CALIBR 2u - UNCON 2d - NATUR 1c - NATUR	ATED PE FINED C AL DRY D AL MOIST	NETROMET OMPRESSIV ENSITY - P	FER READI VE STRENC LC.F. FENT - %	NG - T.S.F ITH - T.S.F	i.



												Pag	ge 1	of	3
Facili	ty/Projec	rt Nam	ne Gu u:		License/	Permit/	Monitor	ring Nı	umber		Boring	Numb	er	20	
Hav	ana Po	ower	Station	1 forow chief (first last) and Firm	Data Dr	illing St	ortad			ata Drilli	na Cor	HAN	VIW-	<u>39</u>	ing Mathad
Borin	g Diniec	bima	iname o	r crew chief (first, fast) and Firm	Date DI	ining St	aneu				ing Cor	npieted		bi	
Cas	ani Joc scade	mms				6/9/	2015				6/9/2	015			liger
				Common Well Name	Final Sta	atic Wa	ter Leve	el	Surfa	ce Eleva	tion	010	Bo	orehole	Diameter
				HAMW-39	Fe	et (NA	AVD88	3)	46	6.20 F	eet (N	AVD8	38)	8	.3 inches
Local	Grid Or	igin	(es	stimated:) or Boring Location		st 40)° 16	' 36	746 "	Local C	Grid Lo	cation			
State	Plane I	,314	,/38.84	4 N, 2,321,677.08 E E/W		در ۱۱ <u>۱</u>	<u> </u>	<u> </u>	<u>,</u> วาว"]N		
Facili	1/4 tv ID	of	1	/4 of Section , I N, K	Lon	g/	<u>-</u> Civil Ta		$\frac{223}{\text{tv/or}}$	Village	Fe	et 🗋	18		Feet W
i uein	iy ib			Mason	[llinois		Hava	na	<i>i</i> y/ 01	, mage					
Sar	nple										Soil	Prope	erties		
	2 (I		L	Soil/Rock Description											
	tt. & sd (ii	unts	Fee	And Geologic Origin For						sive (tsf)					ts
ber Type	th A vere	, Co	h In	Each Maior Unit		S	hic	ram		pres	ture	L E	icity <		/ men
um Du	leco	Blow	Jept] S (Jrap	Vell Diag	2	Com	Aois Cont	imi	last	200	COD COL
1	24	3		0 - 1.1' TOPSOIL: (ML)s, dark brown (10YR	3/3),								цц		
SS	24	6 8	-0.5	grass and roots in top 4", dry to moist.	,		↓ [↓] ↓								
			E_10				↓	Š Š	\langle						
			E .	1.1 - 2' SILT: ML, very dark brown (10YR 2/2),		ť mľ								
			E ^{-1.5}	5-15% sand, trace wood debris, cohesive, low plasticity, dry.	I	ML									
2	24	2	E-2.0	2 - 5.1' SILT: to LEAN CLAY: ML. very dark	brown		++++++								SS#2 300lb
SS	24	5 4 5	-2.5	(10YR 2/2), cohesive, medium plasticity, dry to	0										hammer.
			E_30	moist.											
			E												
			E-3.5			ML									
3	24	5	<u>-</u> 4.0												WOH =
SS	19	3 2 3	E-4.5												Weight of
			Eso												nammer
1			E	5.1 - 35' POORLY-GRADED SAND: SP, da											
			E-5.5	yellowish brown (10YR 4/4), fine sand, dry.											
4	24	1	<u>-6.0</u>	6' moist											
ss	14	3 4 6	E-6.5												
		Ū	E 70												
1			E /.0												
			E-7.5			SP									
5	24	1	-8.0	8' - 9 6' light vellowish brown (10YR 6/4) and	dark										
ss	19	2 3 4	-8.5	yellowish brown (10YR 3/4) seams, wet.	uunt										
			E												
/															
I			E-9.5												
	-		-10.0												
I here	by certif	y that	the info	rmation on this form is true and correct to the bes	st of my k	nowled	lge.								

Signature Part M H-fb	Firm Natural Resource Technology 234 W. Florida St., Fifth Floor, Milwaukee, WI 53204	Tel: (414) 837-3607 Fax: (414) 837-3608
	Template: ILLINOIS BOPING LO	C Project: 2285 HAVANA CINT CDI

Template: ILLINOIS BORING LOG - Project: 2285 HAVANA GINT.GPJ



Boring Number HAMW-39

Page 2 of 3

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Sar	nple							Soil	Prope	erties		
	2 3		L L	Soil/Rock Description							1	
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r pe	At	jou	l I	And Geologic Origin For	l so	<u>ы</u> Е	h (i	e t		ty	1	ent
Ty	gth ove	B B	th]	Each Major Unit	Ü	phi I	ngt	stu ten	it di	tici	0	
Inv	Sec	3lo) Oep		C S	Gra Wel	Stre	No.	let in	Plas	52(02 10
6	24	2		5 1 - 35' POORLY-GRADED SAND: SP dark								
SS	18	4 4	E 10 5	yellowish brown (10YR 4/4), fine sand, dry.							1	
IV		3	E 10.3	(continued)							1	
X			-11.0									
IA			E	11.2' find to modium cond								
1			E-11.5									
		_	E-12.0									
7	24	2	E									
55	20	2	E-12.5									
IV			E130									
1			E 15.0									
1			-13.5									
			E									
8	24	0	E ^{14.0}	14' -14.4' very fine sand, dark yellowish brown								
SS	15.5	1	E-14.5	(10YR 3/4).								
IV			E.I	14.4 - 15.3 fine sand, yellowish brown (10YR 5/4).								
۱. I			E ^{-15.0}			12. 6. 12						
			E-15.5									
1	V I		E I									
9	24	0	E ^{-16.0}	16' - 19.8' trace medium sand.								
SS	19	2	E-165									
IV		2	E									
ΙÅ			E-17.0									
			E-175									
1	V I		E									
10	24	2	E ^{-18.0}									
SS	21.5	1	E-185		SP							
IV		i	E									
ΙÅ			E-19.0									
			E-19.5									
/	V I		E									
11	24	WOH	E-20.0									
SS	21.5	WOH	E-20.5									
IV		I	E									
ΙÅ			E ^{-21.0}									
			E-21.5									
1	V I		E			(******						
12	24	WOR	E ^{-22.0}	22' - 24' trace fine gravel.								
SS	24	WOR 1	E-22.5	J. J								
IV		2	E									
ΙX			E-23.0									
			E-23 5									
/	V I		E 20.0									
13	24	2	E-24.0	24' - 25 7' dark vellowish brown (10YR 3/4) mostly								
SS	20	2	E-24 5	fine sand, trace medium sand to fine gravel.								
IV		4	E 21.3									
X			E-25.0									
1/			E255								1	
			₽ ^{23.3}									
14	24	3	E-26.0	26' - 30' trace medium and coarse sand								
ss	24	3	E-265									
V	۱ I	/	F 20.5								1	



Boring Number HAMW-39

Page 3 of 3

Sar	nnle									Soil	Prop	erties	01	
<u> </u>										5011	TTOP			
	(ii)	ats	eet	Soil/Rock Description					ve sf)					
ar pe	Attered	Cour	In F	And Geologic Origin For	S	ى د	E		essi th (t	re t		ity		ents
1 Ty	ngth cove) w	pth	Each Major Unit	C	g ghi	All Agra		mpr engi	vistu nter	luid nit	stic	00	D/
Nu	Lei Re	Blc	De		n S	Log Log	Ne Di		Co Str	CΫ́	Lic	Pla Ind	P 2	Co RC
Ν	/		E-27.0	5.1 - 35' POORLY-GRADED SAND: SP, dark										
				(continued)										
/			$E^{-27.5}$											
15	24	4	-28.0				l∶∐:`							
SS	24	4	E-28 5											
		9												
I.			E-29.0	29' medium to coarse sand seam (3" thick).										
			E-29.5				l:∃:							
		F	E-30.0											
SS I	24 24	3 5	E 20.5]:∃:							
N		6	E 30.5											
IX			= 31.0		SP									
ľ			-31.5											
			E-32 0	31.8' strong brown (7.5YR 4/6) mottling,										
17 SS	24 17	8 10 11	E J2.0	medium-grained sand.										
		14	E-32.5	yellowish brown (10YR 4/4).										
X			E-33.0											
			=-33.5											
			E				ŀ.∃.							
18	12	9 16	= 34.0											
33	°		E-34.5											
Ľ	4		E-35.0	25' End of Boring		220		-						
				33 End of Bonng.										
					I									



