Client Site Job Nur Field Ge	Army Corps of EngineersDrilling CompanyFogle Pump & SupplyCoordinates2466SP Site (Task 6)Boring MethodAir Rotary2460Imber801126Borehole DepthB3 FeetCasing ElevationeologistR.M. WeberWater Depth13 FeetSheet2 of 2								28.410	
et)	nts	ple .	ver	nic+ or m)		2	General: 50 feet	6" steel casing, pressure grout.		Gro
Dep (Fe	Blo Cou	Sam	Reco	orgo Vogo	LE &	80		Sample Description	1	L
55							BASALT - cosing.	- Black, no water, good	seal on conductor	112424
- 3				-			DACALT	Bisto and and	100 0000	
60							BASALI -	- Black, with dark gray		30
12							damp. Colar cha	nge to dark brown.	/GC) — Black,	00000
65		1			-		Color cha	nge to brown with incre	ase in white	0000
							and orang	ge fragments, predomina	itly clay.	000
70										0000
75							WEATHERE white clas Water yiel	ED BASALT — Black—gra; sts, soft drilling, damp. ding zone at 75 feet.	y, with orange and	
							WEATHERE orange an	D BASALT – Block-gra nd white fragments, soft	y, with abundant drilling.	
80		1		-			BASALT -	- Dark gray, hard.		
								- Bottom of Hole - 83	Feet	-
85										
90			-							
12										
95		1						IN R I I	-	
3									1991	

WELL COMPLETIONM	W-1A
	DRILLING TIMES: START <u>DB00 - 5/10/90</u> FINISH <u>1100 - 5/</u> 11/90 STANDBY or DOWN TIME:
	METHOD OF DECON. PRIOR TO DRILLING:
	DEVELOPMENT
	METHOD OF DEVELOPMENT: DISPLACEMENT PUMPING @ 70 CYCLES/SEC
	PUMP TIME 0305 TO 0500 DATE 5/17/90
F J J J F	
	TURBIDITY CLEAR MOD. TURBID
210 00°	AFTER DEVELOPMENT:
A BORING DEPTH	ODOR IN WATER ?
BORING DIAMETER IN. B. WELL DEPTH79.3 ET	WATER GROUND SURFACE STORAGE TANK
C WELL STICKUP FT	DISCHARGED STORM SEWERS TANK TRUCK
D BLANK INTERVAL <u>66</u> FT. BLANK DIAMETER <u>2</u> IN.	DEPTH OF WATER AFTER DEVELOPMENT: 5'
E SCREEN INTERVAL <u>65-75'</u> FT. SCREEN DIAMETER 2 IN	MATERIALS USED
TYPE/SLOT SIZE0.01_	4 1/2 SACKS of 20/40 SAND
F SEDIMENT TRAP <u>5</u> FT. G ANNULAR SEAL <u>54</u> FT.	Z SACKS OF PORTLAND CEMENT SACKS OF PREMIX CONCRETE
MATERIAL,GROUT	GALLONS of GROUT USED GROUT COMPOSITION #6 BENTONITE
H. BENTONITE SEAL6 FT.	SACKS of BENTONITE PELLETS BUCKETS of BENTONITE PELLETS
I SANDPACK <u>18</u> FT. TYPE/SIZE: <u>20/40</u>	YARDS CEMENT - SAND USED 3 CENTRALIZERS at 31, 59, AND 78.5' BGS
J BOTOM SEAL/PACK 2 FT.	
K WELL COVER FT.	WELL COVER USED: Above Grade At Grade
L STICKUP FT.	Other
M CONDUCTOR CASING 50 FT.	
NOT TO SCALE	
2	FEB 6 1991

Client Site Job Nu Field G	mber	SP Site 80 ist f	e (1 0111 R.M	<u>Task 6)</u> 26 . Weber	eers	Borin Bore Wate	ng Company <u>Fogle Pump &amp; Supply</u> Coordinates <u>24667</u> ng Method <u>Air Rotary</u> <u>24601</u> hole Depth <u>65.5 Feet</u> Casing Elevation r Depth <u>5 Feet</u> Sheet <u>1 of 2</u>
Depth (Feet)	Blow Counts	Somple No.	Recover	Organic• Vapor (ppm)	LEL	2°22	General: 6" steel cosing to 5 feet. Sample Description
5							<ul> <li>SILTY SAND (SM) - Fine- to coarse-grained sand, brown, black basolt gravel.</li> <li></li></ul>
40							Water yielding zone at 30 feet. WEATHERED BASALT — Dark gray, orange, and white fragments, minor clay and sand, soft.
45							

