APPENDIX D

GROUNDWATER SAMPLING FORMS

	HYDRO G	EO CI			iter Samp	lina For	т			
			0/1	unum	iier Sump	ang 10	Well I	D: <u>B</u>	F-3	
	Project Name/Nu	mber: 7tl	h AZ WQ	ARF Si	te Date: 💆	-19-1	5_Sampl	ler: BV	MO	
			WEL	L INFO	ORMATIC	DN			r	
Total Well De	epth: <u>75'</u> 'a", ft): <u>75'</u>	Casing	Diameter ('	'd", in.):	y"	I	Depth to W	ater ("b", f	t): 64.77'b	ka
Well Depth ("	'a", ft): <u>75'</u>	Screen	ed Interval	(ft) From	: <u>\$0 '</u> to:	75' I	Depth to LN	VAPL (ft):		
Casing Volum	ne: $(a - b) X d^2 X d^2$	0.0408 =	gal	3 Casing	g Volumes	gal	LNAPL Th	ijckness (ft):	
Control	$\frac{1}{8} = b \times d^2 \times d^2 \times d^2 \times e^{-b}$	<u> </u>	10	Ch	argi _	(e	Ex	henos	12	
	PUR	GE INFO	ORMATI	ON AN	D FIELD I	MEASUR	EMENT	S		
Time Started:	PUR 603		Time Con	npleted:	16'.39	<u> </u>	Total Purge	Time:	35 mm	
Purge Metho	d: low flow)	Pump Set	ting:	11 17]	Total Purge	e Volume:	all	
Elapsed Time (Min)	Extraction Rate (\mathcal{M}/min)	Temp (°C)	E.C. (mS/cm)	pH	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	Notes	
1603	(0000)	28.(1769	4.52	a.24	3.69	(mv) 423			
1606	.11	27.7			1.42	1.0(402	11		
1610		27.7	2757	6.51	.26	.52	390	()		
1615	<u> </u>	27.7	2764	6.51	11	.42	374	11		
1620	41	27.7		6.51		.39	365	. 11		
1625	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	27.8	2773		.10	.36	353	11		
1630	11	27.7		6.50	,31	.30	332	٦Į		
1635	ti	27.5	2769	6.50	,37	+S8	326	i1		
1638	11	27.7	2777	6.50	.54	.46	320	71		
						<u>L</u>				
Time Started:	16:39 SAN	APLINC	G INFORM Time Con	MATIO	N AND SA	MPLE R		Method:		

Sample No.	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Notes
BF-3	16:40		IL		Alk cl sand	none	
BF-3	16:31	Vots	you	3	Moth / Eth	HCI	
BF-3	16:39	, VOAS	40m)	3	6260	HC)	
BF-3	16:39	Amber VOK	40m)	3	TUC	HU	
Farvous In	L16:42		10 n	/	Spocho	~	0.08 mg/1
Silfre	16:5		10 2		Spachro	~	1 Mg/C

-Orig. Sample-No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes
	EQ.Black		1720	5260	
<u> </u>					

	HYDRO GI	EO CH				ling For				
<u> </u>			Gro	undwa	ter Samp	ling For	Well I	D: <u>7/</u>	12P-1	
± ,	Project Name/Nur	nber: 7th	AZ WQA	ARF Sit	e Date: 3	5-19-13	Sampl	er: BV	MD	
-							-			
			WEL	L INFC	ORMATIO	N				ΔI
Detel Wall De	pth: <u>85</u> a", ft): <u>85</u>	Casing	Diamatar ("	d" in)·	ч"	т	Denth to W	ater ("h" f	n 67.12	2'6/2
Well Denth ("	a" ft): % 5	Screen	ed Interval ((ft) From	(60)' to:	85' 1	Depth to LN	VAPL (ft):		
Casing Volum	$a , n) = (a - b) X d^2 X (b)$).0408 =	gal	3 Casing	Volumes	gal	LNAPL Tł	nickness (ft	;);	-
Contro	$\frac{1}{Box} P^{2}$	5I	70	ch	mge =	6 2	i Ex	chaust	- 12 se	<u>ب</u>
					-				_	
Time Started:	1410	JE INFU	Time Con	on And	D FIELD I <u>יץ גי</u> ל	MEASUN	Fotal Purge	e Time:	3 <u>5 min</u>	
	d: low from				78.			e Volume:		
Elapsed	Extraction Rate	Temp	E.C.		Turbidity	D.O.	ORP	Odor or Sheen?	Notes	
Time (Min)	(ml/min)	(°C)	(mS/cm)	pH	(NTU) 9.77	(mg/l) 4,90	(mV) 39(No		-
<u>1410</u>	600	27.3	3307	4.43	0,67	3.91	274		and	
1420			3388			3,41	260	טע וו	nostant a	
1425	<u> </u>	27.1	3334				247	11		
1430		26.9		6,60	,26 ,58	3.07 3.05	211	u		
1435		26.9		1	.78	3.13	210	1		-
<u>1440</u>					.65	3.15	193	11	<u>}</u>	- I
1445	9	26.8	3220	6.61	.73	3.21	186	17		
14.50	U U	27,0	3340			3,28	182		<u> </u>	
1455		<u> ~ ~ ~</u>	12-10	re i ve ok			100		<u> </u>	<u>الــــ</u>
	SAL	MPLING	INFOR	матіо	N AND SA	AMPLE R	ECORD		1	
Time Started			Time Con	npleted:	1519		Sampling	Method:	grad	_

		Container		No. of			
Sample No.	Time	Туре	Volume	Containers	Analysis Method	Preservative	Notes
7AZP-1	1457	Poly	11		Alk CI SOU NO.	nore	
7AZP-1	1450	VUÅ	40m	5	Meth/Eth -	HCI	
7AZP-1	1456	VOA	40 mi	3	8260	HC	
7AZP-1	1456	Ambs VOA	Youl	3	Toc	HC	
Farrors Trop			10~1	\frown	Soutro		0.16 mg/L
Sulfide	4519		10m/		Spictro		1 n mi