			20		_							Paş	ge 1	of	3
Facili	ty/Projee	ct Nan	ne		License/	Permit/	Monito	oring N	lumbo	er	Boring	Numb	er	10	
Hav	ana Po	ower	Station	1 foreversion of (first least) and Firm	Data Dri	llin a Ci	outed			Data Dmill	ma Can	HAI	VI W	40	ing Mathad
	g Di lice	и Бу. hima	maine o	r crew chief (first, last) and Firm	Date DI	ning Si	laiteu		1	Jate Dilli	ing Coi	npieteu		bin	llow stom
Cas	ann Joe scade		CII			6/11	/2015	5			6/11/2	2015		au	ger
				Common Well Name	Final Sta	tic Wa	ter Lev	vel	Surf	àce Eleva	tion		Bo	rehole	Diameter
				HAMW-40	Fe	et (NA	AVD8	(8)	4	67.43 F	eet (N	AVD	38)	8	.3 inches
Local	Grid Oi	rigin		stimated:) or Boring Location		+ 40)° 1	6' 44	338	" Local (Grid Lo	cation			
State	Plane I	1,315	,507.2	5 N, 2,321,892.58 E E/W			<u> </u>	<u> </u>	2 122]N		Ε
Facili	1/4	of	1	/4 of Section , T N, R	Long	390	<u> </u>	$-\frac{-52}{0}$	Vity/ 0	– r Village	Fe	et 🗋			Feet W
i aciii	iy iD			Mason	Illinois		Hava	ana	ny/ u	i vinage					
Sat	nnle			IVILIONI	minois		liuve				Soil	Prope	erties		
				Soil/Pook Description											-
	tt. & d (ir	unts	Feet	And Geologic Origin For						sive (tsf)					N.
ype Jype	h A vere	Cot	l In	Fach Major Unit		S	nic	une.		oress gth (ure	q-	city		nent
umb T pr	engt	low	epth			S	rapl	/ell	In I	omp	loist	iqui	lasti dex	200	OD OD
	24	<u>n</u>		0 - 1' SILTY SAND: SM very dark brown (1)	0YB				<u>थ</u>	S C	20		E F	Р	200lb
ss		WOH	F	2/2), trace roots, cohesive, nonplastic, dry to	moist.	SM			ÿ						hammer
		,	-1						8						used.
			E	yellowish brown (10YR 3/6), fine sand, traces	silt,										
			<u>-2</u>	increased silt content with depth, dry to moist	t.	SP									
2 SS	24	1 5 8	F	2' dry.		L									WOH = Weight of
		13	E_2	2.5 - 8.6' SILT WITH SAND: (ML)s, very data brown (10YB 2/2) trace red mottling, cobesiv	rk /e										Hammer
1/				nonplastic, dry.	,			•							
			F.												
3	24	3 11	E-4												
55	16	6 7	F					•							
)			-5				. 								
			E			(ML)s									
4	24	1	-6	6' very dark brown (7.5YR 2.5/3), low plastic	itv.			•							
SS	16	2 3 4	F		,										
			-7												
			E												
_ F		1	-8				. + .f	·							
SS	24	1 2	E												
		3	-9	8.6 - 34.5' POORLY-GRADED SAND: SP,	dark dark										
			F	brown (10YR 3/3) silty sand seams, dry.	uark										
			E												
6	24	1				SP									
		2	 			.									
			E												
			È .a												
	1		<u>-12</u>												
I here	by certif	ty that	the info	ormation on this form is true and correct to the be	est of my k	nowled	ige.								

Signature Patri M H-H	Firm Natural Resource Technology 234 W. Florida St., Fifth Floor, Milwaukee, WI 53204	Tel: (414) 837-3607 Fax: (414) 837-3608
	Template: ILL INOIS BORING LO	G Project: 2285 HAVANA GINT CDI

Template: ILLINOIS BORING LOG - Project: 2285 HAVANA GINT.GPJ



Sample

SOIL BORING LOG INFORMATION SUPPLEMENT

Page 2 of 3

Soil Properties

Boring Number HAMW-40

	USCS	Graphic Log	Well Diagram)	Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
P, dark ce dark <i>continued)</i>										
sand moist to										

	(in) (in)	ıts	eet	Soil/Rock Description					e	1					
er	n Att ered	Cour	In F	And Geologic Origin For	s	. <u>.</u>		E	ressi ¹	tile +			ity		ients
d Tv	scove	0 M 0	epth	Each Major Unit	SC	aphi	ell	agra	Iduic	oistu	quid	mit	astic dex	200	QD/
	74	2 2	ļă	8.6 - 34.5' POORLY-GRADED SAND: SP. dark		J J	3	5	Ŭ Ĉ		E	Ξ	II II	Р	ŭ K
śs	22	3 4 4	E	yellowish brown (10YR 4/4), fine sand, trace dark											
	X		-13	brown (101R 3/3) sitty sand seams, dry. (conunded)											
			-	13.5' wet.											
8	24	1	-14	14' moist.			2 2								
SS	18	3	-												
	ÅI – I														
			-												
9 SS	24 24	2 1 2	- 10	16' dark brown (10YR 3/3), trace silt, few sand seams[dark vellowish brown (10YR 4/4)], moist to											
		1	- 17	wet.											
	$\langle \rangle$														
10	24		-18	18' fine to medium sand trace gravel											
SS	24.5		-												
	X		- 19												
11	24	1 WOH	-20 -	20' trace coarse sand and fine gravel, wet.											
33	15	WOH	- 21				2 2								
	N		- 21												
12	24	1	-22	201 trace alow padulas	SP										
SS	24 22	WOH 1 WOH		zz trace clay hodules.											
	X		-23												
13	24	3 1	24	24' no clay.											
55	15	1 1					E								
	A l		25 												
			-26												
14 SS	24 15	1 7 1		26' silt (30-50%).											
	X	2	-27												
	$\langle \rangle$		E F	27.1' black silt.											
15	24	3	-28	28' trace gravel, no black material.											
SS	17	4 1 4					ŧΕ								
			29												
			- 20												
16 SS	24 15	5 4 6		30' very fine sand, trace coarse sand and clay nodules, no gravel, wet.											
	X	18	-31	-											
L	-		-32				ŕΕ								



Boring Number HAMW-40

		-	2.5	Boring Number HAMW-40							Pag	ge 3	of	3
San	nple									Soil	Prope	erties		
	& in)	s	et	Soil/Rock Description					• ()					
o	Att. ed (ount	I Fe	And Geologic Origin For					ssiv (tsf	0		~		ıts
lber Typ	gth /	Č	h Ir	Each Major Unit	CS	hic	ram		pre:	sture	id t	icit. x	0	0/ mei
, pur	Leng	3lov	Dept	-	S	Jrap	Vell Diag		Com	Mois Cont	imi	last	20	Com QI
17	24	I	_	8.6 - 34.5' POORLY-GRADED SAND: SP, dark						10	I		I	<u> </u>
SS	24		-	yellowish brown (10YR 4/4), fine sand, trace dark										
X			-33	32' fine sand, trace coarse sand to fine gravel.										
\wedge					SP		:目:							
			-34											
18 SS	12 9													
	Ū			34.5' End of Boring.										
			I		I	I	I	I	I			I		