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	WELL COMPLETION	<u>V-1B</u>
		DRILLING TIMES: START 1245_5/B/90 FINISH 1504_5/B/90 STANDBY OF DOWN TIME:
		METHOD OF DECON. PRIOR TO DRILLING
		DEVELOPMENT
	H H	METHOD OF DEVELOPMENT: DISPLACEMENT PUMPING 60 CYCLES/SEC
		START TIME 0820 TO 0120 DATE 5/17/90
•	TOP OF CASING ELEVATION2318.63FT. A BORING DEPTH	TURBIDITY CLEAR MOD. TURBID AFTER SL. TURBID TURBID ODOR IN WATER ? NONE WATER GROUND SURFACE STORAGE TANK
	C WELL STICKUP 0.5° FT. D BLANK INTERVAL 65 FT.	DISCHARGED STORM SEWERS TANK TRUCK TO: DRUMS
	BLANK DIAMETER 2 IN. 2.5-32.5 FT. SCREEN INTERVAL 35-45 FT.	DEPTH OF WATER AFTER DEVELOPMENTS 6 FEET
	SCHEEN DIAMETER <u>2</u> IN. TYPE/SLOT SIZE <u>0.01</u> F SEDIMENT TRAP <u>5</u> FT. G ANNULAR SEAL <u>FT.</u> MATERIAL: <u>GROUT</u> H. BENTONITE SEAL <u>FT.</u> I SANDPACK <u>FT.</u>	9.5     SACKS of     20/40     SAND       4.5     SACKS of     PORTLAND CEMENT     SAND       SACKS of PREMIX CONCRETE     GALLONS of GROUT USED     GROUT COMPOSITION     #6 BENTONITE       SACKS of BENTONITE PELLETS     BUCKETS of BENTONITE PELLETS     SAND
otion	TYPE/SIZE:         20/40           J         BOTOM SEAL/PACK         2           MATERIAL:         SAND           K         WELL COVER         FT.           L         STICKUP         FT.	
Corpor	An and a state of the second state of the seco	
ECOVA Corpor	M CONDUCTOR CASING FT.	
11990 ECOVA Carpar	M CONDUCTOR CASING FT.	

Construction/Decommission (select one)		<b>Type of Well</b> (select one) <b>Resource Protection Geotech Soil Boring</b>
of Intent Number	Prot	perty Owner Spokane International Airport
consulting Firm Budinger and Associates, In	<u>.</u> Site	Address
Inique Ecology Well ID	City	Airway Heights County Spokane
ag No. <u>ALR 119 (MW-1)</u>	Loc	ation NE 1/4-1/4 SW 1/4 Sec 28 Twn 25 R $42^{\text{Select One}}$
VELL CONSTRUCTION CERTIFICATION ccept responsibility for construction of this well, and its /ashington well construction standards. Materials used pove are true to my best knowledge and belief.	: I constructed and/or compliance with all ind the information reported Lat/ still	Long (s, t, r Lat Deg $\frac{47}{17}$ Lat Min/Sec $\frac{38' 5.6}{30' 2}$ REQUIRED) Long Deg $\frac{117}{17}$ Long Min/Sec $\frac{30' 2}{2}$
Driller Engineer Trainee Name (Print)	ageman Tax	Parcel No
Driller / Engineer / I rainee Signature	Case	ed or Uncased Diameter <u>8"</u> Static Level <u>12.2'</u>
f trained linenced duillen?e	Wor	k/Decommission Start Date 11/8/07
i traince, incensed drifter's	Wor	k/Decommission Completed Date 11/26/07
Construction/Design	Well Da	ta Formation Description
	Monument: 6" dia., 6' long to 3' below grade with lock	steel set in concrete ng lid and bollards
1	Riser: 2" schedule 40 pvc se	et to 8.5' with Silt
1	locking expansion plug	
1	Screen: 2" schedule 40 pvc from 8.5' to 14.5' with end c	(0.010" slot) set cap
<u> </u>	Seal: Bentonite from 3' to 6	.5'
18:47 D667	Filter pack: #20-40 silica sa 14.5'	nd from 6.5' to
		RECEIVED
TT OF TAN		JAN 0 9 2008
		DEPARTI ENT OF ECOLOGY
	RECEI	VED
	JAN 0.3	2007
	DEPARTMENT	E FEOLOGY
	WELL DRILLI	NG UNIT
		Basalt
-		End of Boring @ 15'
	and the second second	Line of Boring of 15
	and the second second	
	to the state of	
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PAGE  $\underline{1}$  OF  $\underline{1}$ 