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QUALITY CONTROL SAMPLE RECORD

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes

	HYDRO	GEO CH			ter Samp	ling For	<u>m</u> Well II	D: <u>74</u> 7	7P-9	
	Project Name/I	Number: 7th	AZ WQ	ARF Sit	te Date: <u>3</u>	-19-13				
Casing Volum	ppth: $\frac{90^{t}}{90^{t}}$ a", ft): $\frac{90^{t}}{50^{t}}$ he: (a - b) X d ² b ~ x	X 0.0408 = _ P5'I = _	Diameter (" ed Interval gal	d", in.): _ (ft) From 3 Casing	Volumes Karge	90′ D gall =6	Depth to LN LNAPL Th	IAPL (ft): ickness (ft Eなら		blas
	1140 d: low flu								40 mm 20 L	
Elapsed Time (Min)	Extraction Ra		E.C. (mS/cm)	pH	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	Notes]
11:40	Sound	1 27.3	2905	6,66	,86	5.42	286	NO	cloudy	
11:44		24.7	2882	6.65	875	4.64	228	<u></u>	1 1	
11:50		26.6	2892	6.65	334	3.38	188	<u> </u>	1	
11:58	14	24.4	2856	6.61	82.8	2,29	38.8	10	lightly el	July
1205	u	26.4	2849	6.61	30	2.16	182	11	dem	
1210	λić	26.3	2847	6.61	18,2	2.40	180	и	clom	4
1215	٤١	24.4	2844	6.60	22.5	2.44	151	11	<u> </u>	
1220	<u>(</u>)	26.3	2834	0.61	14.8	2.48	146	1	•(4
Time Started	1 \	AMPLING			N AND SA (230	MPLE R	ECORD Sampling N	Aethod: _	greeb	
Sample N	o. Time	Container Type	Volume	No. of Containe		sis Method	Preservati	ve	Notes	
JAZP-0	<u>.</u> 1 mie 1 1222	Poly		1		Say Nor	None			
TA2P-0	1221	1 JAA	40ml	<u>,</u>	Man	/Eth.	HCI	_		
	1001			<u> </u>						

 $T\partial I$

spectro

HCI

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Orig. Sample No. QC Sample Type QC Sample No. Time Analysis	Method Notes

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	HYDRO G	EO CH	,		ter Samp	oling For	т			
					1	0	Well I	D: <u>74</u>	<u>ZP-11</u>	
	Project Name/Nur	nber: 7 tl	n AZ WQ	ARF Si	te Date: <u>3</u>	19-13	Sampl	ler: <u>BV</u>	NO	
			WEL	L INFO	ORMATIC	DN				
Total Well De	pth: <u>90</u>	Casing	Diameter ("	d" in).	4"	Т	Depth to W	ater ("b", f	t): 77.7/	bhe
Well Depth ("	a", ft): <u>90</u>	Screen	ed Interval	(ft) From	: 70 [°] to:	- ۹0' I	Depth to LN	VAPL (ft):		
Casing Volum	ne: $(a - b) X d^2 X (a - b) (a - b) X d^2 X (a - b) $).0408 =	gal	3 Casing	g Volumes	gal	LNAPL Th	nickness (ft	t):	
Geo (a	that box PS	51 <u>1</u>	2(Chara	e <u>f</u> s	(<u>-</u>	Exhau	st _1	lsac	
Time Started:	<u> </u>		Time Con	on An	940		Fotal Purge	5 e Time:	35 m. 'w	
	1: bladdwr								214	
Elapsed Time (Min)	Extraction Rate (w/min)	Temp (°C)	E.C. (mS/cm)	pН	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	Notes	
q.35	600	<u> </u>	2783		19.1	6.76	230	NO		
9:09	600	25,4		<i>4.53</i>	Gilb	2.88	207			-
9'.14	1		2868			2.79	194			1
9:18	14		2872			2.88	185	n		
9:23	11		2880			2.90	177		Pepland b	there
9:29			2879	-		2.86	122	11	- Y wr	Γ ´
9:33	× t		2885		1.39	2.96	136	15		
9:34	14		2897		0,79	2,86	138	и		
9:40	ц.	25,9			0.75	2.90	139	L.		1
Time Started:	SAN 9441	APLING	<u>.</u>	MATIO	N AND SA	AMPLE R	ECORD Sampling I	Method:	arelo	-

Time	Started:	9	4	4	l	

							<u> </u>
		Container		No. of			
Sample No.	Time	Туре	Volume	Containers	Analysis Method	Preservative	Notes
7AZP-1)	942	poly	IL	1	Alk I say No.	none	
7AZP-11	941	VUA	You	3	Acth/Ethene/Eth	me HCl	
7AZP-11	941	VUA	40m1	3	8260	itc1	
7AZP-11	941	Amber	YOM	3	TOC	HCI	
Ferrors Tru	19 A	9:44	10m		Spectro	(.09 mc/L
Sulfide	9:50	9:50	Ilm		Spectro	_	1.0 pg/L
	-						