					Page 1 of							3			
Facilit	ty/Proje	ct Nan	ne		License/F	ermit/	Monito	ring N	umber	Boring Number					
Hav	ana Po	ower	Station	1 forow chief (first lost) and Firm	Data Dail	line C4	orted			Date Drilling Completed				41	ing Mathad
	g Dilleo	и Dy. hima	name 0								ng Con	ipieted		h	llow stom
Cas	scade	111115			6/10/2015					6/11/2	2015		auger		
				Common Well Name	Final Static Water Level Surfac				Tace Elevation Borehole Diameter				Diameter		
				HAMW-41	Feet (NAVD88) 465				.65.10 Feet (NAVD88) 8.3				.3 inches		
Local	Grid Or	rigin 1 216	[] (es	stimated: \Box) or Boring Location \boxtimes	1 Local C					Grid Location					
State Flate 1,510,000.50 IV, $2,525,496.70$ E E/W					Long	$L_{ang} = -90^{\circ} - 4' - 12.693''$					Fo	at []N]s		Eeet W
Facili	ty ID	01	1	County Section (Section)	State	,	Civil T	own/C	ity/ or	Village	10				
	2			Mason	Illinois		Hava	na	-						
Sar	nple										Soil	Prope	erties		
	in) &	s	et	Soil/Rock Description						• ()					
. e	Att.	ount	1 Fe	And Geologic Origin For						ssiv. I (tsf	o		v		nts
Typ	gth over	Ŭ 8	th I	Each Major Unit		СS	phic	l pran		ngth	stur tent	it di	ticit	Q	June O
Nur and	Len	Blo	Dep			U S	Graj Log	Wel Dia		Con	Con	Liqu	Plas Inde	P 2(RQI
1	24	1	È a F	0 - 0.7' TOPSOIL: SP, very dark brown (10Y	/R	00	\downarrow^{\vee}								300lb
55	21	2	E ^{-0.5}	0.7-35' POORI X-GRADED SAND' SP dt		5P 									used.
IX			E-1.0	yellowish brown (10YR 4/6), fine sand, dry.											
	V		= 1.5												
2	24	1	E-2.0	2' dry to moist											
ss	20	1	-2.5												
			E-3.0												
1/			E35												
			E_10												
3 SS	24	2 2 2													
		2	E-4.5		(1.0)										
I.			E-5.0	diameter), trace clay nodules, trace very dark	(1-2 c brown										
	V		E-5.5	(10YR 2/2) seams.											
4	24	4	6.0	6' dry.		SP									
ss	24	2 1	E-6.5												
			E-7.0												
/`			E-7.5	7.1' wet.											
			E-8.0												
5 SS	24	1 2 2	Ess	8' moist to wet.											
		1	E o.o												
IA			E 9.0	8.9' interbedded layers of medium sand yello brown (10YR 5/4) and fine sand[dark yellowis	sh										
ľ	V		E ^{-9.5}	brown (10YR 4/6)].											
6	24	2	E ^{-10.0}	10' moist.											
ss	17	1	E-10.5												
<u> </u>							1. 1997								
I here	by certi	fy that	the info	ormation on this form is true and correct to the be	est of my k	nowled	lge.								

Signature MILIA	Firm Natural Resource Technology	Tel: (414) 837-3607
Fare I Happ	234 W. Florida St., Fifth Floor, Milwaukee, WI 53204	Fax: (414) 837-3608
	Template: II I INOIS BORING L	C Project: 2285 HAVANA CINT CDI

Template: ILLINOIS BORING LOG - Project: 2285 HAVANA GINT.GPJ



D · M I

Boring Number HAMW-41 Page 2 of 3										3				
Sar	nple									Soil	Prope	rties		
	& (in)	ts	set	Soil/Rock Description					/e (f)					
r Se	Att. red	uno	n Fe	And Geologic Origin For			2		essiv h (ts	e		ţ		ints
Tyl	gth	ωC	oth I	Each Major Unit	C	phic	ll grar		npre	istur	uid nit	stici ex	8	D/
Nur and	Len Rec	Blo	Dep		U S	Gra	We Dia		Cor Stre	Moi Cor	Lim	Plas	P 2(RQ
			Ē	0.7 - 35' POORLY-GRADED SAND: SP, dark										
X			= 11.5	(continued)			2 2							
7	24	1	E-12.0	12' trace medium sand and fine gravel, moist to wet.			2							WOR =
SS	17	1 1	E-12.5				8							Weight of
I X			E-13.0				2							nous
			E-135				2							
			E 14.0				2							
8	24	1 WOR	E 14.0				3							
33	15	1 2	E-14.5											
X			E-15.0	14.8' medium sand seam (1" thick).			2							
			E-15.5											
۹ H	24	2	E-16.0				3							
ss	19	2	E-16.5	16.4' medium sand, vellowish brown (10YR 5/6)			3							
Į		-	E 17 0				8							
IA			E 17 5				,							
							,							
10	24	1 1	E 18.0	18' wet.			3							
SS	18.5	2 3	E-18.5				2 2							
X			E-19.0				2 2							
			E-19.5											
			E-20.0				2							
SS	24 24	2	E-20.5	20' fine sand, trace fine gravel.	SP		2 2							
IV		6	E 21.0				8							
IA			E 21.0				8							
			E ^{-21.5}				2							
12	24	1	E-22.0				5							
SS	24	3 4	E-22.5											
X			E-23.0											
			-23.5											
Ļ			E-24.0											
13 SS	24 24	3 4 6	E-24 5											
IV		11	E 24.5]						
I A			E-25.0											
			E ^{-25.5}											
14	24	4	= 26.0											
SS	19	7 9	E-26.5					:						
IX			-27.0											
IV			E-27.5				 :目:	1						
			E-28 0											
15 SS	24	4 7 12						1						
		15	E 20.5											
ľ			E ^{29.0}				l E	1						
	1 I		i l		I	1	1	1	I I		I	i I		l .



Boring Number HAMW-41

3 3 Page of Sample Soil Properties Length Att. & Recovered (in) Soil/Rock Description Compressive Strength (tsf) In Feet Blow Counts RQD/ Comments Number and Type And Geologic Origin For Moisture Content Plasticity Index Diagram USCS Graphic Liquid Limit Depth] Each Major Unit P 200 Well Log 0.7 - 35' POORLY-GRADED SAND: SP, dark -29.5 2 yellowish brown (10YR 4/6), fine sand, dry. E -30.0 (continued) 16 SS 24 4 8 14 18 E 22 30.5 31.0 31.5 32.0 32.5 33.0 31.8' trace gravel. 17 SS 24 24 8 14 20 25 32' fine to medium sand, trace fine gravel. SP -33.5 -34.0 18 SS 12 9 20 34' trace coarse sand, no gravel. 12 34.5 35.0 35' End of Boring.



														Pag	ge 1	of	3
Facilit	y/Projec	et Nan	ne Cu u		License/Permit/Monitoring Number							40					
Hav	ana Po	ower	Statioi	1 forew shief (first least) and Firm		lata Dri	lling St	ortod			Dat	Drilli	Drilling Completed			42	
Ade	m Ioo	i By. hime	on	r crew chief (first, fast) and Firm	Date Drining Started				Date Drining Completed			bollow stom					
Cas	cade	111115			6/12/2015				6/16/2015 aug			ger					
				Common Well Name	F	Final Static Water Level Surface Elev					Elevat	levation Borehole Diameter				Diameter	
				HAMW-42	Feet (NAVD88) 479.20					.20 Fe	eet (N	AVD8	38)	8	.3 inches		
Local	Grid Or	igin	$\begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	stimated: \square) or Boring Location \square		Lat 40° 17' 7.41"					_						
1/4 of 1/4 of Section T N R						Lon	-90)° ∠	 1'	6.07	3"		Fo	at []N]s		Eeet UW
Facilit	y ID	01	1	County	Sta	te	<u> </u>	Civil T	own/	City/	or V	illage	10				
	-			Mason	I11	inois		Hava	ina	2							
Sar	nple												Soil	Prope	erties		
	k (in)	s	et	Soil/Rock Description								e ()					
e .	Att. red (ount	n Fe	And Geologic Origin For						_		ssiv 1 (tsl	e		x		nts
Typ	gth ove	w C	oth L	Each Major Unit			CS	phic		gran		npre	istur itent	uid it	sticit	8	D/
Nur and	Len Rec	Blo	Dep				U S	Gra Log	Ne.	Dia		Cor Stre	Cor	Lin	Plas	P 2(Cor
1	24	1	-	0 - 0.5' POORLY-GRADED SAND WITH S	SIL'	T: ly fine :	SP-SM			\mathbb{X}							300lb
	20.5	1	E_1	sand, few roots, moist.		/			Ø	Ø							used.
			E	0.5 - 32.5' POORLY-GRADED SAND: SP,	da	rk											
2	24	3	-2	2' trace silty sand seams [dark vellowish bro	u, 11	10131.											
ss	19	1	F	(10YR 3/4)].	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,												
X		5	-3														
/	V		Ē,														
3	24	1 2	E-4	4' no silty sand seams.					8								
55	20	2 2	E_5														
I/			E														
,	24	1	-6	6' four eiltr cond coome													
ss \	24 18	2	Ē	6 few sitty sand seams.													
X		2	-7														
	V		E				SP										
5	24	1	E-8														
ss	20	1 2	F o														
I/			Ē						8								
			E_10						8								
6 SS	24 21	1 1 1	E	10' trace silt.													
X		1	-11														
/			F						8 2								
7	24	1	-12						8 2								
ss	22.5	2	Ē						8								
I)			\mathbb{E}^{13}														
	4		E_14														
I here	by certif	fy that	the info	prmation on this form is true and correct to the b	est	of mv k	nowled	lge.	1					1	1		<u> </u>
						<i>,</i> , ,		<u> </u>									

Signature	And M Happ	Firm Natural Resource Technology 234 W. Florida St., Fifth Floor, Milwaukee, WI 53204	Tel: (414) 837-3607 Fax: (414) 837-3608
		Temmleter II I NIOR DODNIC LOC	Designet, 2295 HAVANA CINT CDI

