Atlantic Richfield Company

Jack Oman
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September 7, 2010

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Nadia Hollan Burke
Remedial Project Manager
U.S. Environmental Protection Agency Region 9
75 Hawthorne Street, SFD-8-2
San Francisco, CA 94105

Subject: **August 2010 Monthly Report, Yerington Mine Site, Lyon County, Nevada: Administrative Order for Remedial Investigation and Feasibility Study (RI/FS), EPA Docket No. 9-2007-0005; Administrative Order on Consent, EPA Docket No. 09-2009-0010**

Dear Ms. Hollan Burke:

Pursuant to the above referenced orders issued by the U.S. Environmental Protection Agency - Region 9 (EPA), Atlantic Richfield Company (ARC) has prepared the following monthly report for RI/FS and removal action activities at the Yerington Mine Site (Site) during August 2010.

August 2010 Activities

- Continued routine Site O&M, security and bird deterrent activities including operation of the propane cannons for the Arimetco ponds (with the exception of the VLT Pond, as directed by EPA). The bird guard towers are not being operated while the pumpback ponds are dry.
- Continued monitoring of the evaporation pan located near PW6. PWS evaporation pond levels: North Cell 0.0 feet; Middle Cell = 0.0 feet; South Cell 0.0 feet.
- Arimetco fluid management system (FMS) using recently installed flow meters: 1) total estimated gallons transferred from the VLT Sediment Pond (VLTSP) to the FMS Evaporation Pond = approximately 701,703 gallons; 2) total estimated gallons transferred from the Slot Sediment Pond (SSP) to the FMS Evaporation Pond = approximately 647,483 gallons; and 3) total estimated gallons transferred from the Phase 1 Pond to the FMS Evaporation Pond = 0.0 gallons. A total of approximately 1,349,180 metered gallons of solution was transferred to the FMS pond during the month of August (see attached graphs).
- End-of-month pond levels based on recently installed pressure transducers: Phase 1 Pond = 1.0 feet; FMS Evaporation Pond = 6.75 feet; VLT Pond = 3.00 feet; Slot 2 Pond = 9.25 feet (see attached graphs). Approximately 1,093 gallons of solution was pumped from the leak detectors during the month of August (see attached form).
- The truck shop was organized to accommodate storage for drilling core generated by ongoing drilling activities. Signs on the perimeter fence damaged by vandalism were replaced.
- Shade boxes for the flow meters at the Slot and VLT ponds were constructed and installed to protect the instruments from overheating.
- Tom Dunkelman (EPA) and Justin Yurkaria (City Life journalist) toured the Site on August 19.

August 2010 Activities - Continued

Site Characterization

- Site-wide monthly groundwater elevation measurements were obtained August 30 & 31.
- A pit lake water elevation of 4221.486 feet amsl was recorded on August 31, 2010 from the pressure transducer, a decrease of 0.032 feet since July 31, 2010. The pit lake elevation has risen 2.846 feet since August 31, 2009.
- Continued meteorological monitoring at the AM-6 location including wind speed/direction, temperature, relative humidity, barometric pressure, precipitation and solar radiation.
- Of the six outstanding respondents eligible for bottled water, responses were received in August from four residences. One residence (DW-106) does not want bottled water. Three residences (DW-121, DW-153, and DW-160) accepted, and were placed into the program. A fourth residence (DW-13) was added to the program based on their well sampling results and provided a signed access agreement. The current status of access agreements is as follows: Yes-153, No-12, Outstanding-7 and Pending-2.
- Provided EPA with 2Q 2010 domestic well monitoring results for distribution to home owners.
- Continued compilation of data for inclusion in the 2Q 2010 domestic well monitoring and Site-wide groundwater monitoring reports.
- Continued the 2010 monitor well program (see attached progress update): 1) monitor wells B/W-27I, -33S, -33I, -36S, -37I, -51S, -52S, -52I, -52D, -54S, -54I, -61S, -61I, -61D, and MW-4B were installed; 2) 28 zonal groundwater samples were collected from four boreholes, and 25 laboratory analytical results were received from the zonal samples; 3) no aquifer solids samples were collected; 4) 11 samples were sent out for sulfur, nitrogen, and oxygen isotope analyses; and 5) surface water samples were collected from the Walker River near Bridge Street and from the West Campbell Ditch near HWY 95A.
- Attended a groundwater technical meeting on August 31 to discuss the status of current investigations, background monitoring and on-Site monitor wells.
- Continued the analysis of aquifer test data and preparing a summary of the results.
- Completed geochemical and geotechnical field characterization activities for the mineral salt precipitates and sub-grade materials in the north cell of the PWS evaporation pond.
- Submitted the Process Areas Vadose Zone and Groundwater Characterization Work Plan (Revision 1) on August 20.
- Reviewed the draft Site History Report, and submitted comments to EPA on August 11.
- Continued routine database management activities.
- Continued Site wildlife surveys, data management and wildlife observation reports.

AOC Removal Actions

- Responded to July 26, 2010 EPA comments on the draft Process Areas Radiological Materials Removal Action Plan on August 10, and provided a preliminary schedule for the removal action. Received conditional EPA approval of the removal action.
- Submitted the draft Electrical Hazards Removal Action Report on August 19.
- Responded to EPA comments dated August 13, 2010 on the draft Evaporation Ponds (Thumb Pond and Sub-Area A) Implementation Work Plan on August 27, and provided a preliminary schedule for the removal action. Received conditional EPA approval of the removal action.
- Received EPA approval of the revised Transite Pipe Removal Action Plan on August 10.
- Spectrum Geophysics conducted ground clearance activities on August 10-13 for the removal actions. A pre-bid Site walk for construction contractors was held on August 23. Continued repairs to the air quality monitoring stations to be used in support of the 2010 removal actions.