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes

	HYDRO G	EO CI	HEM, I	NC.						
			Gra	oundwa	ter Samp	oling For	<u>m</u> Wall I	р. 1	AZP-10)
						1 1			-	
	Project Name/Nu	mber: 7tl	h AZ WQ	ARF Si	te Date: <u>3</u>	5/18/13	<u></u> Sampl	er: <u>BV</u>	10	
									v	
					ORMATIC					
Total Well De	epth: $94'$ 'a", ft): $94'$ ne: (a - b) X d ² X (Casing	Diameter ('	'd". in.):	44	T	Depth to W	ater ("b", f	n: 83.59	1 the
Well Depth ("	'a", ft):	Screen	ed Interval	(ft) From	: <u>74 '</u> to:	<u>q4</u>	Depth to LN	NAPL (ft):	t	
Casing Volum	ne: (a - b) X d ² X (0.0408 =	7.1 gal	3 Casing	g Volumes_1	<u>2.3</u> gal	LNAPL Th	uckness (ft		• .
a	is control	Y57	= 75_	(hage to	~~(= <u>></u>		Exhe	wat time	<u>12</u>
	, PUR(GE INFO	ORMATI	ON AN	D FIELD	MEASUR	EMENTS	5	YEMIN	
Time Started	: 12/24		Time Con	npleted:	(3105	<u> </u>	Fotal Purge	Time:	1220	
Purge Metho	PURC : 12/24 d: low flow		Pump Set	ting:	86		Fotal Purge	Volume:		
Elapsed	Extraction Rate	Temp	E.C.		Turbidity	D.O.	ORP	Odor or	Notes	
Time (Min)	(m/min)	(°C)	(mS/cm)	pH	(NTU)	(mg/l)	(mV)	Sheen?		
12:24	400m	27.7		6.51		4.68	156,9	po		
(1,30				6.58		4.65	148.5	91		
12:33	<u>\</u>		4747		101,5	4.37	134.4	L†		
12:36	1)	27,4		6.56		3.90	128.0	11		
12:44	LJ LJ	27.3	4733	6,56	49,5	3.1	119,7	ι,		
12:50	11	27.2	4722	6.55	29.9	2,94	114.6	1(
12:55	1	27.3	4733	6.55	24.9	2.94	111.8	N		
13:00	11		4738		24.9	2.90	110.0	11		
13:05	11	27.3	4733	6.55	23.6	3.03	109,3	17		

Time Started: 13:04 Time Completed: 13:34 Sampling Method:

		Container		No. of			-
Sample No.	Time	Туре	Volume	Containers	Analysis Method	Preservative	Notes
TAZP-10	13:04	VUA	40 m)	3	\$260B	HCI	
7AZP-10		NOA	40m)	3	Meth / Ethine/Ethio	ne HCI	
7AZP-10	13:07	Poly	IL		AK, CI, NOZ, ST		48hr hold
7AZP-10	13:06	Ambor JOA	40ml	3	TOC	'HCI	
Ferrous Iron	1321	glass	ion	1	Spectro	NA	1.13 moll
Sulfide	13:34	<i>"</i> "	10 m			NÆ	28 mg/L'