SUBMIT ONE WELL REPORT PER WE	284358	Type of Well (select one) ✓ Resource Protection Geotech Soil Boring			
_] Decommission ORIGINAL INSTALLATION of Intent Number	Notice				
Consulting Firm Budinger and Associates. Inc.	Property C	Swner Spokane International Airport			
Inique Ecology Well ID	Site Addre	25S			
Tag No. ALR 120 (MW-2)	City <u>Airw</u>	ay Heights County Spokane Select One Select One E			
VELL CONSTRUCTION CERTIFICATION: ccept responsibility for construction of this well, and its co /ashington well construction standards. Materials used ar bove are true to my best knowledge and belief. Driller Engineer Trainee Name (Print)	I constructed and/or ompliance with all d the information reported gennan Tax Parce	$\frac{\text{NE} \ 1/4 - 1/4 \ \underline{\text{SW}} \ 1/4 \ \text{Sec} \ \underline{28} \ \text{Twn} \ \underline{25} \ R \ \underline{42} \qquad \square \qquad \underline{\text{WW}} \\ (s, t, r & \text{Lat Deg} \ \underline{47} & \text{Lat Min/Sec} \ \underline{38' \ 8.3''} \\ \text{JIRED} & \text{Long Deg} \ \underline{117} & \text{Long Min/Sec} \ \underline{30' \ 28.5'} \\ 1 \text{ No.} \\ \underline{\text{No.}} & \underline{\text{No.}} & \underline{\text{No.}} \\ \end{array}$			
Driller/Engineer /Trainee Signature	Cased or	Uncased Diameter 8" Static Level 12.5'			
Driller or Trainee License No. 2853	Work/Dec	commission Start Date 11/8/07			
f trainee, licensed driller's		commission Completed Date 11/26/07			
ignature and License No. 2853	Work/Dec	commission Completed Date 11/20/07			
Construction/Design	Well Data	Formation Description			
Ι.	Monument: 6" dia., 6' long steel se	et in concrete Road Fill: Gravel and Sand with Cobbles			
1	to 3' below grade with locking lid	and bollards			
1	Riser: 2" schedule 40 pvc set to 9.	5' with			
I	locking expansion plug	Sand with Silt $\overline{\gamma}$ $\gamma$			
1	Screen: 2" schedule 40 pvc (0.010	"slot) set			
ł	from 9.5' to 14.7' with end cap				
	Seal: Bentonite from 3' to 7'	0°C 18			
	Filter nach #20.40 silies sond from	5' -			
1	Filler pack: #20-40 silica sand from	n / 10 15			
l					
I		REGENCED			
<u> </u>		JAN 0.9 2000			
	TELVED	DEPARTMENT OF FOOLOGY			
	RECEIVE	EASTERN REGIONAL OF THE			
1	.IAN 0 3 2007				
	DEDADTALIM LIE FEULO	GY			
	WELL DRILLING UNIT				
		Basalt			
		$\frac{15'}{1}$			
	1				
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(SUBNITIONE WELL REPORT PER WELL         Construction/Decommission (select one)         Construction         Decommission ORIGINAL INSTALLATION N	INSTALLED)	84357 ту	pe of Well (select one)  ✓ Resource Protection  Geotech Soil Boring
of Intent Number		Property Owner Spoka	ane International Airport
Consulting Firm Budiliger and Associates, Inc.		Site Address	
Unique Ecology Well ID Tag No. ALR 121 (MW-3)		City Airway Heights	County Spokane
WELL CONSTRUCTION CERTIFICATION: 1 c accept responsibility for construction of this well, and its comp Washington well construction standards. Materials used and t above are true to my best knowledge and belief.	constructed and/or pliance with all he information reported	Location <u>SE</u> 1/4-1/4 <u>N</u> Lat/Long (s, t, r still REQUIRED)	$\underline{W}$ 1/4Sec <u>28</u> Twn <u>25</u> R <u>42</u> Control MMMLat Deg <u>47</u> Lat Min/Sec <u>38' 11.5</u> Long Deg <u>117</u> Long Min/Sec <u>30' 37</u>
Driller Engineer Trainee Name (Print) Ethan Hage	hian/	Tax Parcel No	
Driller/Engineer /Trainee Signature	Xy-	Cased or Uncased Dia	meter 8" Static Level 7.5'
Driller of Trainee License No. 2853 /		Work/Decommission S	Start Date 11/8/07
If trainee, licensed driller's	·	Work/Decommission (	Completed Data 11/26/07
Signature and License No. 2853		work/Decommission C	
Construction/Design	v	ell Data	Formation Description
	Monument: 6" dia., to 3' below grade w Riser: 2" schedule 4 locking expansion p Screen: 2" schedule from 6.5' to 8.4' wit Seal: Bentonite fror Filter pack: #20-40	6' long steel set in concrete ith locking lid and bollards 40 pvc set to 6.5' with olug 40 pvc (0.010" slot) set h end cap n 3' to 4.5' silica sand from 4.5' to 8.5'	Silt with Sand Sand with Silt Sand with Sand Sand with Silt Sand with Sand Sand with Sand Sand Sand with Sand
1	RECE	IVED	10
1		o 2007	
1	JAN U	5 2001	
   	DEPARTMEN WELL DRI	LING UNIT	JAN 09 2008
<u>-</u>   			DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE 15' -
			•