Planned September/October 2010 Activities

Site Characterization

- Continue Site wildlife surveys, maintenance of wildlife observation data and preparation of wildlife observation reports.
- Continue groundwater elevation and pit lake level monitoring. Continue meteorological monitoring at AM-6.
- Submit the 2Q 2010 Site-wide monitoring and domestic well monitoring reports.
- Conduct the 3Q 2010 Site-wide monitoring and domestic well monitoring events.
- Provide updates to EPA for domestic well access agreements, as needed.
- Submit a final Aquifer Solids Work Plan.
- Continue borehole drilling, zonal sampling and monitor well installations pursuant to the revised 2010 Monitor Well and Ag Fields Work Plans, and add drill rigs to expedite the schedule.
- Submit a technical memorandum on the aquifer test results for EPA review, and discuss with EPA the next steps described in the PWS Characterization Work Plan Addendum dated February 17, 2010. Initiate particle tracking and numerical modeling, per EPA direction.
- Implement geophysical surveys in the Process Areas pending EPA approval of this element of the revised Process Areas Vadose Zone Work Plan.
- Conduct a tour of the Wabuska Drain with EPA, NDEP and YPT.

AOC Removal Actions

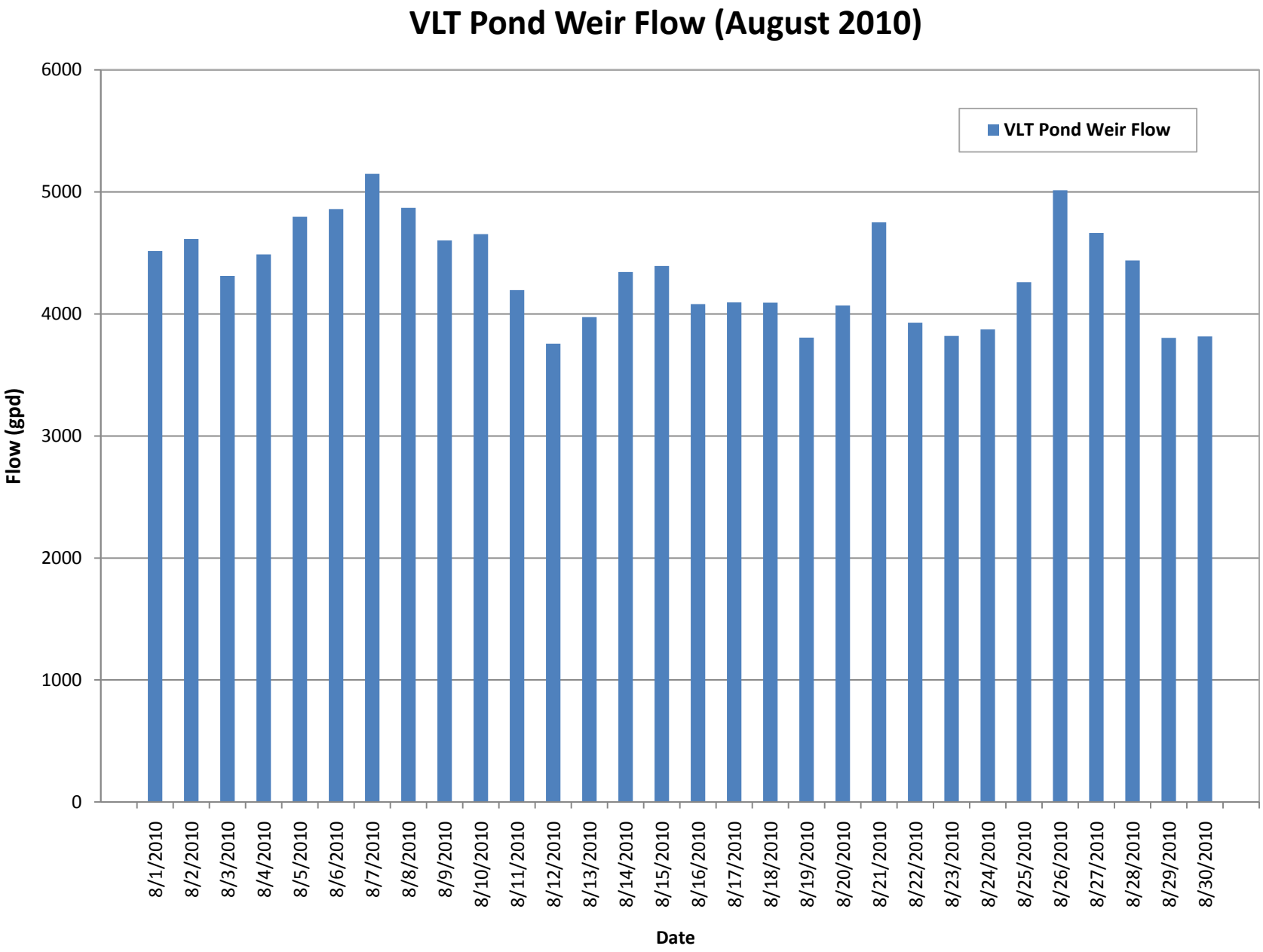
- Continue routine O&M, site security, and bird deterrent activities. Continue flow monitoring and water balance calculations for the Arimetco FMS, and implement other elements of the revised FMS O&M Plan.
- Compile geochemical and geotechnical data resulting from the characterization activities for the mineral salt precipitates and sub-grade materials in the north cell of the PWS evaporation pond, and submit a letter report to EPA that summarizes these data.
- Select a contractor to perform the 2010 removal actions (Thumb Pond and Sub-Area A interim covers; transite pipe removal; Process Areas radiological materials removal). Provide EPA with supplemental information pertinent to the removal actions (e.g., dust control and air quality monitoring plans). Pending EPA final approval, implement the removal actions in mid-October.
- Respond to EPA comments dated August 18, 2010 for the draft Cover Materials Work Plan and submit a revised Work Plan by September 24. Pending EPA approval, initiate the field activities described in the Work Plan.