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes

- 1			Gro	oundwa	ater Samp	oling For	<u>m</u> Well I	D: <u>Mn</u>	<u>-PD-5</u>
	Project Name/Nur	mber: 7tł	h AZ WQ.	ARF Si	te Date: <u>3</u>	118/13	Samp	ler: <u>BV</u>	F
			WEI	.I. INFC	ORMATIC	N			-
	. 88	- ·					- 41 4 333	· · · · · · · · · · · · · · · · · · ·	×0.84'
otal Well De Vell Depth ("	epth: 'a", ft):	Casing	Diameter ("	'd", in.): _ (ft) From	$\frac{1}{166}$ to:	- % 6 ^L	Depth to W	ater ("b", π	
asing Volum	$a^{, 11}$, $b^{, 12}$, $b^{,$	0408 =	gal	3 Casing	volumes	 	LNAPL T	vickness (ft))
Gas Cor	$ \frac{a - b}{X} \frac{d^2 X}{PSI} $	~_ <u>_</u>	<u>o </u>	:hory	(fm e =	<u>_6</u>	Erho	unst fu	nc = 11
	·								
	PUR	GE INFO	JRMATI	ON AN	D FIELD	MEASUR	EMENT	S - Time:	35 m.r
ime Started:	- MR 15-20	,	I ime Con	innielea:					
	: <u>15:20</u>								_
	: 18 15:20 d: <u>low Flow</u>								17.5L
Purge Methoo	d: <u>low flow</u> Extraction Rate	/ Temp	Pump Sett	ting:	89 fj Turbidity	<u> </u>	Fotal Purge	e Volume: _	_
urge Methoo Elapsed Time (Min)	d: <u>low flew</u> Extraction Rate (M /min)	Temp (°C)	Pump Sett E.C. (mS/cm)	ting: pH	Turbidity (NTU)	D.O. (mg/l)	Fotal Purge ORP (mV)	e Volume: _ Odor or Sheen?	17.5L
Elapsed Time (Min)	d: <u>low Flew</u> Extraction Rate (M/min) 5700	Temp (°C) 30.9	Pump Sett E.C. (mS/cm) 6677	ting: pH 6.3(Turbidity (NTU) Q.24	D.O. (mg/l) 5 .65	ORP (mV) 29 3	Odor or Sheen?	17.5L
Elapsed Time (Min) くいしつ したこころ	d: <u>low Flow</u> Extraction Rate (m/min) 500	Temp (°C) 30.9 26.9	Pump Sett E.C. (mS/cm) 6677 6618	ting: pH \$.3(\$.30	84 fg Turbidity (NTU) 2.24 14.7	D.O. (mg/l) ع.ن ي خ ار، ار	ORP (mV) 293 2-33	e Volume: Odor or Sheen? μο ι	17.5L
Elapsed Time (Min) 151, JO (5:24 (5:30	d: <u>low flow</u> Extraction Rate (m /min) SOO U	Temp (°C) 30.9 26.9 26.8	Pump Sett E.C. (mS/cm) 6677 6618 66000	ting: pH 6.3(6.30 6.30 6.30	84 fg Turbidity (NTU) 2.24 14.7 28,7	D.O. (mg/l) S .65 (.1(O.88	ORP (mV) 293 233 214	e Volume: Odor or Sheen? μο ιη ι	17.5L
Purge Method Elapsed Time (Min) 15110 524 524 530 1535	d: <u>low Flow</u> Extraction Rate (M/min) SOO 11 11	Temp (°C) 30.9 26.9 26.8 26.7	Pump Sett E.C. (mS/cm) 6677 6677 6677 6574	ting: pH \$.3(\$.30 \$.33	84 fj Turbidity (NTU) 2.24 16.7 28.7 26.0	D.O. (mg/l) 5 .65 (.1(0.88 0.77	ORP (mV) 293 233 216 204	Odor or Sheen? $\mu 0$ ι_1 ι_l	17.5L
Purge Method Elapsed Time (Min) 15110 (5224) (539) 1535 1535 1535	d: low flow Extraction Rate (m/min) SOO () () () () ()	Temp (°C) 30.9 26.9 26.8 26.7 26.1	Pump Sett E.C. (mS/cm) 6677 6677 6677 6574 6574	ting: pH \$.3(\$.30 \$.33 \$.33 \$.33	84 fj Turbidity (NTU) 2.24 14.7 28.7 26.0 21.7	D.O. (mg/l) 5 .65 [.11 0.88 0.77 0.69	ORP (mV) 293 233 216 204 197	Odor or Sheen? $\mu 0$ η ι_1 ι_2 η	17.5L
Purge Method Elapsed Time (Min) 15110 15120 1524 1535 15555 15555 15555 155555 1555555 1555555555555555555555555555555555555	d: low flow Extraction Rate (m/min) SOO (1) (1) (1) (1) (1) (1)	Temp (°C) 30.9 26.9 26.8 26.7 26.7 26.7	Pump Sett E.C. (mS/cm) 6677 6677 6574 6573 6563	ting: pH 6 .3(6 .30 6 .30 6 .33 6 .33 6 .33	84 fg Turbidity (NTU) 2.24 14.7 28.7 26.0 21.7 15.0	D.O. (mg/l) 5 .65 [.11 0.88 0.77 0.69 0.63	ORP (mV) 293 2-33 216 204 197 189	Odor or Sheen? $\mu 0$ $\ell 1$ $\ell 1$ $\ell 1$	17.5L
Purge Method Elapsed Time (Min) 5110 524 524 530 535 5555 555 555 5555 5555 5555 55	d: <u>low flow</u> Extraction Rate (m/min) 500 11 11 11 11 11	Temp (°C) 30.9 26.9 26.8 26.7 26.7 26.7 26.7 26.7 26.7	Pump Sett E.C. (mS/cm) 6677 6677 6574 6573 6563 6543	ting: pH 6.30 6.30 6.33 6.33 6.33 6.33	84 ft Turbidity (NTU) 2.24 16.7 28.7 26.0 21.7 15.0 8.61	D.O. (mg/l) 5 .65 (.11 0.88 0.77 0.69 0.63 0.56	ORP (mV) 293 233 216 204 197 189 182	Odor or Sheen? $\mu 0$ ι_1 ι_1 ι_1 ι_1 ι_1 ι_1	17.5L
urge Method Elapsed Time (Min) $5^{1}JO$ $5^{2}24$ $5^{2}39$ $5^{2}35$ $5^{2}40$ $5^{2}45$	d: low flow Extraction Rate (m/min) SOO (1) (1) (1) (1) (1) (1)	Temp (°C) 30.9 26.9 26.8 26.7 26.7 26.7 26.7 26.7 26.7	Pump Sett E.C. (mS/cm) 6677 6677 6574 6573 6563	ting: pH 6.30 6.30 6.33 6.33 6.33 6.33	84 fg Turbidity (NTU) 2.24 14.7 28.7 26.0 21.7 15.0	D.O. (mg/l) 5 .65 [.11 0.88 0.77 0.69 0.63	ORP (mV) 293 2-33 216 204 197 189	Odor or Sheen? $\mu 0$ $\ell 1$ $\ell 1$ $\ell 1$	17.5L

Sampling Method: Time Started: 1255Time Completed: 16:57 No. of Container Sample No. Time Volume Туре Containers Analysis Method Preservative Notes 3 You (\mathcal{H}) MW. PD-S UOA 15:56 60 ß c 3 MW~PD~S 15:56 yout 1 VOA Pal. 11 48 15:57 l mw-PD-S 6,5 port mb YOML 3 AD-5 15:56 \mathcal{D} JOA 16:01 10m (glas s 5 X ₳ <u>class</u> 16:11 (Oml $\boldsymbol{<}$

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes

	HYDRO GI	EO CH	IEM, II Gro	NC. undwa	ter Sampl	ling For	n	n. RI	2-)	
T I	Project Name/Nur	nber: 7th								
			WEL	L INFO	ORMATIO	N				
Total Well De	pth: <u>\$} </u> a", ft): <u>\$} ^</u>	Casing 1	Diameter ("	d", in.): _	<u> </u>	~, ^E	Depth to Wa	ater ("b", fi): <u>66.20</u>	bloc
Well Depth ("	a", ft): <u>-5/</u> (Screen	ed Interval ((ft) From	: <u>50.5</u> to: _	<u>80,5</u> E	Pepth to LN	JAPL (ft):		
Casing Volum	$d^2 X d^2 $	0.0408 = _	gal	s Casing	4^{-1}	gai .	LNALL II	ислисээ (II	ハ	
Cha	Xe 1	4	es her	(7 ONLAN			17 N A 17 N 17 1	2		
Time Started:	γ 7 12:45	JE INFC	Time Con	DN AN	UFIELUN <u>(320</u>	ILASUR	Cotal Purge	Time:	<u>35 m</u>	
Purge Method	1: bladder	pump	Pump Sett	ing:	75-FA]			216	- -
Elapsed Time (Min)	Extraction Rate (v /min)	Temp (°C)	E,C. (mS/cm)	pH	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	Notes	
111110 (1111)	600	29.8			19.3	4.63	469	N	Fine que	dog.
1250	<u></u>		2507	6.52		1.57	432	~	41	F 7
1255	L1	22.4	2511	6.51	5.74	.55	422	и	и	
1300		27.4	2511	6.51	4.11	.68	414	- 11	elen	
1305	11	27.3	2503	6.51	2,43	,39	394	<u> </u>	<u></u>	
1310	11	27.3	2503	6.51	1.85	.76	378	16	V	
1315	M		2501	6.51	<u>_9'2</u>	.42	353	te	"	4
1320	11	27.2	2503	6.5		.31	340	<u>v</u>	11	
					<u> </u>					