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(SUBMIT ONE WELL REPORT PER WELL Construction/Decommission (select one) ✓ Construction ☐ Decommission ORIGINAL INSTALLATION I of Intent Number Consulting Firm Budinger and Associates, Inc. Unique Ecology Well ID Tag No. ALR 122 (MW-4) WELL CONSTRUCTION CERTIFICATION: 1	Votice	284360 Ty Property Owner <u>Spoka</u> Site Address <u>City Airway Heights</u> Location <u>SE</u> 1/4-1/4 N	pe of Well (select one) ✓ Resource Protection Geotech Soil Boring ane International Airport County Spokane W 1/4 Sec 28 Twn 25 R 42 Select One K www
accept responsibility for construction of this well, and its com Washington well construction standards. Materials used and above are true to my best knowledge and belief. Driller Engineer Trainee Name (Print) Driller/Engineer /Trainee Signature Driller or Trainee License No. 2853	pliance with all the information reported	Lat/Long (s, t, r still REQUIRED) Tax Parcel No Cased or Uncased Dia Work/Decommission S	Lat Deg 47         Lat Min/Sec 38' 12.4           Long Deg 117         Long Min/Sec 30' 34           meter 8"         Static Level 8'           Start Date 11/8/07         Completed Date 11/26/07
Construction/Design	Monument: 6" dia., to 3' below grade w Riser: 2" schedule 4 locking expansion p Screen: 2" schedule from 7.5' to 12.4' wi Seal: Bentonite from Filter pack: #20-40 12.5'	6' long steel set in concrete ith locking lid and bollards 40 pvc set to 7.5' with olug 40 pvc (0.010" slot) set ith end cap n 3' to 5.5' silica sand from 5.5' to	Silt with Sand Sand with Silt Sand With Sand Sand Sand Sand Sand Sand Sand Sand Sand
-             	RECEIV JAN 03200 DEPAH INICIAL OF CAR MARTING	ED 07 0100	Basalt End of Boring @ 12.5' 15' - RECEIVED JAN 0 9 2008 DEPARTMENT OF ECOLOGY EASTERN RECIONAL OFFICE

ECY 050-12 (Rev. 2/03)

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Proie	ct: SI/	Storm	wa	ter					BORING NO	MW-5		
Proje	ct Loc	ation: N	lort	h en	d of	Run	way 21					
Proje	ct Nur	nber: 3	631	0018	3				Sheet 1 of 1			
Loca	ation:							Date(s) Drilled	27-May-09	Logged By	J. Sugaiski	
N 47	I 47° 38' 8.2" Drill Bit Size/ Type								Air Rotary	Total Borehole Depth	20	
W 1	17° 3	0' 6.6'						Driling Contractor	Budinger	Drill Rig Type	Mobile 857	
								Sampling Method(s)	SPT	Hammer Data	120 # Auto	
								Level/ Date Measured	5R	Surface Elevation	Approx 2292	
88		SAMPLE	EB		pol.							
Dept	14 14	9	Bowsh	W Que	Graphio	Sen		MATE	ERIAL DESCRIPTION		OTHER TESTS	
0						OL	Top Soil					
1	<u> </u>		-	-	-	SM	Light Brown	SILT with som	e SAND		4	
	<b>├</b> ─		⊢		+						1	
2						SW	Light brown r	medium to fine	grain SAND with SILT. N	loist	]	
	<u> </u>		-	-	-						4	
	<b>├</b> ─		⊢		+						1	
4											1	
-											Water @ E B	
			4		-						vvater@, οπ	
6			6			SP	Olive gray m	edium grain d	ean SAND, obtained sam	ple	j	
_,			8									
· ·	⊢		┝	-	-						{	
8											1	
_						00	0.000				]	
1	├──		$\vdash$	-	$\vdash$	GP	Coarse GRA	VEL or begin i	Dedrock		1	
10			50	+			No recovery				3" sampler could	
_											not penetrate	
	┝──		┝	-	-						4	
12											1	
									A 1987		]	
13	<u> </u>		-	-	-	BR	Basalt rock s	trong, difficult	aniiing		4	
14											1	
											]	
15			50	+	-		No recovery				4	
16			-	-	-						1	
								-			1	
17	<u> </u>		-	-	-		Highly fractur	red weathered	bedrock		4	
18			-	-	-		Well screene	d from 5 to 20	ft. Sand from 4 to 20ft. Be	entonite from	1	
_							3 to 4ft				End boring at 20'	
19											Well Installed	
		I	<u> </u>	L							URS	