Template: ILLINOIS BORING LOG - Project: 2285 HAVANA GINT.GPJ



Boring Number HAMW-42

Page 2 of 3

Sa	mple			Soil Properties										
Number and Tyme	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram		Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
8 SS	24 17	1 5 5	-15	0.5 - 32.5' POORLY-GRADED SAND: SP, dark yellowish brown (10YR 4/6), mostly fine sand, moist. <i>(continued)</i> 14.3' dark yellowish brown (10YR 4/6).										
9 SS	24 21	2 4 7 8	-16	16' - 17.8' trace discoloration (oxidation, strong brown).										
10 SS	24	4 6 6 10	-18											
11 SS	24	2 5 6 9	-20				- - - - -							
12 SS	24	2 5 6 7	-22	22' trace gravel.	SP									
13 SS	24 24	3 4 5 5	-24											
14 SS	24 13	6 2 4 8	-26											
15 SS	24 12	2 5 7 8	-28 29				2							
16 SS	24 20	4 7 10 9	-30	30' trace coarse sand to fine gravel. 31' wet.										
17 SS	24 23	4 5 5 5	-32	32.5 - 32.9' POORLY-GRADED GRAVEL: (SP)g, 30-50% fine to coarse subrounded to rounded / \gravel	ـــــــــــــــــــــــــــــــــــــ	2		•						
18 SS	24 15	2 1 1 4	-34	32.9 - 44' POORLY-GRADED SAND: SP, dark yellowish brown (10YR 4/4), mostly fine sand, trace coarse sand, wet. 34' trace coarse sand to fine gravel, trace black coarse grained material, moist.	SP									
19 SS	24 14	5 7 3 3	-36	36' coarse sand to fine gravel (5-15%).				•						



$\mathbf{P} = \mathbf{W} + \mathbf{W} +$

Boring Number HAMW-42 Page										e 3	of	3		
San	nple									Soil	Prope	rties		
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram		Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
20 SS	24 15.5	3 8 14 5	38 39	32.9 - 44' POORLY-GRADED SAND: SP, dark yellowish brown (10YR 4/4), mostly fine sand, trace coarse sand, wet. <i>(continued)</i>										
21 SS	24 23	3 3 4 11	40 41	40' coarse sand to gravel (0-15%).	SP									
22 SS	24 24	3 4 7 11	-42 -43	42' trace coarse sand to gravel.										
				44' End of Boring.										

Appendix A

TELEPHONE 309 673-2131

tests design reports analysis inspection consultation investigations Fehl

INSTALLED BY

I.



WHITNEY & ASSOCIA 2406 West Nebraska Avenue

PEORIA, ILLINOIS 61604

Monitoring Well Boring Logs ACGREGATES - ASPHALT - POZ-O-PAC SOILS AND GRAVEL SURVEYS MATERIALS QUALITY CONTROL SOIL MECHANICS AND FOUNDATION ENGINEERING ORILLING - CORING - TESTING

Proposed Performance

10-29-92 DATE

			TYPICAL 1	MONITORING WEI	LL DIAGRAM Renamed HAMW-30
	PROJECT	Illino N <u>Havar</u>	ois Power Ash a. Illinois	Pond	MONITORING WELL NO. <u>HAMW-130</u> INSTALLATION DATE <u>10-29-92</u>
	HUNITOR	ING WELL L	LOCATIONNI	4,001: 10004	
	ELEVATION 472.1	נדיזו (1) 2.5'			G VELL CAP
		<u>. V.,</u>		LOCAIRS PROTECTIY	E STEEL CASING
	469.6	0.0'		EXISTING GROUND S	URFACE
	466.5	<u>()</u> 3.1'		≡ 1) SURFACE SEAL	1. SUPPLE SEL Concrate Encasement 2. AREULAR BACKFILL Cement/
				2)	3. LOVER SEAL Bentonite Pellets
					4. RISER TYPE <u>2" I.D. PVC</u>
	<u>455.6</u> 454.7	()14.0' ()14.9'			6. SCREER TYPE 2" I.D. PVC
	453.0	<u>()16.6'</u>))	SLOT SIZE 0.010 LEGGTE 9.0
	449.9	(-) 19. / .		JOINT RISER	RENCHMARK <u>USGS-Illinois</u> Power
)FILTER MEDIA	Hollow Stem Augers YATER LEVEL @ 24+ HOURS 454.7
				2 . I.D. FLUSE	JOIXT
				YELL STREET	
-	440.9 440.5 439.6	$\frac{()28.7'}{()29.1'}$		BOWITORING VELL SU	
_	<u></u>	<u>(950,0</u>		<u> </u>	WHITNEY & ASSOCIATES -







Facility/Project Name	Local Grid Location of Well		Well Name	
Havana Power Station	ft. □ S	$_{ft.} \square W.$		
Facility License, Permit or Monitoring No.	Local Grid Origin 📋 (estimated: 🗌) of	or Well Location		
	Lat. <u>40°</u> <u>16'</u> <u>36.746''</u> Long. <u>-90</u>	$\frac{10^{\circ}}{2}$ <u>4'</u> <u>36.223''</u> or	HAMW-39	
Facility ID	St. Plane <u>1,314,738.84</u> ft. N, <u>2,321,67</u>	7.08ft. EE/Ŵ	Date Well Installed	
	Section Location of Waste/Source		06/09/2015	1.5.
Type of Well	1/4 of 1/4 of Sec, T	N, R□W	Well Installed By: (Person's Name and	1 Firm)
mW Distance from Waste/ State	Location of Well Relative to Waste/Source	Gov. Lot Number	Adam Jochimsen	
Source State	$u \square Upgradient s \square Sidegradient$	nt	Cascade	
	d 🖾 Downgradient n 🗆 Not Known	1 Can and look?	Cuscude	
A. Protective pipe, top elevation	ff. (NAVD 88)	2. Protective cover p	ine:	
B. Well casing, top elevation46	68.59 ft. (NAVD88)	a. Inside diameter		4.0 in.
C. Land surface elevation46	66.20 ft. (NAVD88)	b. Length:		<u>5.0</u> ft.
D. Surface and hattain 465.2 A QUAN		c. Material:	Steel	\boxtimes
D. Surface seal, bottom $-\frac{103.2}{1000}$ fl. (NA)			Other	
12. USCS classification of soil near screen:		d. Additional prot	ection?	∃ No
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		If yes, describe		_
Bedrock		3. Surface seal:	Bentonite	
13. Sieve analysis attached? \Box Ye	es 🖾 No	\backslash	Other	
14 Drilling method used: Rotat		4 Material between	well casing and protective pipe:	_
Hollow Stem Aug			Bentonite	X
Othe			Sand Other	_ ⊠
		— 5 Annular space sea	al: a Granular/Chipped Bentonite [
15. Drilling fluid used: Water ⊠ 0 2 A	ir 🗆 🛛 👹	bLbs/gal n	ud weight Bentonite-sand slurry [
Drilling Mud 0 3 Nor	ie 🗆 🛛 👹 👹	cLbs/gal m	nud weight Bentonite slurry [
		d. <u>30</u> % Bentor	ite Bentonite-cement grout	\boxtimes
16. Drilling additives used?	S ⊠ NO	eF t^3	volume added for any of the above	
Describe		f. How installed	Tremie	
17. Source of water (attach analysis, if required	<u></u> 📓 📓		Tremie pumped	X
			Gravity	
Onsite Potable Well		6. Bentonite seal:	a. Bentonite granules	
ED () () () () () () () () () (TDOD 18.0 0	b. ∐1/4 m. ⊠	$3/8$ in. $\Box 1/2$ in. Bentonite chips \Box	⊠ □
E. Bentonite seal, top -440.2 ft. (NAV	D88) or 10.0 ft.	7 Fine sand materia	l: Manufacturer product name & mesh	size
E Fine sand ton ft (NAV	(D88) or f >			512.0
		b. Volume added	ft ³	-
G. Filter pack, top <u>443.2</u> ft. (NAV	(D88) or 23.0 ft.	8. Filter pack materi	al: Manufacturer, product name & mes	h size
		a. Red Fli	nt Sand and Gravel, Water Pack	_
H. Screen joint, top441.2 ft. (NAV	D88) or 25.0 ft.	b. Volume added	ft ³	
		9. Well casing:	Flush threaded PVC schedule 40	\bowtie
I. Well bottom 431.2 ft. (NAV	D88) or 35.0 ft.		Flush threaded PVC schedule 80	
121.2			Other [
J. Filter pack, bottom 431.2 ft. (NAV	D88) or 35.0 ft.	>10. Screen material:	Schedule 40 PVC	
431.2	25.0	a. Screen Type:	Factory cut	
K. Borehole, bottom 431.2 ft. (NAV	D88) or 55.0 ft.		Continuous slot	
L Darahala diamatan 83 in		h Manufacturer	Other	
L. Borenoie, diameter in.		c. Slot size:	0	.010 in
M Ω D well easing 2.38 in		d Slotted length		10.0 ft
	Ň	11. Backfill material (below filter pack): None	
N. I.D. well casing 2.07 in.			Other [
I hereby certify that the information on this form	n is true and correct to the best of my knowled	ge.	Date Modified: 12/1/2015	
Signature MILII	Firm Natural Resource T	echnology	Tel: (414) 837-3607	
U april 1 Hapt	234 W. Florida Street, I	Floor 5, Milwaukee, WI	53204 Fax: (414) 837-3608	