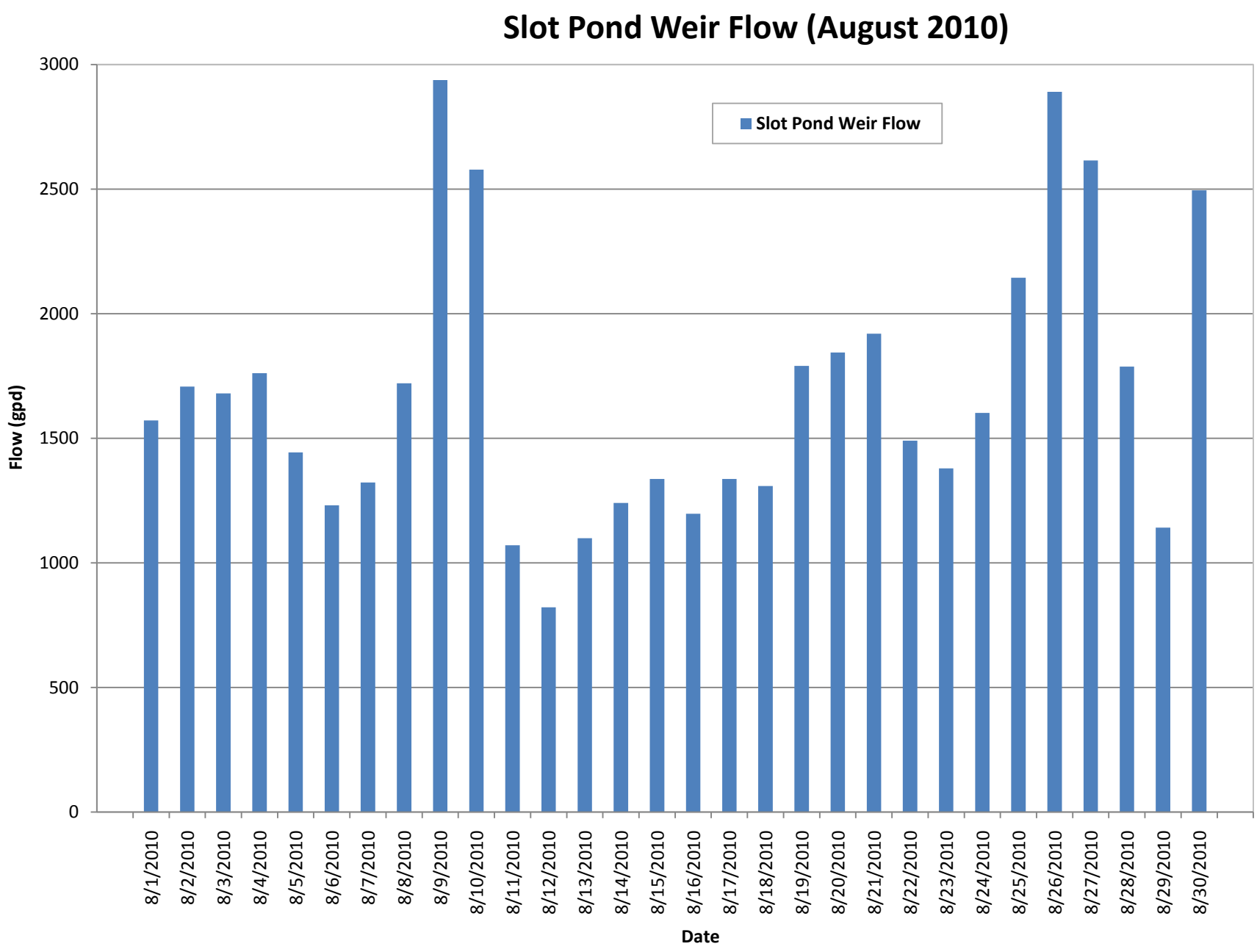
If you have any questions or comments, please contact me at (714) 228-6774 or via e-mail at jack.oman@bp.com.