P136310018 SIA Stormwater 09/Working/Additional Well Installation/MW-5 Installation.xis(Soil Boring Log) 7/23/2009

oject BIA Stormwater	r -			BORING NO.	MW-6			
oject Location: North	end of F	Rumway		Chart 1 of 1				
ocation:	010	-	Diste(x)	prices it of t	Logged	Lingan		
47* 39' 13 9"			Defind Defined Statistics	21-0109-01	Dy Total Borehole	A sugered		
47 30 13.0			Typel	Az Hotary	Depth Det Rec	20		
117 50 10.5			Contractor	Dutinge	Type	Mobile (157		
			Method a)	597	Deta	120 # Auto		
		_	Dists Measured	858	CHANNED	Approx 2285		
	NA Dec	aten)	MAT	MATERIAL DESCRIPTION				
<u>-</u>	~ ~ ~	OL TR	Boll					
_	1.0	SM B	n SILT with some sar	nd				
		1						
4						1		
1								
						1		
X		SC U	Brown clayey silty an	IN SAND				
a X		B	pled from 4.5 to 6.5ft	(z		-		
4 X								
-		00.0				-		
		ar u	Gray medium clean	onnu.				
3	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	0	ned sampe			1 march 1		
4	<u> </u>					Water @ 9.5 ft		
	(							
14						1		
12								
						1		
14						-		
12								
18 14			ned cample					
14		Ĭ.	inco sompic					
"		GW M	um fine SAND and G	RAVEL				
72						1		
-		BRO	petent Bed Rock encl screened from 5 to 20	ountered at 18.5t, very dif	cult drilling	End boring at 20 Weil Installed		
	1	4		and the second sec	and the lower of the	The manual of		
						TID		

VII 13851-0018 SIA Storm 1723/2809 water USW/shing Adottonal Veel Installaton/MW46 installation tos(Sol Boring Log) 

HIDLE	t SM	Storm	wate	er 👘			100	BORING NO,	MW-7			
Froje Froje	t Loc	ation: I	Korth 6310	end 018	of R	Unw	sy 21	Sheet 1 of 1				
Loca	tion:						Dete(x)	27-449-00	Logged	J Support		
N 47	• 38'	7.9*					DHI BE DEM	At Hotery	Teal Sorehole 20 Desity 20 Desi Rog Mobile 857 Taxe			
W 1	7* 3	0' 59.	7*				Dylling	Bucktiger				
							Swriping	BPT Henrie		Tipe Hermier Des 120 # Auto		
							Level Date Manufactor		Surbox Databas	* *****		
5 a	-	MAR	Da.		Ť	7		- use	(Contractor)	1 Contractor		
1	ŝ		-	NO.	and in the	080	MAT	TERIAL DESCRIPTION		REMARKS AND OTHER TESTS		
-			1.1			81	Light Brown SAND with b	race SILT and some GRAV	/EL. dry			
-			-						-	-		
4			1		1							
d					-					1		
1		-		-	-					Difficultio drift		
-						BR	Gray highly fractured bas	alt bedrock, dry				
-		-	50+	-	1			and the state of the		No Recovery		
		-	11									
			1.1	-	-					-		
-1	111				1					1		
-	1				-					Drilling eases		
_			1.1		-							
Ľ	1.1.1		50+		-				-	No Recovery		
-	2.5	-			-					1		
- 11	12.7		12.4		-					-		
4			1.00		-	DD.	C. D. Dark unaffered by	denote with some sand				
0						Pry	only black wearlered be.	arock with some salid		1		
-14			1.1.4							Water # 13 5 ft		
- 14	1		1		-					and a start		
-					1					-		
1			50+		-					No Recovery		
	1	111	1.1				-			1.0		
-11					-					1		
-	1			1						-		
-	-	11			-				and the first state	End boring at 19		
11	1	-	1.1				4t	1911, ISBN 0.170111 4 10 20 11. B	sention te trom, a to	Weinstalled		
_	-		-	-						URS		

A	CON	1						
STA	NEW	WELL			AECOM Project Number: 60557313	Spokane International Airports, New Wells PFOA-PFOS Assessment	Boring Number: MW-13 Well Tag: BKP-258	
2 mu	0-13	11-2-17			Equipment Type/ model #: Mobile G-24	00	Location NAD 83	
	10-11	12.37			Auger type/diameter: 8-inch Hollow Ste	47.6355 N, - 117.4977 W		
F=== a.=			THE SHARE		Contractor: Geologic Drill, LLC	111		
					Sampling method: 2-inch SPT		Sheet 1 of 1	
	CL3.	Mr. III			Hammer Weight: 140 Lbs		Above-Grade	
	%	Secret Well			Free Fall: 30"	of east property line	Monument Time 830	
ounts	ery '	h in et	hic	aph	Surface conditions/ Topsoil Depth: Gra	iss-covered hillside.		
slow C	ecov	Dept Fe	rapl og	oil Gr SCS	· · ·		Date 11/2/17	
	Ř	0	ĽŮ	с й ма	Material Description	al Loope Meist With examine		
2-2-6	100%	U		5111	Brown slity SAND with occasional grav	el. Loose, Moist. With organics.		
		1						
		2						
		3						
		Ŭ,						
		4						
				CM	Provencilly CAND Medium dames Mai	-4		
5-6-6	100%	5		5111	Brown slity SAND, Medium-dense, Mol	St.		
		6						
				GM	Brown, silty GRAVEL with sand, Mediu			
		7						
		8						
		Ŭ Ŭ						
		9		SP	Grey- brown SAND with trace silt, Medi	um-dense, Wet.		
		10						
10-13-37	76%	10						
		11						
				RX	Basalt. Refusal at 11.5 feet by	gs.		
		12						
		13			Well constructed with 6-feet of 20-slot	screen.		
		14						
		15						
		16						
		17						
		18						
		10						
		19						
		20						
		01						
		21			Boring Completed at 11.5 feet BGS. Gro	oundwater encountered at 6.8 feet	bgs.	