Facility/Project Name	Local Grid Location of Well		Well Name	
Havana Power Station	ft. □ N	_ft. $\Box W$.		
Facility License, Permit or Monitoring No.	Local Grid Origin 📋 (estimated: 🗌) o	r Well Location		
	Lat. 40° <u>16'</u> <u>44.338''</u> Long. <u>-90^{\circ}</u>	<u>4' 33.433"</u> or	HAMW-40	
Facility ID	St. Plane <u>1,315,507.25</u> ft. N, <u>2,321,892</u>	2.58 ft. E. E/Ŵ	Date Well Installed	
	Section Location of Waste/Source		06/11/2015	
Type of Well	1/4 of 1/4 of Sec T	NR DW	Well Installed By: (Person's Name and Fir	m)
mW	Location of Well Relative to Waste/Source	Gov. Lot Number	Adam Jochimsen	
Source Source State	u 🗆 Upgradient s 🗆 Sidegradien	nt	Casaada	
ft. Illinois	d 🛛 Downgradient 🛛 n 🗆 Not Known			
A. Protective pipe, top elevation	ft. (NAVD 88)	 I. Cap and lock? 2. Protoctive cover n 	inc:	NO
B. Well casing, top elevation 47	<u>10.23</u> ft. (NAVD88)	a. Inside diameter		in.
C. Land surface elevation46	<u>7.43</u> ft. (NAVD88)	b. Length:	5.0	ft.
D. Surface cool bottom 466.4 ft (NA)		c. Material:	Steel 🖂	
			\Box Other \Box	No
12. USCS classification of soil near screen: $CP \square GM \square GC \square GW \square SV$		If yes, describe	Three steel bollards	INO
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3. Surface seal:	Bentonite	
13. Sieve analysis attached? \Box Ye	rs 🖾 No	\backslash	Other	
14. Drilling method used: Rotar	v 🗆 🛛 📓 📓	4. Material between	well casing and protective pipe:	
Hollow Stem Aug			Bentonite	
Othe	er 🗆 🛛 📓 📓		Sand Other 🛛	
	📓 👹 🗕	— 5. Annular space sea	al: a. Granular/Chipped Bentonite	
15. Drilling fluid used: Water $\boxtimes 0.2$ A		bLbs/gal n	nud weight Bentonite-sand slurry	
		cLbs/gal n	nud weight Bentonite slurry	
16. Drilling additives used? \Box Ye	s ⊠ No	d. 50% Benton		
		eFt fHow installed	Volume added for any of the above	
Describe	🕅 🕅	1. TIOW Instance	Tremie pumped	
17. Source of water (attach analysis, if required	l):		Gravity	
Onsite Potable Well		6. Bentonite seal:	a. Bentonite granules	
		/ b. □ 1/4 in. ⊠	$3/8$ in. $\Box 1/2$ in. Bentonite chips \boxtimes	
E. Bentonite seal, top ft. (NAV	D88 <u>) or 17.0</u> ft.	c	Other	
		7. Fine sand materia	I: Manufacturer, product name & mesh size	;
F. Fine sand, top ft. (NAV	D88).orft.	a	Ω ³	
G Filter pack top 445.4 ft (NAV	(D88) or 22.0 ft	8 Filter nack materi	al: Manufacturer, product name & mesh siz	70
		Red Fli	nt Sand and Gravel. Water Pack	
H. Screen joint, top442.9 ft. (NAV	D88) or 24.5 ft.	b. Volume added	$ ft^3$	
		9. Well casing:	Flush threaded PVC schedule 40 \boxtimes	
I. Well bottom ft. (NAV	D88) or 34.5 ft.		Flush threaded PVC schedule 80 \Box	
122.0			Other	
J. Filter pack, bottom 432.9 ft. (NAV	D88) or 34.5 ft.	√10. Screen material:	Schedule 40 PVC	
K Porchole bottom 432.9 ft (NAX)	(D88) or 34.5 ft .	a. Screen Type:	Factory cut 🛛	
K. Borenoie, bottom it. (NAV			Other	
L. Borehole, diameter <u>8.3</u> in.		b. Manufacturer		
		c. Slot size:	0.010	_ in.
M. O.D. well casing <u>2.38</u> in.	\sim	d. Slotted length:	10.0	ft.
2.07		11. Backfill material	(below filter pack): None \Box	
N. I.D. well casing 2.07 in.			Other	
Lhereby certify that the information on this form	n is true and correct to the best of my knowled	0e	Date Modified: 12/1/2015	
Signature	Firm Natural Desource T	echnology	Tel: (414) 837-3607	
Fatel M Hall	234 W. Florida Street. F	Floor 5, Milwaukee, WI	53204 Fax: (414) 837-3608	
and the second sec				

Signature	1.1.1	.1 .1
	Ham	MHIA
	1	1 11-11-



Facility/Project Name	Local Grid Location of Well		Well Name
Havana Power Station	ft. □ S	$_{\text{ft.}} \square \overset{\square E.}{\square W.}$	
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated:)	or Well Location	
	Lat. 40° 16' 55.718" Long90	$\frac{0^{\circ}}{2}$ <u>4'</u> <u>12.693''</u> or	HAMW-41
Facility ID	St. Plane <u>1,316,660.50</u> ft. N, <u>2,323,49</u>	<u>8.70</u> ft. E. E/W	Date Well Installed
	Section Location of Waste/Source		06/11/2015
Type of Well	1/4 of 1/4 of Sec T	N. R□ W	Well Installed By: (Person's Name and Firm)
mw Distance from Wester	Location of Well Relative to Waste/Source	Gov. Lot Number	Adam Jochimsen
Source o State	$u \square Upgradient \qquad s \square Sidegradient$	ent	Cascade
T. Illinois	d ⊠ Downgradient n ∐ Not Know	n -	
A. Protective pipe, top elevation	ft. (NAVD 88)	2 Protective cover r	nine:
B. Well casing, top elevation46	57.95 ft. (NAVD88)	a. Inside diameter	$\frac{4.0}{10}$ in.
C. Land surface elevation 46	55.10 ft. (NAVD88)	b. Length:	<u>5.0</u> ft.
		c. Material:	Steel 🛛
D. Surface seal, bottom ft. (NAV	VD88) of ft.		Other
12. USCS classification of soil near screen:		d. Additional pro	tection?
$\begin{array}{c c} GP \Box & GM \Box & GC \Box & GW \Box & SV \\ SM \Box & SC \Box & MU \Box & MU \Box & SU \\ \end{array}$		If yes, describe	e: Infee steel bollards
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		3. Surface seal:	Bentonite
13 Sieve analysis attached? \Box Ye	rs ⊠ No	\backslash	Concrete 🛛
14 Drilling method yead		A Material between	well casing and protective pipe:
Hollow Stem Aug		4. Material between	Bentonite
Othe			Sand Other
			al: a Granular/Chinned Bentonite
15. Drilling fluid used: Water ⊠ 0 2 A	ir 🗆 🛛 👹	b Lbs/gal n	nud weight Bentonite-sand slurry
Drilling Mud 0 3 Non	ne 🗆 🛛 👹	cLbs/gal n	nud weight Bentonite slurry \Box
		d. <u>30</u> % Bentor	nite Bentonite-cement grout ⊠
16. Drilling additives used?	es 🖾 No	eFt ³	volume added for any of the above
Describe		f. How installed	: Tremie
17 Source of water (attach analysis if required			Tremie pumped 🛛
17. Source of water (attach analysis, if required			Gravity 🗆
Onsite Potable Well		6. Bentonite seal:	a. Bentonite granules
447.1		b. ∐ 1/4 m. ⊠	$3/8$ in. $\Box 1/2$ in. Bentonite chips \boxtimes
E. Bentonite seal, top 447.1 ft. (NAV	(D88) or 18.0 ft.	 C 7 Fine cond materia 	Uther L
E Eine cand tan (NIAN)		7. The sand materia	ii. Manufacturer, product name & mesh size
r. rine sand, top II. (NAV		/ a h. Volume added	
G Filter pack top 442.0 ft (NAV	$(D88) \text{ or } {}^{23.2} \text{ ft} > $	8. Filter pack materi	ial: Manufacturer, product name & mesh size
		a Red Fli	int Sand and Gravel, Water Pack
H. Screen joint, top440.1 ft. (NAV	(D88) or 25.0 ft.	b. Volume added	ft ³
		9. Well casing:	Flush threaded PVC schedule 40 \boxtimes
I. Well bottom ft. (NAV	/D88).or 35.0 ft.		Flush threaded PVC schedule 80 \Box
			Other \Box
J. Filter pack, bottom ft. (NAV	D88) or 35.0 ft.	> 10. Screen material:	Schedule 40 PVC
100.1		a. Screen Type:	Factory cut 🛛
K. Borehole, bottom 430.1 ft. (NAV	/D88) or 35.0 ft.		Continuous slot
			Other
L. Borehole, diameter 3.3 in.	*******	b. Manufacturer	0.010 ·
NOD II. 238 ·		c. Slot size:	$\frac{-0.010}{10.0}$ m.
IVI. U.D. well casing 2.50 in.		11 Backfill material	$(\text{below filter pack})$ None \Box
N I D well casing 2.07 in			Other
1.1.2. wen cubing iii.			
I hereby certify that the information on this form	n is true and correct to the best of my knowled	lge.	Date Modified: 12/1/2015
Signature A II II	Firm Natural Resource	Technology	Tel: (414) 837-3607
Farm 11 Happ	234 W. Florida Street,	Floor 5, Milwaukee, WI	53204 Fax: (414) 837-3608