SAMPLING INFORMATION AND SAMPLE RECORD

1

Container					
	X7 1	No. of	Aughurig Mathad	Preservative	Notes
Туре	Volume	Containers	Analysis Method	Pleselvauve	140103
1 Vot	40m(3	8260	HCI	
B VOA	YON	3	M.th/EM	HC	
B Vor	YOM	3	TUC	HCI_	
2 pay	IL		Alk CI SO, NOz	none	
	10-1	ſ	Spectro	-	.1 mg/L
	(On!	-	10		3 W/L
	B Vok B VOA	1 Vot 40 ml 2 Vot 40 ml 3 Vot 40 ml 3 Vot 10 ml 4 pay 1 L 10 ml	# Vok 40 ml 3 # Vok 40 ml 3 # Vok 40 ml 3 # Vok 10 ml 3 # pay 1L 1 10 ml -	Vot 40ml 3 8260 BVOA 40ml 3 Mcth/Eth BVOA 10ml 3 TOC Apply 12 1 Alk Cl SQ NOZ 10ml - Spectro	Vot 40ml 3 8260 HC BVOA 40ml 3 McH/EM HC BVOA 10ml 3 TOC HC Apply 12 1 Alk Cl SQ, NB, none 10ml - Spectro -

QUALITY CONTROL SAMPLE RECORD

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes
BF-1	GW	Dup-1		8260	

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	HYDRO (GEO CI	HEM, I	NC.						
			Gra	oundwa	ter Samp	oling For	<u>m</u> Well I	ъ. 7А	7P-6	
					-	11.	VY CIT I			
	Project Name/N	umber: 7tl	h AZ WQ	ARF Site	e Date: 🧕	20/13	Sampl	er: <u>M</u> D	131	
					RMATIC					
Total Well De	epth: 95 'a", ft): 95	_ Casing	Diameter ('	'd", in.):	<u> </u>	. I	Depth to W	ater ("b", f	t): <u>\$5.6</u>	7.600
Well Depth ("	'a", ft): <u>95'</u>	Screen	ed Interval	(ft) From:_	65' to:	95' I	Depth to LN	JAPL (ft):		
	ne: $(a - b) X d^2 X$					gal	LNAPL Th	ickness (fi	t):	_
Chan	27		Esh	mst	N					
•=	a. PU	RGE INFO	ORMATI	ON AND	FIELD	MEASUR	EMENTS	s _	`	
Time Started:	<u> </u>		Time Con	npleted:	1050	7	Total Purge	e Time:	<u>35 m</u>	
Purge Metho	9:32 d: low flo	<u>~_</u>	Pump Set	ting:	10 Pt-	1	Total Purge	Volume:	18.15L	-
Elapsed	Extraction Rat		E.C.	<u>,</u>	Turbidity	D.O.	ORP	Odor or	Notes	٦
Time (Min)	(m /min)	(°C)	(mS/cm)	pH	(NTU)	(mg/l)	(mV)	Sheen?		
932	550	35.6		1 1	1.83	6,65	226	NO		
935	И	76.3		I I I		5,69	210	71		
940	11	24.5	2782	6.60	18.6	4.58	204	* 1		
945	11	26.4	2780	6.59	29.0	3.55	198	11		
<u>(a 30</u>	11	26.7			35.3	5.55	181	11	out of	Nr
1035	11	26.6				4.50	ררן	41		
1040	<u>i1</u>		2796			3.39	171	N		_
1045	LI		2796			3.30	156	-1		_
1050	<u> </u>	26.8	2797	6.56	29.0	3.27	162	1,		
				-			-			
Time Started:		AMPLING			AND SA		ECORD Sampling N	Aethod:	and	
						····			Ď	1
Sample No		Container Type	Volume	No. of Container	s Analys	is Method	Preservati	ve	Notes	
TAZP-	6 1051	VUA	Youl	3		60	HCI			
7A7P	-6 1051	VOA	Yout	3	Mith		1+01	_		
747P-	6 1051	tinteen	Youl	3	TU	1	ACT			
7AZP-	1	poly	IL	Ĭ		Noz Say	none			
Ferrous	10:54	1-1	10ml		Spre	/		L.Z	3 mg/L	
suf.de	11:02	~	10ml		Spice		·	40 x	value -	
					¹		·		0	