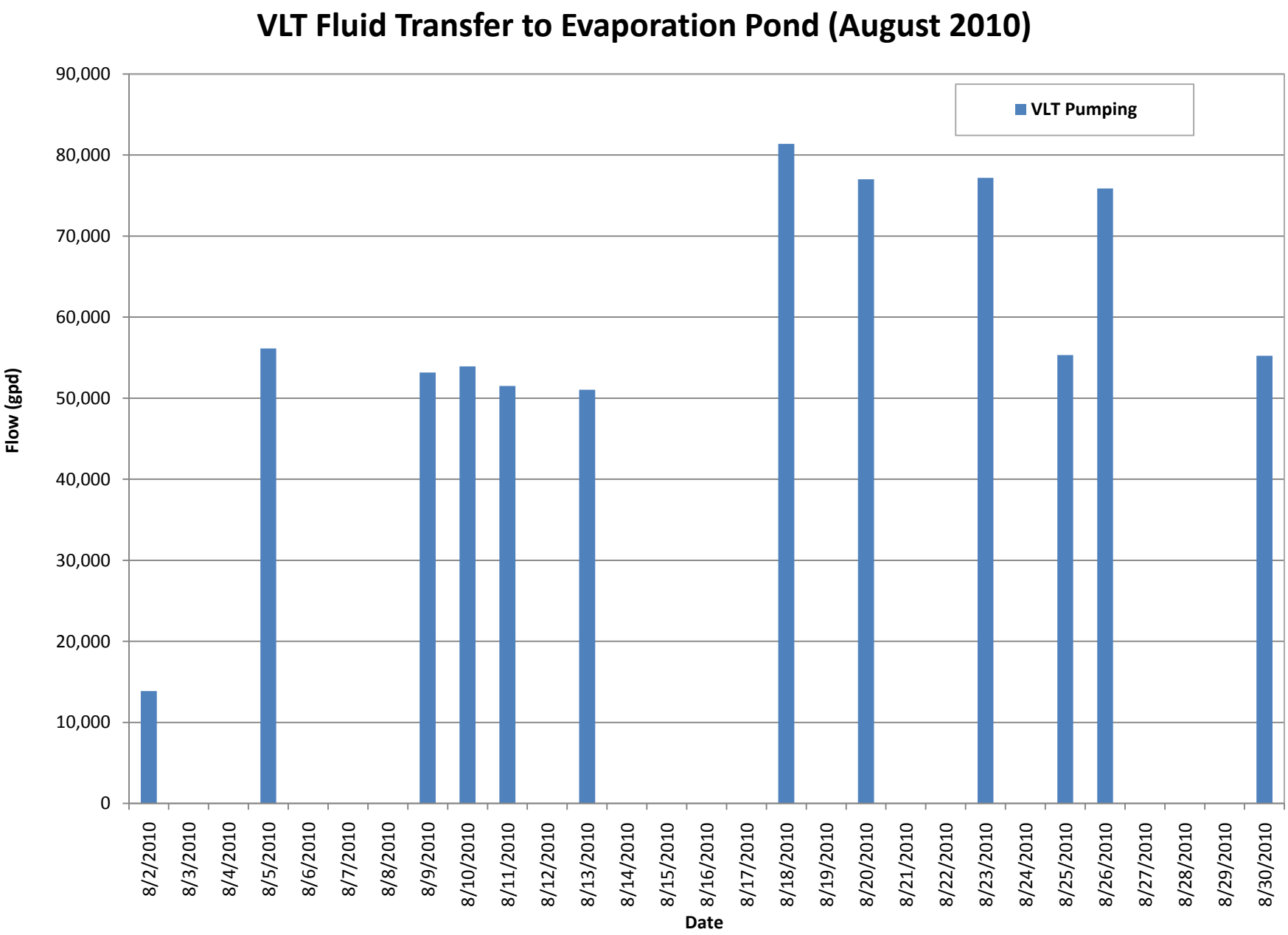
Sincerely,

Jack Oman
Project Manager

cc: Dave Seter, EPA – via electronic mail
Jacquelyn Hayes, EPA – via electronic mail
Svetlana Zenkin, EPA – via electronic mail
Roberta Blank, EPA – via electronic mail
Jere Johnson, EPA – via electronic mail
Andrew Helmlinger, EPA – via electronic mail
Tom Dunkelman, EPA – via electronic mail
Joe Sawyer, NDEP – via electronic mail
Tom Olsen, BLM – via electronic mail
Dan Newell, City of Yerington – via electronic mail
Phyllis Hunewill, Lyon County Commissioner – via electronic mail
Dennis Stark, Lyon County Manager – via electronic mail
Richard Faber, Lyon County Facilities Engineering – via electronic mail
Tom Grady, Nevada State Assembly – via electronic mail
Justin Whitesides, YPT – via electronic mail
Chairman Emm, YPT – via electronic mail
Dietrick McGinnis, McGinnis and Associates – via electronic mail
Tom Bowden, Ridolfi, Inc. – via electronic mail
Chairman Sammaripa, WRPT – via electronic mail
Roxanne Ellingson, WRPT – via electronic mail
Ron Halsey, Atlantic Richfield Company - via electronic mail
James Lucari, Atlantic Richfield Company – via electronic mail
Steve Dischler, Atlantic Richfield Company – via electronic mail
Robin Bullock, Atlantic Richfield Company – via electronic mail
Shannon Dunlap, Atlantic Richfield Company – via electronic mail
Don Pratt, Atlantic Richfield Company – via electronic mail
John Batchelder, EnviroSolve – via electronic mail
Jim Chatham, Atlantic Richfield Company – via electronic mail
Rich Curley, Curley and Associates, LLC – via electronic mail
David Peri, Peri and Sons – via electronic mail
Ken Greene, CH2M Hill – via electronic mail
Victor Early, Tetra Tech – via electronic mail
Colin Lee, Tetra Tech – via electronic mail
Peggy Pauly, YCAG – via electronic mail
Lyon County Library System Central


VLT Pond Weir Flow (August 2010)
VLT Pond Weir Flow
Flow (gpd)
6000
5000
4000
3000
2000
1000
0
8/1/2010
8/2/2010
8/3/2010
8/4/2010
8/5/2010
8/6/2010
8/7/2010
8/8/2010
8/9/2010
8/10/2010
8/11/2010
8/12/2010
8/13/2010
8/14/2010
8/15/2010
8/16/2010
8/17/2010
8/18/2010
8/19/2010
8/20/2010
8/21/2010
8/22/2010
8/23/2010
8/24/2010
8/25/2010
8/26/2010
8/27/2010
8/28/2010
8/29/2010
8/30/2010
Date


Slot Pond Weir Flow (August 2010)
Slot Pond Weir Flow
Flow (gpd)
3000
2500
2000
1500
1000
500
0
8/1/2010
8/2/2010
8/3/2010
8/4/2010
8/5/2010
8/6/2010
8/7/2010
8/8/2010
8/9/2010
8/10/2010
8/11/2010
8/12/2010
8/13/2010
8/14/2010
8/15/2010
8/16/2010
8/17/2010
8/18/2010
8/19/2010
8/20/2010
8/21/2010
8/22/2010
8/23/2010
8/24/2010
8/25/2010
8/26/2010
8/27/2010
8/28/2010
8/29/2010
8/30/2010
Date