Facility/Project Name	Local Grid Location of Well			Well Name	
Havana Power Station	ft. □ S	ft.	\square E. \square W.		
Facility License, Permit or Monitoring No.	Local Grid Origin 📋 (estin	nated: 🗌) or W	Vell Location		
	Lat. <u>40°</u> <u>17'</u> <u>7.410''</u>	_ Long. <u>90°</u>	<u>4'</u> <u>6.073"</u> or	HAMW-42	
Facility ID	St Plane 1,317,844.15 ft 1	2,324,010.38	ftE F/®	Date Well Installed	
	Section Location of Waste/Sou	irce		06/16/2015	
Type of Well	1/4 6 1/4 60	т	N D E	Well Installed By: (Person's Name and	nd Firm)
mw	1/4 OI 1/4 OI See	c, 1	N, K W	Adam Jochimsen	
Distance from Waste/ State	u Upgradient s	□ Sidegradient	Gov. Lot Number		
Source ft. Illinois	d ⊠ Downgradient n	□ Not Known		Cascade	
A. Protective pipe, top elevation	ft. (NAVD 88) •	/I	. Cap and lock?	🛛 Yes	🗆 No
	1.05 0 0100000	$-\sqrt{2}$	2. Protective cover pi	pe:	
B. Well casing, top elevation	(1.95) fl. (NAVD88)		a. Inside diameter:	_	4.0 in.
C. Land surface elevation 47	<u>9.20</u> ft. (NAVD88)		b. Length:	_	<u>5.0</u> ft.
D Surface seal bottom 478.2 ft (NA)	/D88) of .0 ft .	N. I. I.	c. Material:	Steel	\boxtimes
				Other	
12. USCS classification of soil near screen:			d. Additional prote	Ction? X Yes Three steel bollards	∐ No
$\begin{array}{c c} GP \sqcup GM \sqcup GC \sqcup GW \sqcup SV \\ SM \sqcap SC \sqcap M \sqcap M \sqcap C \\ \end{array}$			If yes, describe:		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		8 🕅 🔪 🍾	3. Surface seal:	Bentonite	
13 Sieve analysis attached? \Box Vé	× XI No			Concrete	
				Other	
14. Drilling method used: Rotar	y⊔ ⊠	∛ 🕅 ⁴	. Material between v	well casing and protective pipe:	
Hollow Stem Aug		∅ 🕅		Sand Other	
		88.			
15 Drilling fluid used: Water ⊠0.2 A	ir 🗆 🛛 🕺		6. Annular space sea	I: a. Granular/Chipped Bentonite	
Drilling Mud $\Box 0.3$ Nor	е П — — — — — — — — — — — — — — — — — —	▩	bLbs/gal m	ud weight Bentonite-sand slurry	
		▓ ▓	c. <u>Los/gal m</u> d 30 % Denten	ita Bentanita coment grout	
16. Drilling additives used? \Box Ye	es 🛛 No 🛛 🖁	8 🕅 '	a. $\underline{}_{76}$ Benton	volume added for any of the above	
		≋	f How installed:	Tremie	
Describe	8	8 🕅	1. Thow instance.	Tremie pumped	
17. Source of water (attach analysis, if required	l):	≋		Gravity	
Onsite Potable Well		8866	Bentonite seal	a Bentonite granules	
		8 🕅 📝	b $\Box 1/4$ in \Box^2	$\frac{1}{2}$ in Bentonite chips	
E Bentonite seal ton 452.2 ft (NAV	T188) or 27.0 ft	88/	с. <u>с</u> .	Other	Π
		8 🛞 / .7	7. Fine sand material	: Manufacturer, product name & mes	h size
F Fine sand ton ft (NAV	D88) or ft	▓ ▓ / /	а	2 I	
		▓ ▓/ /	b. Volume added	ft ³	_
G. Filter pack, top 447.2 ft. (NAV	D88) or 32.0 ft.	3 13 / 8	3. Filter pack materia	I: Manufacturer, product name & me	sh size
			a Red Flin	nt Sand and Gravel, Water Pack	
H. Screen joint, top445.2 ft. (NAV	D88) or 34.0 ft.		b. Volume added	ft ³	_
5 7 1		9	9. Well casing:	Flush threaded PVC schedule 40	\boxtimes
I. Well bottom 435.2 ft. (NAV	D88 <u>) or 44.0</u> ft. 🔨		C	Flush threaded PVC schedule 80	
				Other	
J. Filter pack, bottom <u>435.2</u> ft. (NAV	D88).or 44.0 ft.). Screen material:	Schedule 40 PVC	
•			a. Screen Type:	Factory cut	\boxtimes
K. Borehole, bottom <u>435.2</u> ft. (NAV	D88).or 44.0 ft. <			Continuous slot	
				Other	
L. Borehole, diameter <u>8.3</u> in.			b. Manufacturer		
		\backslash	c. Slot size:	_	$\frac{0.010}{10}$ in.
M. O.D. well casing 2.38 in.		\backslash	d. Slotted length:	_	<u>10.0</u> ft.
		`11	. Backfill material (I	below filter pack): None	
N. I.D. well casing 2.07 in.				Other	
I hereby certify that the information on this form	n is true and correct to the best	of my knowledge.		Date Modified: 12/1/2015	
Signature V. I.M. M. IL I.A.	Firm Natura	l Resource Techi	nology	Tel: (414) 837-3607	
Garie / Mapa	234 W. I	Florida Street, Floor	5, Milwaukee, WI 5	3204 Fax: (414) 837-3608	