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes
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	Project Name/Nur	nber: 7th			ter Samp e Date:		weni		<u>-PD-</u> 30 MD
					RMATIO				
	« [¹): <u>68,66'</u>)
tal Well De	epth: { [' a", ft): (Casing]	Diameter ("	d", in.): _			-); <u></u> ,
ell Depth ("	a", ft): <u>81</u>	Screen	ed Interval ((ff) From:	<u> </u>	L 	-	• • •	
sing Volun	ne: $(a - b) X d^2 X (a - b) $	$0.0408 = _{-}$	gai	3 Casing	Λ	gar J	LINALL II	nekness (11)	·
Ch.	me		es	have	8t 1%	}		•	
	me 7 PUR	GE INFO	ORMATI	ON ANJ	D FIELD I	MEASUR	EMENT	s	35 ~~~
me Started	- 14/0		Time Con	ipleted:	1935		otal Purg	e 1 me:	
	1 6	1	-		10 Li	-			\mathbf{O}
irge Metho	d: low fla	~	Pump Set	ting:	1775]	l'otal Purg	e Volume:	214
Elapsed	Extraction Rate	Temp	E.C.		Turbidity	D.O.	ORP	Odor or	Notes
Elapsed Time (Min)	Extraction Rate (Q/min)	Temp (°C)	E.C. (mS/cm)	pН	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	
Elapsed Time (Min)	Extraction Rate (NQ/min)	Тетр (°С) 28, 0	E.C. (mS/cm) J.46 s	рН 6,50	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen? ১১৯	
Elapsed Fime (Min) 420 435	Extraction Rate (LQ/min) COT	Temp (°C) 28 ,ن २ २. , <u>6</u>	E.C. (mS/cm) J.46 C 2655	_{рн} 6,50 6,53	Turbidity (NTU) L 13 9.74	D.O. (mg/l) M. 1(2.33	ORP (mV) 500 462	Odor or Sheen?	
Elapsed Fime (Min) 420 435	Extraction Rate (AQ/min) COT 4 1	Temp (°C) 28,0 27.6 27.8	е.с. (mS/cm) Д46 с Д46 с Д46 д	_{рН} <u>6,50</u> 6,53 6,53	Turbidity (NTU) L 13 9.74 13.2	D.O. (mg/l) 1.33 1.31	ORP (mV) S & S 46 2 470	Odor or Sheen? N3 N M	
Elapsed Fime (Min) 420 435 430	Extraction Rate (LQ/min) COT	Temp (°C) 28,0 27.6 27.8 28.7	E.C. (mS/cm) J.46 c 2655 2660 7674	_{рн} 6,50 6,53 6,53 6,54	Turbidity (NTU) L 13 9.74 13.2 27.8	D.O. (mg/l) 1.1(2.33 1.31 .76	ORP (mV) S& 462 440 413	Odor or Sheen? No No No No No No No No No No No No No	
	Extraction Rate (AQ/min) COT 4 1	Temp (°C) 28,0 27.6 27.8	E.C. (mS/cm) J.66 d 2655 2660 7674 J.674	рн 6.50 6.53 6.53 6.54 6.54	Turbidity (NTU) L 13 9.74 13.2 27.8 21.3	D.O. (mg/l) M. 1(2.33 1.31 .76 1.78	ORP (mV) S & S 46 2 470	Odor or Sheen? Nð U U U U	
Elapsed Fime (Min) 420 435 430	Extraction Rate (AQ/min) COTO N IL IL	Temp (°C) 28,0 27.6 27.8 28.7	E.C. (mS/cm) J.66 d 2655 2660 7674 J.674	рн 6.50 6.53 6.53 6.54 6.54	Turbidity (NTU) L 13 9.74 13.2 27.8 21.3	D.O. (mg/l) 1.1(2.33 1.31 .76	ORP (mV) 500 462 440 413 388 361	Odor or Sheen? N³ N N N U U U	
Elapsed Fime (Min) 420 435 430 1435 1440	Extraction Rate (NQ/min) COT N LL L L U	Temp (°C) 28,0 27.6 27.8 28.7 28.7	E.C. (mS/cm) J.66 d 2655 2660 7674 J.674	рн 6.50 6.53 6.53 6.54 6.54 6.54	Turbidity (NTU) L 13 9.74 13.2 27.8 21.3	D.O. (mg/l) M. 1(2.33 1.31 .76 1.78	ORP (mV) 500 462 440 413 388 361 345	Odor or Sheen? Nð U U U U	
Elapsed Fime (Min) 420 425 430 430 430 445 1440 1440 1445	Extraction Rate (NQ/min) COT N U U U U U	Temp (°C) 28.0 27.6 27.8 28.7 28.1 2.8.1	E.C. (mS/cm) J.66 c 2655 2660 7674 J674 J680 270J	PH &.50 &.53 &.53 &.53 &.54 &.54 &.54 &.54 &.54	Turbidity (NTU) L 13 9.74 13.2 27.8 21.3 18.0 13.0	D.O. (mg/l) 4, 1(2.33 1.31 .76 .78 .77	ORP (mV) 500 462 440 413 388 361	Odor or Sheen? N³ N N N U U U	

Fime Started:	<u>14</u> \$¢		Time Co	mpleted:		Sampling Metr	
	Time	Container	Volume	No. of Containers	Analysis Method	Preservative	Notes
Sample No. MW-PD-30	Time 1 5 56	Type	Yonine	3	\$260	HCI	
MW-PD-30	1456	1. 1	YOM	3	Moth/Eth	IFCI	
MW-PD-30	1456		Hent	3	TOC	HCI	
MW-PD-30	1457	VIA	1L		AIK UND SD.	none	/
Farroys	1501	/	10m	· ·	Spicho		0.39 mg/C
Sulfield	1508		10mj		Servin		14 ag/C
							<i>• 0</i> ′