VLT Fluid Transfer to Evaporation Pond (August 2010)
VLT Pumping
Flow (gpd)
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
8/2/2010
8/3/2010
8/4/2010
8/5/2010
8/6/2010
8/7/2010
8/8/2010
8/9/2010
8/10/2010
8/11/2010
8/12/2010
8/13/2010
8/14/2010
8/15/2010
8/16/2010
8/17/2010
8/18/2010
8/19/2010
8/20/2010
8/21/2010
8/22/2010
8/23/2010
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8/25/2010
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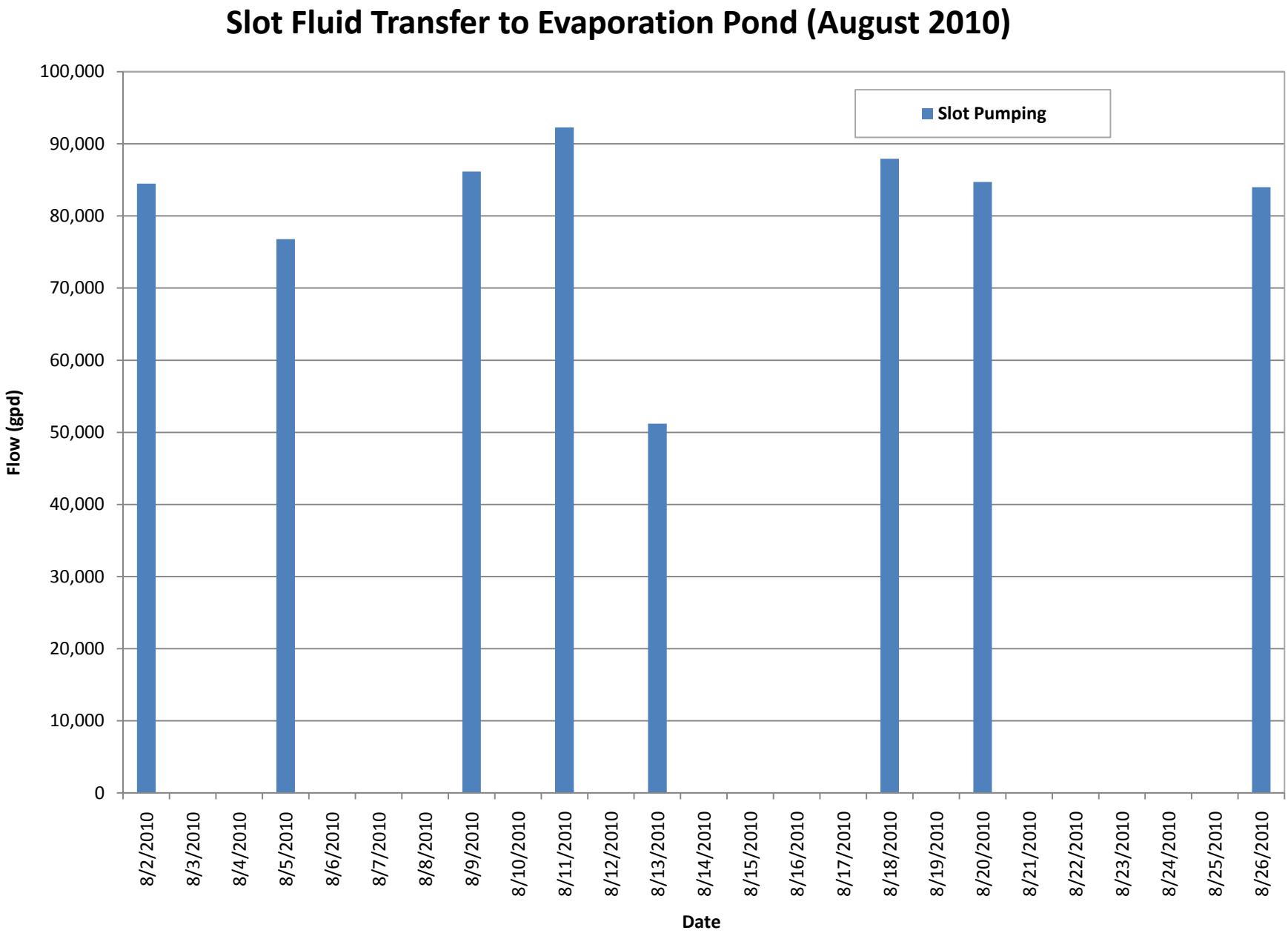
8/29/2010
8/30/2010
Date