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WATER WELL CONSTRUCTION REPORTS

tale of Illinous Geospiate within 30 days of well completion and suid	I to the oppropriate Flashit Copristment
	13 Property Owner Duncay
Type of Well	14. Dillor Adam Jochimsen Haller
a Driven Well: Casing Diameter (m.)	15. Home of Dilling Company: Coscode Drilling 16 Permit Humber
h Bored Well, Casawa Diameter (In.) 8 Biencel Stab?	Doto Issued: 17 Date Didling Started
- Online Mell, DVC Castern Formation Packer Set at Depth of (IL)	to Wall Clin Address: 15260 IL 78 House, IL.
C. Driftet Weit 1 - Vo. Geberg - Constants - Constants	The versile formers (SPECE Land ID #
a Dailed Well Shue Cashing Reconcerning Provide Local States (in) to (it.)	19. Inwindling Ivinitia.
e Holo Dunisales (41) 8 to (41) 99 (41) From (41) To (41) Tramia Depth (41)	20. Stabilizion Manue
10 1 18 18	21. Column g Cranny Massa B Suchar
1900 Guald 2 18 23	c. Township: 2/1/ Rangu: 900
Holeplug	d. SE Quarter of the NE Quarter of the SE Quarter
g Wall (pushad willin	e GPS Lat Degraes 40 Manufas 16 Seconds 37 P
Crow Mark Back Grow StretSupplier # From (8.) To (8.)	Lon: Degreus 90 Minutes 04 Seconds 36 W
I Kind of Chrydeshing Pack Charlester Charle	22. Casing and Liner Information
<u>Red Finl</u>	Okamatur (In.) Maturial, Joint Type I rom (K.) Ta (K.)
	2 Sch 40 PVC +3 25
Wull Use Manitoring Walt DisInfactual? No	
Date Wall Completed 6-9-/5 Odiller's Estimated Wall Yieki ((pm):	
And Double and Department (II:):	Dlameter (in.) Laught (II.) Skat Size (in.) From (it.) To (it.)
A source Comparing (another and the second	23. Is the well yes 2 10 ,010 2.5 35
Piless Adaptor Model	
nod Kanalachire	24. Water hom If a hapter of (it.)
. Well Cap Type & Manufacturer	a Stalle water level (it.) below top of casing
Prossure Tank	h. pumping invol is (it.) pumping (gpm) for (bonds)
Working Cycle (gals.) Cuplive Air? 8 Percep System Disinfected	25. Eadh Maledals-Passed Throught 1-10m (R.) 10 (R.)
0 Name of Parap Company	Top Soil O
Lieupen #	silt/Clay 1 5
1, Pamp Instalky.	Sond 5 35
2 Data	
Licaesed Pause Installation Contractor Signature	
the second se	
Bioris Department of Public Health Institution that is necessary to accomptish the statistics	(Attack 2nd name # necessary) 48 ORY IGH L fill out fills & inde ate how hole was sealed)
525 West Jefferson Street purpose as malined under Public Act-0663. Elsclasurc.of.this reconclust. 10, 5251	Adam & produces
Spanguest, it a 2703 initial and a spanning of the second participation of the second	Theense II
1L-4H2-4H-26 Report 16/09	Licensed Water Well Contractor Signature

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State of Buors	STRUCTION REPORT Print Form
Department of Public Health Complete winner an mays in was completened with a	MALEN WAMINI-UN
	13 Property Owner Dynegy
1 Type of Well	14 Dillor Adam Jochimsen Irunsell
a Driven Well Casery Diamstor (m.) Depth (it.)	16 Home at Delling Company Coscode Drilling 16 Parmit Number
b Nored Well Gasing Diamater (in) 8 Burled Stab?	Date Issued: 17 Data Drilling Started 6-10-13
© Drillad Walt - PVC Casing Formation Packer Set at Depth of (8.)	10 Well Sile Address 15260 IL-78 Havono, IL-
d Drilled Wolf Stud Casing Machanically Driven	19. Township Manne Havana Land ID #
11 1 1010 Doministra (m) _8 to (n) 34 . (m) _ to (n.) (m) _ to (n)	20. Substivision Name:
t Type of Grout It of bags Grout Weight From (it) To (it) Tremin Elepin (it.)	21. Location: a County Mason h Site Elevation II. (above ros
Ag-a Guard 3 10 11 11	c Township 2/N Range 900 Section /
Holeplug 3 11 22	d. ALE Quarter of the NE Quarter of the SE Quarter
Well Constant weller	e GPS Lat Deproves 40 Minutes 16 Seconds 46 M
	Los Duoraus 90 Maulos 04 Sucrands 33 W
h Kind of Gravol/Sand Pack Grain Stad/Supplier & Fride (W)	22. Casing and Liner Information
Red Plin 2 H TU	Diamater (in) Material, Joint Type I rom (it.) To (it.)
	2 Sch. 40 PUC +3 24
2. Wall Use Monitoring Wall Disinformet? No	
3. Date Well Completed. 6-11-15 Duitor's Estimated Well Yieki (gpm):	
4. Date Permanant Programmation; NA Set at Dapth (0.):	Diameter (in.) Langth (it) Stor Size (it.) From (it.) 10 (it.)
5. Poop Capacity (gpm).	screened Yes 2 10 ,010 21 137
6 Filless Adapter Model Attachment to Cushig	24, Water kom at a dupth of (IL) To (IL)
	a Stalle value level (IL) halow top of casing which is (in.) above ground
P. Granderine Taula	b wrowing level is (ii.) [wroging (gran) [or (ivers)]
Worklag Cyclu (jats) Cuplive Air? 9 Pump System Disinfected	25. Earth Materials-Passed Tirrough From (It.) To (It.)
10 Dame of Porto Communy	Top Soil 0 1
	silt w/sand 1 7.5
11, Pinnp Installur	Sond 7.5 34
12 Dute	
Liconaud Pump Installation Contractor Signature	
Biomis Deconstructs of Public Dealth MICHITANCE (KYIKE, This state agency is requesting disclosur	
Division of Environmental Health of Information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information that is necessary to accomplish the statistical or information the statistical or information the statistical or information the statistical or information the statistical	(Anach Just page, If necessary) - (if DRY HCig), till our top & indicate how hole was sealed)
525 yest acherson array purpose as furning and a factorial for the second proved by the Springfield, it. 62761 Information is Manual for the second proved by the	adar & fictions Incorrect
1 mms asonagement center	Licensed Water Well Contractor Signature
Reusset G/P)	

State of Illinois WATER WELL CONST	TRUCTION REPORT Print Form
Department of Public Health	Werk HAMIN - 41
	13 Property Owner Uynegy
1 Type of Well	14. Driller Adam Jochimsen Heensen
a Brivan Walt Casing Diameter (in) Depth (ii.)	15 Name of Dilling Company Coscode Drilling 16 Permit Number
b Bored Well Gasing Diameter (m.) 8 Dimied Slab?	Date tasued 17 Date Dritting Started 6-11-15
c Drillod Well PVC Cosing Formation Packer Sel at Dapily of (A.)	18. Well Silu Achiross 15260 IL-78 Hovana, IL.
a Dated Wolf, Stept Casing Mechanically Driven	18 Township Name Haugan Land ID #
$(1 + 1) = 0$ (11) S_{10} (11)	an Cohilideinn Nama
Trans of Grout H of bags Grout Weight From (0.) To (0.) Transle Depth (4.)	21. Location of County Marcard b Site Elevation It. (above mst)
August 13 10 1 18 18	Suction 12
114000000000000000000000000000000000000	c Township 2/ N Range 900
LITA/cf1vg	d. New Quarter of the NE Quarter of the Sco Charter
11 Wall Cinishad willin	a GPS. Lat. Degraps 40 Minutus 16 Surcandis 53 19
To (11.)	Lon: Degrees 90 Minutes 04 Seconds 11 W
Rend of Gravous and Pack Grand Szersing met in the state of the state	22. Casing and Liner Information Survey use only
Ked Clint R. 70	Diamotor (in.) Material, Joint Type From (il.) To (it.)
	2 Sed 40 PIIC +3 25
2 Well Use Manitaring Well Distributed? No	
Duliter's Estimated Wall Yiekt (gnm)	
a, Lone was compared	Diameter (in.) Longin (II.) Sikit Size (in.) From (II.) To (b.)
4. Ende Pormanional Isonapolitication:	23. Is the well 12 11 yos 2 10 ,010 25 35
5. Primp Copacity (gpm):	scieenedi Tes
and Manufacturer Allachmunt to Casing.	24. Water from At a depth of (B.) Ter (B.)
r Muther Tong R Manufacturer	n Static water level (it.) below top of casing which is (in.) above ground
 Openanova Tresk 	b. minuting lavel is (it.) pumping (guns) for (tumes)
Working Cycle (pate.) Capitya Air? 9 Pamp System Disinfected:	25. Earth Materials/Passed Through From (h.) To (k.)
the Manual Provide Provide	Top Soil 0 15
to ranna a rundy constanty	6. 15 35
11. Pemp Installer	
12. Dale Date	
theman camp manner commune	
Introis Department of Public Dealth IMPORTANCE NOTICE: This state agency is requesting disclosure	
Division of Environmental Health of Information that is necessary to accomptish the stationary 535 West Information from numpers as outlined under Public Act-0063. Disclosing of libits	(Attach 2nd page, If necessary) (If DRY FIC) at the out log & welk are how hole was sealed)
Sponglield, R. 62761 iplemation is Mandatory. This form has been approver by the	Alan & Doliver Licensen 11
Ewns Managenen Lemer	Licensed Water Well Conhactor Signature
Revised 6/09	