AECOM								
				1114	AECOM Project Number: 60557313	Spokane International Airports, New Wells PFOA-PFOS Assessment	Boring Number: MW-14 Well Tag: BKP-259	
	MW-	4 11-2-1	1		Equipment Type/ model #: Mobile G-	2400	Location NAD 83	
	10-	-11/2			Auger two/diameter: 9 inch Hellow Stom		117.4981 W	
	2	1.			Contractor: Geologic Drill, LLC			
Contractor 6	a alla	Contraction of the second			Sampling method: 2-inch SPT		Sheet 1 of 1	
				1. S. S. S.	Hammer Weight: 140 Lbs		Above-Grade	
	900/0	Are we will		968 S.A.	Free Fall: 30"		Monument	
ounts	۶ry %	r i	ic	hda	Surface conditions/ Topsoil Depth: Grass-covered.		- 1000	
ow Cc	cove	Jepth Fee	aph	ll Gra			Date 11/2/17	
ā	Re		۲ G	Soi US	Material Description			
2-2-4		0		SM	Brown silty SAND with occasional gra	avel. Loose, Moist. With organics.		
		1						
		· ·						
		2						
			]					
		3						
		1						
		4-						
0.4.5		5		SP	Grey- brown SAND with trace silt, Loo	ose, Moist.		
3-4-5								
		6						
		7						
		( –						
		8						
		9						
		10		SD	Grav- brown SAND Loosa Wat			
2-2-3		10		5F	Grey- brown SAND, Loose, well			
		11						
			)					
		12	)					
		13						
		14						
			]					
2-2-5		15		SP	Grey- brown SAND, Loose, Wet.			
		10						
		16			Heaving sands-lost approximately 2-f	eet of boring. Boring terminated, we	ll set.	
		17	1					
			1					
		18	]					
		19			Completed well death is 44.5. for th	-		
	$\left  - \right $	20			Well constructed with 10-feet of 20-sl	s. ot screen.		
			1					
		21						
					Boring Completed at 16.5-feet BGS. G	Groundwater encountered at 7.0 feet	bgs.	

Please print, sign and return by mail to Department of Ecology

Construction/Decommiss	LEPORT PER WELL INSTALI ion (select one) IAL INSTALLATION Notice	LED) Ty	Type of Well (select one)		
6	f Intent Number	Property Owner So	okene International Aurport		
Consulting Firm	URS	Site Address So	with Spotted Rd		
Unique Ecology Well ID Tag No.	BHW-566 mu	321 City Spakam	County Spokane		
WELL CONSTRUCTION accept responsibility for constructi Washington well construction stan above are true to my best knowledg Weriller Engineer Trainee N Driller/Engineer /Trainee Si Driller or Trainee License N If trainee, licensed driller' Signature and License No.	CERTIFICATION: 1 constructed and on of this well, and its compliance with all bards. Materials used and the information ge and belief: ainte (Print) griature o. S	Vor reported Lat/Long (s, t, r still REQUIRED) 1. Iden Tax Parcel No Cased or Uncased Dia Work/Decommission Work/Decommission	Lat Deg Lat Min/Sec Lat Min/Sec Long Deg Long Min/Sec 5285.9011 meter Static Level 8 tart Date $9-9-14$ completed Date $9-9-14$		
Construction	Design +	Thee balla			
I in New Grand	noatiment	- Well Dita	ronnation Description		
6 How Car	Fconcrete	Bentowite			
10	" "schuo AVE Riser		+		
- C 10 - C 4	I wo All min .		silter Gonined		
TOPOT 10 0+ 2	ich 40 PVL 010 scree	n	ning Gradel		
64	Analak				
E	borence	i i			
			Basalt		
			o osci j		
. 11	A Horn COAD				
2" Threader	K301103				
			e - 1		
-			RECEIVED		
			OCT 10 2014		
к 18 к	4. 	2.5	Department of Ecology Eastern Regional Office		