Slot Fluid Transfer to Evaporation Pond (August 2010)
Slot Pumping
Flow (gpd)
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
8/2/2010
8/3/2010
8/4/2010
8/5/2010
8/6/2010
8/7/2010
8/8/2010
8/9/2010
8/10/2010
8/11/2010
8/12/2010
8/13/2010
8/14/2010
8/15/2010
8/16/2010
8/17/2010
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8/21/2010
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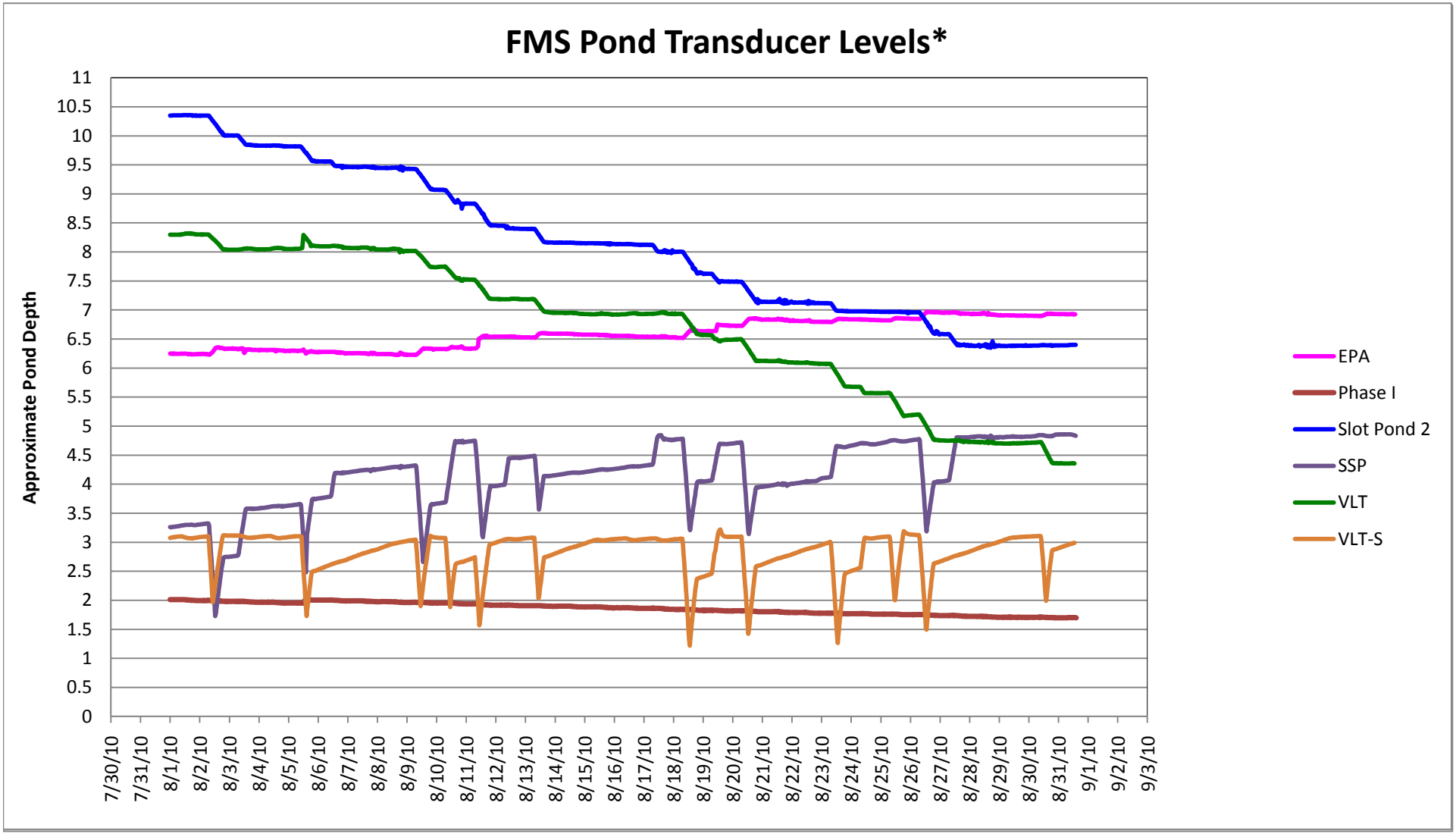
8/25/2010
8/26/2010
Date


FMS Pond Transducer Levels*
Approximate Pond Depth
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
7/30/10
7/31/10
8/1/10
8/2/10
8/3/10
8/4/10
8/5/10
8/6/10
8/7/10
8/8/10
8/9/10
8/10/10
8/11/10
8/12/10
8/13/10
8/14/10
8/15/10
8/16/10
8/17/10
8/18/10
8/19/10
8/20/10
8/21/10
8/22/10
8/23/10
8/24/10
8/25/10
8/26/10
8/27/10
8/28/10
8/29/10
8/30/10
8/31/10
9/1/10
9/2/10
9/3/10
EPA
Phase I
Slot Pond 2
SSP
VLT
VLT-S

ARIMETCO FMS - MONTHLY LINER LEAK DETECTOR REPORT FOR YEAR: 2010

UNIT NAME[1]	VLTSP		VLTP		VLTD1		VLTD2		VLTD3		FX1		FX2		FX3		SSP		SP2		SD1		SD2		SD3	
JAN																										
FEB																										
MAR																										
APR																										
MAY																										
JUN																										
JUL	W	50	W	500	D	0	D	0	D	0	W	50	D	0	W	5	W	100	D	0	D	0	D	NR	D	0
AUG	W	34	W	500	D	0	W	42	D	0	W/T	0	W	17	W/T	0	W/T	0	D	0	D	0	W	500	D	**0**
SEP																										
OCT																										
NOV																										
DEC																										
TOTAL		84		1000		0		42		0		50		17		5		100		0		0		500		**0**
YEAR TO DATE TOTALS:								**1798**																		

COMMENTS: SD2 is set up with a float switch to pump to the SSP permanently and was not reported for July.

W = WET; W/T = WET, TRACE OF WATER TOO SHALLOW TO PUMP. D = DRY; NUMBER INDICATES APPROXIMATE VOLUME PUMPED IN GALLONS

1) Leak Sump Locations shown on Figure 3-2 of the Arimetco FMS O&M Manual (July, 2010)

2010 Groundwater Investigations Update - August Monthly Report

Well Completion Log

Location	Ground Surface	Screen Interval				Screen Length	Date Completed
	ft amsl	Top (ft bgs)	Bottom (ft bgs)	Top (ft amsl)	Bottom (ft amsl)	(ft)	
B/W-1B	4354.6	655	665	3699.6	3689.6	10	5/19/2010
B/W-6B	4436	260	280	4176	4156	20	4/26/2010
B/W-22B	4478	224	244	4254	4234	20	5/8/2010
B/W-27I	4355	80	100	4275	4255	20	8/17/2010
B/W-33B	4432	267	277	4165	4155	10	7/26/2010
B/W-33D	4432	195	205	4237	4227	10	7/29/2010
B/W-33S	4432	107	127	4325	4305	20	8/4/2010
B/W-33I	4432	170	180	4262	4252	10	8/3/2010
B/W-36S	4427	97	107	4330	4320	10	8/11/2010
B/W-36B	4427	155	165	4272	4262	10	6/17/2010
B/W-37S	4415	82	102	4333	4313	20	6/6/2010
B/W-37I	4415	117	137	4298	4278	20	8/10/2010
B/W-37D	4415	195	215	4220	4200	20	6/5/2010
B/W-37B	4415	247	267	4168	4148	20	5/27/2010
B/W-51S	4377	80	90	4297	4287	10	8/25/2010
B/W-51B	4377	185	195	4192	4182	10	6/25/2010
B/W-52S	4344	23	43	4321	4301	20	8/18/2010
B/W-52I	4344	57	77	4287	4267	20	8/20/2010
B/W-52D	4344	175	195	4169	4149	20	8/17/2010
B/W-54S	4350	52	62	4298	4288	10	8/20/2010
B/W-54I	4350	73	83	4277	4267	10	8/21/2010
B/W-54B	4350	89	99	4261	4251	10	7/10/2010
B/W-61B	4355	673	693	3682	3662	20	7/9/2010
B/W-61S	4355	15	35	4340	4320	20	8/27/2010
B/W-61I	4355	110	130	4245	4225	20	8/23/2010
B/W-61D	4355	320	340	4035	4015	20	8/29/2010
MW-4B	4406	159	179	4247	4227	20	8/28/2010
W4CB-2B	4354	511	531	3843	3823	20	7/9/2010