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes
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E I	IYDRO GI	EO CE			ton Camp	ling For	~~			
		<u> </u>	Gro	unuwu	ter Samp	ung rom	Well I	D: <u>7</u> A	12P-10	
Р	roject Name/Nu	nber: 7 th	AZ WQ	ARF Sit	te Date: 3	-21-13	Sample	er: <u>MO</u>	BV	
			WEL	L INFO	DRMATIO	N				۱۵Ĺ
Total Well De	pth: <u>9</u> [' a", ft): <u>9</u> ['	Casing	Diameter ("	'd", in.): _	7	D au' D	Pepth to Wa	ater ("b", fl	t): <u>86.99</u>	10 100
Well Depth ("a Casing Volum	a", ft): $- 9 ($ e: (a - b) X d ² X (Screen $0.0408 =$	ed Interval gal	(ft) From 3 Casing	: <u>t</u> to: _ Volumes	L	LNAPL Th	ickness (ft):	
Casing Volum	0. (u 0) / u / i		8	c						
	PUR	GE INFO	ORMATI	ON AN	D FIELD I	MEASUR	EMENTS	5		
	10:51		Time Con	npleted:	<u></u>	T	otal Purge	Time:	50 - mM	
Purge Method	Lon FL	كى	Pump Set	ting:	881	T	'otal Purge	Volume:	27.5-1	
Elapsed	Extraction Rate	Temp	E.C.		Turbidity	D.O.	ORP (mV)	Odor or Sheen?	Notes	
Time (Min)	(m /min) 550 ml m.N	(°C)	(mS/cm)	pH	(NTU) 4.29	(mg/l) 6,33	522	NO	clean	
1055	11	26.5	_			6.17	460	ч	slightly	
1100	11	26,6	2640	6.61	69.9	5.74	43(11		
1105	11	245	2636	6.61	54,9	5.45	402		11	
1110	1(26,5	2634	6.61	38.2	8.44	386	11	17	
1115	<u>N</u>		2040			5.42	359	<u>и</u> 	4	
1120	11	16,7	2647 2652	6.60	20.6	5,40	351		и	
1126	<u> </u>	26.9) .				295	i (1.0-1	
1140		- 20, 1		p.va	2.0	5.00		<u>_</u>	Cher	1
					N AND SA				- 1	
Time Started:	<u>[140 </u>	~L.G	Time Cor	npleted:	11:41		Sampling I	Method: _	y~s	
Sample No		ontainer Type	Volume	No. o Contain		sis Method	Preservat	ive	Notes	
Favors	111: 3 5	<u> </u>	(Um)		1	ho			66 mell	
Sulfral	11:36	<u> </u>	10n]			1vi		2		
7AZP-10		IOA	your	3	\$26	OB,	HCL			
7AZP-1		IVA	40ml	3	httle	thus Ethin	e LtCL			
7AZA-		VOA	40 m	3	To	<u> </u>	1+CL	-)
7AZP-1	0 1141 P	oly	11_	l	AIK.CI	NO3 SQ	None	98	he hall	

Orig. Sample No.	OC Sample Type	QC Sample No.	Time	Analysis Method	Notes
ong. Sumpto 199					

-5
\mathbf{V}
4.44
<u>4, 4 4</u> -
nn
L
otes

Time Started: 9:29 Time Completed: 9:45 Sampling Method: 9:45

						<u> </u>	
Sample No.	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Notes
7AZP-5	9:30	poly	IL	l	Alk U Non say	none	
	9:29	Vor	40m1	3	8260	Hel	
7AZP-5		VOA	40m)	3	Meth/Eth		
7AZP-5		Amber	Youl	ふ	toc		
Ferrous	9:36		10ml		Spretre	• (0.05 mg/L
Sulfide	9:45		Wal		Sprano	_	5mg/c

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes

	HYDRO GI	EO CH			ter Samp	ling For	<u>m</u> Well I	_{D:} _УС	-5	
тарана на пределата на	Project Name/Nur	nber: 7 th	ı AZ WQ	ARF Sit	te Date: <u></u> 3.					
					ORMATIO	N			66.6 67 1): <u>66.75</u>	7'bke
Total Well De	pth: <u>45</u>	Casing	Diameter ('	'd", in.): _	<u> </u>	Γ	Depth to Wa	ater ("b", fi	t): 66.35	'h 2
Well Denth ("	a".ff): 70.5	Screen	ed Interval	(ft) From	: >> to:	v 1	<i>repullio</i> Lr	$\mathbf{A}\mathbf{I}\mathbf{L}$		
Casing Volum	$\frac{(a-b) \times d^2 \times d^2}{\sqrt{g}}$	0.0408 = _	gal	3 Casing	g Volumes	gal]	LNAPL Th	ickness (ft): <u>0.32</u>	₽ ¹ 771/1.1
Che	rge <u>Isco</u>	5	Extra	st.	12soc		5	hige-	Setting .	14 0Re
	U PHR	CF INFO	TRMATI	ON AN	D FIELD I	MEASUR	EMENT	S	46-mm	`
Time Started:	1420		Time Con	npleted:	15:06]	Total Purge	e Time: 🔄	46-mn	`
	1: low the			ting:	<u>78'</u>				23-L	
Elapsed Time (Min)	Extraction Rate	Temp (°C)	E.C. (mS/cm)	pH	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	Notes	
1420	500	27.1	2413	5,93	9.90	6.00	00]	NO	clond 11	1 clug
1425	11		2398		L L	1.87	122	11	11	
1430	11	26.7		6.41	14,2	2,30	122	1/	(₁	
1435	eL	26.7	2397	6.42	9.75	2.52	129	4	1	
1440	u	26.8		6.43	6.09	1.09	117	1	9	
1445	ĸ	26.8	2399			1.93	48	71	4	
1450	4		2397		-	1.60	16	11	11	
1455	tr		2393			1.52			17	
ft to										
l <u>.</u>	<u>I</u>	<u> </u>	L	<u> </u>	<u> </u>	<u> </u>	<u> </u>	·	······	<u> </u>

	11	SAMPLINO			AND SAMPLE R	ECORD	
Time Started:	1456		Time Co	mpleted:	<u>1511</u>	Sampling Meth	nod: fra p
·				No. of		<u></u> `	<u> </u>
Sample No.	Time	Container Type	Volume	No. of Containers	Analysis Method	Preservative	Notes
YC-5	1457	AULY	L	1	Alle I Nor She	vare	
	1456	NOA	40~1	3	9260	HC	
	1456	NOA			Moth/Eth		
	1456	Amber	$\overline{\mathbf{V}}$	\mathbf{V}	TUL		
Ferrous	1504	-	Wind		Spreno		
Sulfide	1511		Dal		Spectro		