RESOURCE PROTECTION WELL REPORT	CURRENT Notice of Intent No. <u>RE1044</u>			
SUBMIT ONE WELL REPORT PER WELL INSTALLED) Construction/Decommission <i>(select one)</i> Construction	Type of Well (select one)			
Decommission ORIGINAL INSTALLATION Notice				
onsulting Firm U.R.S	Property Owner Spokene International Airport			
nique Ecology Well ID	Site Address South Spotter Ka			
ag No. BHW-505 MW-A	City <u>Spokone</u> County <u>Spokone</u>			
'ELL CONSTRUCTION CERTIFICATION: I constructed and/or cept responsibility for construction of this well, and its compliance with all ashington well construction standards. Materials used and the information reported ave are true to my best knowledge and belief.         Briller	Lat/Long (s, t, r       Lat Deg       Lat Min/Sec         still REQUIRED)       Long Deg       Long Min/Sec         Tax Parcel No.       25285.9011         Cased or Uncased Diameter       Static Level         Work/Decommission Completed Date       9-9-14			
· · · · · · · · · · · · · · · · · · ·	Theerballards.			
Construction/Designment	Formation Description			
6" Above Grown cap	Bentevite -1+			
2 Wer 2 Of Whisehug AVC Riser	5111 5111			
Topof sand pack				
Topot 10 of 2"sch 40 PVC 010 screen	alt Gaul			
	51114 01ami			
ch A I h				
6' BOTE HOK				
and the second sec				
	唐  · · · ·			
" Threaded Bottom comp				
2 (11)				
	16 C			
	DEACHVED			
	HEUEIVED			
	007 10 2014			
	001 10 2014			
	Department of Ecology			
	Eastern Regional Offici			

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

					SES Project Number: 0270-001	Spokane International Airports, New Wells PFOA-PFOS Assessment	Boring Number: MW-15 Well Tag: BKP-260
					Equipment Type/ model #: Mobile G-2	2400	Location NAD 83
					Auger type/diameter: 8-inch Hollow Stem		47.622229 N, -117.552446 W
					Contractor: Geologic Drill, LLC		
					Sampling method: 2-inch SPT		Sheet 1 of 1
					Hammer Weight: 140 Lbs		Above-Grade
	%				Free Fall: 30"		Monument
ounts	ery °	in in	jc	aph/	Surface conditions/ Topsoil Depth: Grass-covered.		
on Cc	cove	Jeptl Fee	apł	CS			Date 7/31/18
ā	Re		Ъ Ч	Sol	Material Description		
2-2-4	80%	0		GM	Brown silty GRAVEL with sand. Loose	e, Dry. With organics.	
		1					
		2					
		3					
			-				
		4					
		5		GP	Grey- brown GRAVEL with trace silt, I	.oose, Moist.	
3-10-9	50%						
		6					
		7					
		8					
		Ē					
		9					
6-10-9	50%	10		GP	Grey- brown GRAVEL with trace silt, I	Loose, Wet.	
		44					
		11					
		12					
		13					
L							
		14	-				
		15	-				
		16					
		17					
<u> </u>			-				
		18	-				
<b>—</b>		19	-				
					Completed well depth is 12.0- feet bgs	5.	
		20			Well constructed with 5-feet of 20-slot	screen.	
I		04					
		~ 1	-		Boring Completed at 12-feet BGS. Gro	oundwater encountered at 10.0 feet I	ogs.

					SES Project Number: 0270-001	Spokane International Airports, New Wells PFOA-PFOS Assessment	Boring Number: MW-16 Well Tag: BKP-263
					Equipment Type/ model #: Mobile G-2	400	Location NAD 83
					Auger type/diameter: 8-inch Hollow Stem		47.611527 N, -117.558968 W
					Contractor: Geologic Drill, LLC		
					Sampling method: 2-inch SPT		Sheet 1 of 1
					Hammer Weight: 140 Lbs		Above-Grade
			1		Free Fall: 30"		Monument
unts	ry %	. <u>=</u>	<u>.</u>	/hq	Location of Boring: East of S. Center F	Road.	Time 700
¢ Co	оvе	epth Fee	hdu	S G	Surface conditions/ Topsoli Depth: Gra	ass-covered.	Date 7/30/18
Blo	Rec	ă	Gra Lo <u>ç</u>	Soil USC	Material Description		
2-3-2	8%	0		SM	Brown silty SAND with occasional gra	vel. Loose, Moist. With organics.	
		1					
		2	-				
		<u> </u>					
		3					
		4	1				
6-7-7	9%	5		SM	Grey- brown SAND with trace silt, Loo	se, Moist.	
	0 70						
		6					
		7	-				
		'	-				
		8	1				
50/0	0%			RX	Refusal on Basalt.		
		9					
			]				
		10	1				
			4				
		11	4				
		40	4				
		12	-				
<u> </u>		13	-				
			1				
		14	1				
			]		1		
		15	4				
		$\square$	4		1		
		16	-				
		47	-				
			-		1		
		18	1				
			1				
		19	1				
		L ⊦	1		Completed well depth is 8.5- feet bgs.		
		20	]		Well constructed with 2.5-feet of 20-slo	ot screen.	
			4				
		21	-		Boring Completed at 8.5-feet BGS. Gro	oundwater was not encountered.	