2010 Groundwater Investigations Update - August Monthly Report
Borehole and Zonal Sampling Data

Location	GS	Interval		Distance Between Zonal Sampling Intervals	Interval		Interval Midpoint	SO4	Alk (t)	Fe (total)	Ferrous Iron	TOC	Total Aresnic	Total Uranium	Dissolved Arsenic	Dissolved Uranium	U-234	U-235	U-238
	ft amsl	Top (ft bgs)	Bottom (ft bgs)	Feet	Top (ft amsl)	Bottom (ft amsl)	(ft amsl)	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L
B/W-1B	**Completed**	**Total Borehole Depth: 705 ft below ground surface**																	
	4354.6	295	300	-	4059.6	4054.6	4057	51	102.8	1	0	<1.0	4.2	6.1	3.9	5.7	3.3	0.061	1.73
	4354.6	325	330	30	4029.6	4024.6	4027	522	249	6	0.9	<1.0	9.8	160	<1.0	160.0	90.2	2.2	52.3
	4354.6	342	347	17	4012.6	4007.6	4010	31	85	0.1	0	-	8.5	4.6	5.5	2.9	2.33	0.0542	1.49
	4354.6	365	370	23	3989.6	3984.6	3987	346	178	1	0.8	<1.0	4.7	83	3.1	67.0	45	1.05	25.3
	4354.6	415	420	50	3939.6	3934.6	3937	341	249	1	1	1.5	3.1	80	4.6	72	47.8	0.913	24
	4354.6	445	450	30	3909.6	3904.6	3907	440	402	6	6	<1.0	1.6	140	<1.0	130	85.5	1.72	42.2
	4354.6	480	485	35	3874.6	3869.6	3872	625	650	6	3	1.6	2.4	380	1.3	360	258	4.82	126
	4354.6	519	524	39	3835.6	3830.6	3833	84	123	6	0.2	<1.0	16	8.7	11.0	8.6	5.51	0.133	3.04
B/W-22	**Completed**	**Total Borehole Depth: 244 ft below ground surface**																	
	4478	170	175	NS	4308	4303	4306	-	-	-	-	-	-	-	-	-	-	-	-
B/W-36	**Completed**	**Total Borehole Depth: 167 ft below ground surface**																	
	4427	102	107	NS	4325	4320	4323	-	-	-	-	-	-	-	-	-	-	-	-
	4427	132	137	30	4295	4290	4293	1900	267	-	-	-	-	-	<1.0	3.8	-	-	-
	4427	159.5	164.5	27.5	4267.5	4262.5	4265	1933	275	10	5	<1.0	1.4	16	<1.0	16	-	-	-
B/W-37	**Completed**	**Total Borehole Depth: 292 ft below ground surface**																	
	4415	97	102	-	4318	4313	4315.5	2433	169	0.4	0.1	3.5	2.9	240	<1.0	230	103	3.2	72.2
	4415	127	132	30	4288	4283	4285.5	2000	129	0.6	0.3	<1.0	3.4	98	1.9	100	49.7	1.45	31.8
	4415	167	172	40	4248	4243	4245.5	550	54	0.1	0	<1.0	2.2	5.8	1.2	4.8	2.51	0.0711	1.76
	4415	192	197	25	4223	4218	4220.5	870	61	0.3	0.1	<1.0	1.9	2.8	<1.0	1.9	1.21	0.0319	0.696
	4415	208	213	16	4207	4202	4204.5	710	81	0.6	0.3	<1.0	1.2	10	<1.0	8.8	5.67	0.13	3.42
B/W-51	**Completed**	**Total Borehole Depth: 197 ft below ground surface**																	
	4377	57	62	NS	4320	4315	4317.5	-	-	-	-	-	-	-	-	-	-	-	-
	4377	82	87	25	4295	4290	4292.5	158	74.8	1	0	<1.0	18	10	13	9.6			
	4377	142	147	NS	4235	4230	4232.5	-	-	-	-	-	-	-	-	-	-	-	-
	4377	190	195	48	4187	4182	4184.5	190	68	-	0	26	49	250	2.0	0.97			
B/W-61	**Completed**	**Total Borehole Depth: 718 ft below ground surface**																	
	4355	21	26	-	4334	4329	4332	590	210	30	25	5.8	3.6	17	<1.0	17	7.22	0.295	5.66
	4355	40	45	19	4315	4310	4313	192	295	0	0	4.3	64	55	<1	3.8	1.47	0.0599	1.2
	4355	60.5	65.5	20.5	4294.5	4289.5	4292	190	329	0.8	0.3	1.1	2.9	45	1.7	44	18	0.768	14.7
	4355	88.5	93.5	28	4266.5	4261.5	4264	280	318	0.2	0	0.74	3.2	58	2.6	55	26.9	0.743	21
	4355	110	115	21.5	4245	4240	4243	336	306	0	0	0.76	5.3	71	3.5	68	29.7	0.832	22.6
	4355	132	137	22	4223	4218	4221	400	255	0.5	0.1	0.58	3.8	63	1.7	57	26.1	0.693	18.1
	4355	153	158	21	4202	4197	4199.5	405	285	0.2	0.1	<1.0	0.9	36	<1.0	33	17.2	0.421	12
	4355	182.5	187.5	29.5	4172.5	4167.5	4170	1050	198	1	0.3	<1.0	1.1	86	<1.0	89	41	1.22	27.6
	4355	210.5	215.5	28	4144.5	4139.5	4142	200	104	0.1	0.1	<1.0	4	12	3.5	10	7.33	0.22	4.78
	4355	229.5	234.5	19	4125.5	4120.5	4123	900	196	2	0.3	<1.0	3	59	1.7	48	28.7	0.774	18
	4355	249	254	19.5	4106	4101	4103.5	385	107	1	0.1	<1.0	2.8	23	2.8	19	11.6	0.366	6.8
	4355	281	286	32	4074	4069	4071.5	373	75.6	2	1	<1.0	3.9	11	<1.0	8.4	6.72	0.125	3.26
	4355	301	306	20	4054	4049	4051.5	1450	255	2	1	<1.0	1.6	190	1.2	180	104	2.65	62.8
	4355	326	331	25	4029	4024	4026.5	1466	303	1	1	<1.0	2.7	290	2.0	290	180	4.09	102
	4355	361	366	35	3994	3989	3991.5	1567	415	0.8	1	<1.0	2	250	2.0	250	164	3.91	93.8
	4355	429	434	68	3926	3921	3923.5	570	245	9	9	6	<1.0	30	<1.0	27	18.4	0.38	9.66
	4355	464	469	35	3891	3886	3888.5	145	117	0.6	0	<1.0	20	18	17	19			
W4CB-2	**Completed**	**Total Borehole Depth: 556 ft below ground surface**																	
	4354	51.5	56.5	-	4302.5	4297.5	4300.0	2633	254	>300	>300	2.1	1.8	23	<1.0	20	9.86	0.286	7.49
	4354	86	91	34.5	4268	4263	4265.5	1033	64	9	6.5	2.1	<1.0	5.6	<1.0	4.5	2.54	0.107	1.59
	4354	116	121	30	4238	4233	4235.5	367.4	211	2	1	<1.0	<1.0	36	<1.0	30	17.2	0.356	10.8