State of Illinois	IRUCTION REPORT Print Form		
WATER WIELL CONST Complete within 30 stays of well completion and sended 1 type of Well Casing Diameter (in.)	Print Form Print Form <th colspan="2" fo<="" print="" th=""></th>		
7. Well Cap Type & Manufachnes B. Prossure Tank Working Cyclo (gals) Captive Air? 9 Pomp System Disinfacted	n. Static value level (it.) todaw top of casing		
10 Name of Pring Company 11 Pump Installer 12.			
Illinois Department of Public Health Division of Covinancental Health 525 West Jefferson Street Springfield, IL 62761 IIII State agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as onlined under Public Act-0063. Disclosure of hill information its Mandatory. This form has been approved by the Course Management Center.	(Anach 2mi page, H necessary) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (Anach 2mi page, H necessary) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (Anach 2mi page, H necessary) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (Anach 2mi page, H necessary) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (Anach 2mi page, H necessary) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (Anach 2mi page, H necessary) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (Anach 2mi page, H necessary) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater))) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater))) (If CHTY (ICH E, HB (En bug E insticate bow hole was seater)))))))))))))))))))))))))))))))))))		

MONITORING WELL DEVELOPMENT DOCUMENTATION



Facility/Project Name	State		Well Name	
Havana Power Station		Illinois	HAN	AW-39
Facility License, Permit or Monitoring Number				
1. Can this well be purged dry?	🗆 Yes 🖾 No	11 Depth to Water	Before Development	After Development
2. Well development method: surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed, and pumped compressed air bailed only pumped only		 (from top of well casing) Date 12. Sediment in well 	 a. 22.45 ft. b. 6/11/2015 c. 12:45 ⊠ 1 0.0 inches 	22.45 ft. 6/11/2015 a.m. □ a.m. p.m. 01:45 ⊠ p.m. 0.0 inches
pumped slowly otherpumped/surged with pump		bottom 13. Water clarity	Clear □ Turbid ⊠	Clear ⊠ Turbid □
3. Time spent developing well	60 min.		(Describe)	(Describe)
4. Depth of well (from top of well casing)	37.4 ft.			(very pale brown)
5. Inside diameter of well	2.07 in.			
6. Volume of water in filter pack and well casing	12.01 gal.			
7. Volume of water removed from well	46.0 gal.	Fill in it drilling fluids	were used and well is at some mg/l	iid waste facility:
8. Volume of water added (if any)	0.0 gal.	solids		
9. Source of water added		15. COD	mg/l	mg/l
10. Analysis performed on water added? (If yes, attach results)	□ Yes ⊠ No	16. Well developed by Patrick 1 Natural	Person's Name and Firm Hoefle Resource Technology	Inc

Facility A	ddress or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of my
Name:	Havana Power Station	knowledge.
Firm:		Signature: Patra M H-ft
Street:	15260 IL-78	Print Name: Patrick Hoefle
City/State	/Zip: Havana IL 62644	Firm: Natural Resource Technology
		Template: WELL DEVELOPMENT - Project: 2285 HAVANA GINT.GPJ



Facility/Project Name	State		Well Name	
Havana Power Station	ion Illinois		HAN	∕IW-40
Facility License, Permit or Monitoring Number				
1. Can this well be purged dry?	🗆 Yes 🖾 No	11 Depth to Water	Before Development	After Development
2. Well development method: surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed, and pumped compressed air bailed only pumped only		 Depire water (from top of well casing) Date 12. Sediment in well bottom 	 a. 25.23 ft. b. 6/15/2015 c. 11:50 □ 1 0.0 inches 	25.24 ft. 6/15/2015 a.m. □ a.m. p.m. 01:15 ⊠ p.m. 0.0 inches
otherpumped/surged with pump		13. Water clarity	Clear □ Turbid ⊠	Clear ⊠ Turbid □
3. Time spent developing well	85 min.		(Describe) verv dark brown	(Describe) clear to cloudy
4. Depth of well (from top of well casing)	36.8 ft.			(very pale brown)
5. Inside diameter of well	2.07 in.			
6. Volume of water in filter pack and well casing	11.06 gal.			
7. Volume of water removed from well	55.0 gal.	14. Total suspended	mg/l	nd waste facility. mg/l
8. Volume of water added (if any)	0.0 gal.	solids	C C	5
9. Source of water added		15. COD	mg/l	mg/l
10. Analysis performed on water added?	□ Yes ⊠ No	16. Well developed by	: Person's Name and Firm	
(If yes, attach results)		Patrick Natural	Hoette Resource Technology	Inc

Facility Add	ress or Owner/Responsible Party Address	I hereby cert	ify that the above information is true and correct to the best of my
Name: <u>I</u>	Havana Power Station	knowledge.	
Firm:		Signature:	Patri M Happ
Street: _1	15260 IL-78	Print Name:	Patrick Hoefle
City/State/Zi	p: Havana IL 62644	Firm:	Natural Resource Technology
			Template: WELL DEVELOPMENT - Project: 2285 HAVANA GINT.GPJ



Facility/Project Name		State		V	Vell Name		
Havana Power Station			Illinois		HAN	AW-41	
Facility License, Permit or Monitoring Number	ľ						
1. Can this well be purged dry?	□ Yes	🛛 No	11 Depth to Water	B	efore Development	After D	evelopment
2. Well development method: surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block, bailed, and pumped compressed air			(from top of well casing) Date Time	a. b. c.	19.81 ft. 6/16/2015 03:10 ⊠	6. a.m. p.m.	19.80 ft. /16/2015 □ a.m. 04:25 ⊠ p.m.
bailed only pumped only pumped slowly other <u>pumped/surged with pump</u>			 Sediment in well bottom Water clarity 	C	0.0 inches lear □ urbid ⊠	Clear ⊠ Turbid □	0.0 inches
3. Time spent developing well		75 min.		(D	escribe) Jork brown	(Describe)	
4. Depth of well (from top of well casing)	37	7.6 ft.		_			
5. Inside diameter of well	2.	07 in.		_			
6. Volume of water in filter pack and well casing	12.	35 gal.		_			
7. Volume of water removed from well	50	0.0 gal.	Fill in if drilling fluid	s were	e used and well is at so	lid waste faci	ility: mg/l
8. Volume of water added (if any)	0	0.0 gal.	solids		mgr		mgr
9. Source of water added			15. COD		mg/l		mg/l
10. Analysis performed on water added? (If yes, attach results)	□ Yes	🛛 No	16. Well developed by Patrick Natural	y: Per Hoe Res	son's Name and Firm fle	Inc	

Facility A	ddress or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of my
Name:	Havana Power Station	knowledge.
Firm:		Signature: Palm M H-4/1
Street:	15260 IL-78	Print Name: Patrick Hoefle
City/State	/Zip: Havana IL 62644	Firm: Natural Resource Technology
		Template: WELL DEVELOPMENT - Project: 2285 HAVANA GINT.GPJ



Facility/Project Name	State		Well Name	
Havana Power Station		Illinois		MW-42
Facility License, Permit or Monitoring Number			I.	
1. Can this well be purged dry?	🗆 Yes 🖾 No	11 Depth to Water	Before Development	After Development
 Well development method: surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed, and pumped 		(from top of well casing) Date	a. 30.05 ft. b. 8/25/2015	30.05 ft. 8/25/2015 a.m. □ a.m.
compressed air bailed only		Time	c. 11:30 □ j	p.m. 12:20 ⊠ p.m.
pumped only pumped slowly otherpumped/surged with pump		12. Sediment in well bottom13. Water clarity	Clear □ Turbid ⊠	Clear ⊠ Turbid □
3. Time spent developing well	42 min.		(Describe)	(Describe)
4. Depth of well (from top of well casing)	46.8 ft.			
5. Inside diameter of well	2.07 in.			
6. Volume of water in filter pack and well casing	12.33 gal.			
7. Volume of water removed from well	70.0 gal.	Fill in if drilling fluids 14. Total suspended	s were used and well is at some mg/l	lid waste facility: mg/l
8. Volume of water added (if any)	0.0 gal.	solids	C	C C
9. Source of water added		15. COD	mg/l	mg/l
10. Analysis performed on water added? (If yes, attach results)	□ Yes ⊠ No	16. Well developed by Andrea Natural	Person's Name and Firm Salus Resource Technology	Inc

Facility Address or Owner/Responsible Party Address		I hereby certify that the above information is true and correct to the best of my	
Name:	Havana Power Station	knowledge.	
Firm:		Signature:	Andrea Salus
Street:	15260 IL-78	Print Name:	Andrea Salus
City/State	/Zip: Havana IL 62644	Firm:	Natural Resource Technology
			Template: WELL DEVELOPMENT - Project: 2285 HAVANA GINT.GPJ