						SES Project Number: 0270-001	Spokane International Airports, New Wells PFOA-PFOS Assessment	Boring Number: MW-17 Well Tag: BKP-262
						Equipment Type/ model #: Mobile G-2400		Location NAD 83 47.604917 N,
						Auger type/diameter: 8-inch Hollow Stem		-117.552602 W
						Contractor: Geologic Drill, LLC		4
						Sampling method: 2-inch SPT		Sheet 1 of 1
						Hammer Weight: 140 Lbs		Above-Grade
	%	1				Location of Boring: South of W. Electric Avenue		Time 1000
ounts	ery	h in et	hic		aph	Surface conditions/ Topsoil Depth: Grass-covered.		-
OW C	cov	Jept Fe	apl	. p	i Gr	· · ·		Date 7/30/18
	Re		อั	Ľ	so	Material Description		
		0	_		SM	Brown silty SAND with occasional g	gravel. Loose, Moist. With organics.	
		1	-					
		'	-					
		2	-					
		3						
		4						
3-3-4	80%	5			SP	Grey- brown SAND with trace silt, L	oose, Moist.	
	80%							
		6						
			-					
			_					
		Q	-					
			-					
		9	-					
11 11 10		10			SP	Grey- brown SAND with occasional	gravel, Medium-dense, Moist.	
11-11-19	70%							
		11						
			_					
		12	-					
I		40						
		13	-					
<u> </u>		14						
45 40 00		15			SP	Grey- brown SAND with occasional	gravel, Medium-dense, Wet.	
15-19-26	80%							
		16						
		17						
		18	-					
L			-					
		19	-					
I		20			SM	Brown silty SAND with occasional	uravel Medium-dense Wot	
10-11-12	90%	20				Completed well depth is 25.0- feet h	gravel. medium-dense, wet.	
		21				Well constructed with 10-feet of 20-	slot screen.	
						Boring Completed at 25.0-feet BGS	Groundwater encountered at 15.5 fee	et bgs.

APPENDIX C Spokane County Water Resources West Plains Hydrogeologic Database WRIA 54 Cross-Sections R-R' through V-V'



# Figure 19 - Geologic Cross Section Key

Well Location with interpreted aquifer

- basement
- grande ronde
- not identified
- unconsolidated
- wanapum

Study Area

- Geologic Cross Section



West Plains Hydrogeologic Database WRIA 54 Phase IV Implementation Project



#### Lithology Key



10-basalt, fractured 11-basalt, medium 12-basalt, soft or decomposed 13-basalt, porous or vesicular 14-basalt w/clay or shale 15-sand, interbed 16-clay, interbed 17-gravel, interbed 18-sand and gravel, interbed 19-sand, gravel, clay, interbed 1-soil or overburden 20-clay, sand, interbed 21-basement rock 2-sand, unconsolidated 3-gravel, unconsolidated 4-clay, unconsolidated 5-sand and gravel, unconsolidated 6-basalt debris, unconsolidated 7-sand, gravel, and clay, unconsolidated 8-sand and clay, unconsolidated 9-basalt, hard

### Stratigraphy Key unconsolidated basalt-Wanapum Latah I basalt-Grande Ronde Latah II basement Aquifer Key ace static water level Sur upper sand and gravel R Ground basalt basement Depth belo Well Construction Key casing perforations

screen



## Cross-Section R-R'

# **Cross-Section S-S'**



#### Lithology Key



10-basalt, fractured 11-basalt, medium 12-basalt, soft or decomposed 13-basalt, porous or vesicular 14-basalt w/clay or shale 15-sand, interbed 16-clay, interbed 17-gravel, interbed 18-sand and gravel, interbed 19-sand, gravel, clay, interbed 1-soil or overburden 20-clay, sand, interbed 21-basement rock 2-sand, unconsolidated 3-gravel, unconsolidated 4-clay, unconsolidated 5-sand and gravel, unconsolidated 6-basalt debris, unconsolidated 7-sand, gravel, and clay, unconsolidated 8-sand and clay, unconsolidated 9-basalt, hard

### Stratigraphy Key unconsolidated basalt-Wanapum Latah I basalt-Grande Ronde Latah II basement Aquifer Key static water level Sur upper sand and gravel v Ground basalt basement Depth belo Well Construction Key casing perforations screen