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes
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	HYDRO GI	EO CH			ter Samp	ling For	m	- 1	~ ~	
					1		Well I	D: <u>7</u> A	ZP-2	
	Project Name/Nur	nber: 7 th	AZ WQ	ARF Sit	te Date: 3	-21-13	Sampl	er:_ . BV	MO	
					ORMATIO					
Total Wall De	pth: <u> </u>	Casing	Diameter ("	d" in).	4"	г	Depth to Wa	ater ("b", f	t): 68.15	-'btoc
Well Depth ("	a".ft): 85'	Screen	ed Interval	(ft) From	: <u>58.7</u> 'to:_	83.91' I	Pepth to LN	JAPL (ft):	66.71	Hoc
Casing Volum	$a + (a - b) X d^2 X (b)$	0.0408 =	gal	3 Casing	 Volumes	gal 1	LNAPL Th	ickness (ft	:): 1.44°	=
Charge	$\begin{array}{c} a \ , \ 11 \end{array} \stackrel{(a \ -b)}{\longrightarrow} X \ d^2 X \ 0 \\ A \ 2 \ 30 \\ A \ 30 \\ A \ 2 \ 30 \\ A \ 30 \\ A \ 30 \ 30 \ 30 \\ A \ 30 \ 30 \ 30 \ 30 \ 30 \ 30 \ 30 \ $	_	Exho	ivst	12	30 -	st.	mon	73'	blee.
		GE INFO	ORMATI	ON AN	D FIELD]	MEASUR		2	16:43	
	1: low flor				7 7'				28.2 -	
Elapsed Time (Min)	Extraction Rate (y min)	Temp (°C)	E.C. (mS/cm)	pH	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	Notes	
1556	600	25.9	1513	6.60	2.92	5.00	6.2	light Sheen	oder s	Tens
1601	11	25.9	1567	6.62	~	3.65	84.2	1. ght	Odar Pr.	hov
1606	M	25.8	1583	6.62	3.43	3.71	3	T.	11	
1611	 	25.8	1583	6.62	2.06	4.00	-14.8	11		
1616	<u> </u>	28.7	1594	6.62		5.29	-81.5	در		
1621	~~	25.7	1997	0.61	2.45	3.37	-43	u	4	
636		25.6	1567	6.62		441	-95	· t	r.(
1431	11	28.6	1589	6.62	1.40	4.65	-96	- fx	5	
Time Started	1632 ^{SAT}	MPLING	F INFOR Time Cor	MATIO	N AND S UG Y S	AMPLE R	ECORD Sampling I	Method:	grab	-

Preservative Notes Analysis Method Sample No. Time Туре Volume Containers 7 PO L None 1633 . 40~ 8260 HC 1632 11/ 1621 Am ſ () 163: 1640 Dm 1005 108 protect <u>[Dm</u> 18444 ß prevo

No. of

QUALITY CONTROL SAMPLE RECORD

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes

Container

	HYDRO GJ	EO CH	•		ter Samp	ling For	<u>n</u> Well II	D: <u>У</u> С	-5	
	Project Name/Nur	nber: 7 th	AZ WQ	ARF Si	te Date: <u></u> .	-21-13				
	Epth: $-\frac{65}{10^{10}}$, ft): $-\frac{65}{10^{10}}$. ne: (a - b) X d ² X (b)		WEL	L INFO	ORMATIO	N			66 B7	7'b
Fotal Well De	enth 45	Casing	Diameter ("	d". in.):	<i>4 "</i>	Γ	Depth to Wa	ater ("b", f	t): 6.35	bla
Well Depth ("	'a", ft): ° S	Screen	ed Interval	(ft) From	: 55 to:	40 I	Depth to LN	IAPL (ft):	66.35	bł
Casing Volum	ne: (a - b) X d^2 X ().0408 = _	gal	3 Casing	g Volumes	gal 1	LNAPL Th	ickness (ft): <u>0.32</u>	!
Che	$\frac{a + b}{2} \times d^2 \times $	<u> </u>	Exhan	-ot_	IZSOC		5	truge-	Setting -	14
Fime Started	PURC - 1420	GE INFO	DRMATI Time Con	ON AN	D FIELD I (5:06	MEASUR	EMENTS Total Purge	5 Time: <u>-</u>	46-mm	١
Purge Metho	d: low fle	1	Pump Set	ting:	78'	1	Cotal Purge	Volume:	23-L	
Elapsed	Extraction Rate	Temp	E.C.	pH	Turbidity (NTU)	D.O. (mg/l)	ORP (mV)	Odor or Sheen?	Notes	
$\frac{\text{Time}(\text{Min})}{1420}$	(m)/min) ~500	(°C) 971	(mS/cm) 2413			6.00	[UN]	NO	Clen di	ĴĴ
1425	11		2398		1	1.87	122	11	Clon de	1
1430	n n	24.7		6.41	14,2	2,30	122	1/	11	1
1435	rl.	26.7	2397			2.52	129	4	1	
1440	u			6.43		1.09	117	()	Ŋ	
1445	ĸ		2399		3.96	1.93	48	11	4	
14,50	n	26.7	2397			1.60	16	١١	11 .	
1455	10	24.7	2393			1.52	-42	•1	27	
+ 1										
	- <u></u>				N AND SA					_

Time Started:	1456	, 	Time Co	mpleted:	1511	Sampling Meth	nod: <u>fra</u> p
		Container		No. of			N. (
Sample No.	Time	Туре	Volume	Containers	Analysis Method	Preservative	Notes
YC-5	1457	AOLY	IL_		Am i wash	none	
	1456	NOA	40m)	3	9260	HCI	
	1456	NOA			Moth/Eth		
-V	1456	Amor			TUL.	V	
Ferrous	1504	-	10m	_	Spreno	\frown	Q.11 mall
Sulfide	1511		Dm		Sperto		4 wall

Orig. Sample No.	QC Sample Type	QC Sample No.	Time	Analysis Method	Notes

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