Borehole and Zonal Sampling Data

Location	GS	Interval		Distance Between Zonal Sampling Intervals	Interval		Interval Midpoint	SO4	Alk (t)	Fe (total)	Ferrous Iron	TOC	Total Aresnic	Total Uranium	Dissolved Arsenic	Dissolved Uranium	U-234	U-235	U-238
	ft amsl	Top (ft bgs)	Bottom (ft bgs)	Feet	Top (ft amsl)	Bottom (ft amsl)	(ft amsl)	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L
	4354	155.5	160.5	39.5	4198.5	4193.5	4196.0	540	167	5	5	2	1.2	8.4	<1.0	6.8	4.11	0.125	2.63
	4354	205	210	49.5	4149	4144	4146.5	283	105	2	1	<1.0	1.3	4.3	<1.0	3.8	2.22	0.0578	1.28
	4354	241	246	36	4113	4108	4110.5	355	110	0.8	0	<1.0	2.5	29.0	1.4	29	20.1	0.408	10.9
	4354	271	276	30	4083	4078	4080.5	1472	732	2	0.8	<1.0	<1.0	410	<1.0	400	273	10.2	146
	4354	300	305	29	4054	4049	4051.5	1775	704	1	2	<1.0	1.7	620	1.4	670			
	4354	326	331	26	4028	4023	4025.5	1275	594	7	6	<1.0	<1.0	260	<1.0	250			
	4354	395	400	69	3959	3954	3956.5	433	287	1	0.3	<1.0	7.2	92	5.1	99			
	4354	438	443	43	3916	3911	3913.5	116	131	10	0.2	<1.0	8.9	6.3	1.4	2.8			
B/W-54	**Completed**	**Total Borehole Depth: 137 ft below ground surface**																	
	4350	52	57	-	4298	4293	4295.5	46	142	1	0.1	1.1	13	15	12	14	7.29	0.259	4.48
	4350	79	84	27	4271	4266	4268.5	94	105	3	0	4.4	2.1	1.3	<1.0	0.85	0.503	<-0.00000086	0.277
B/W-62	**Drilling and zonal sample collection in progress**																		
	4355	20	25	NS	4335	4330	4332.5	-	-	-	-	-	-	-	-	-	-	-	-
	4355	31	36	11	4324	4319	4321.5	840	510	0.3	0.1	5.1	7.2	190	4.3	200			
	4355	51	56	20	4304	4299	4301.5	483	103	0.2	0	<1.0	5.2	30	3.7	31			
	4355	81	86	30	4274	4269	4271.5	450	113	0.4	0.1	2	7.5	39	3.1	36			
	4355	118	123	NS	4237	4232	4234.5	-	-	-	-	-	-	-	-	-	-	-	-
	4355	120	125	2	4235	4230	4232.5	550	260	0.2	0.1	<1.0	1.3	82	1.8	82			
	4355	145	150	NS	4210	4205	4207.5	-	-	-	-	-	-	-	-	-	-	-	-
	4355	150	155	NS	4205	4200	4202.5	-	-	-	-	-	-	-	-	-	-	-	-
	4355	155	160	37	4200	4195	4197.5	933	225	0.4	0.2	<1.0	<1.0	130	<1.0	120			
	4355	187	192	32	4168	4163	4165.5	1150	53	0	0	<1.0	8.2	2.4	7.7	2.7			
	4355	207	212	20	4148	4143	4145.5	1067	64	0.3	0	<1.0	12	2.5	12	2.8			
	4355	235	240	28	4120	4115	4117.5	45	78	0	0	<1.0	12	4.4	10	4.5			
	4355	260	265	25	4095	4090	4092.5	85	78	0.2	0	<1.0	9.4	6	8.4	6.2			
	4355	285	290	25	4070	4065	4067.5	200	100	0.1	0	<1.0	3.9	19	4.2	21			
	4355	330	335	45	4025	4020	4022.5	516	134	0.3	0	<1.0	4.4	49	4.1	55			
	4355	370	375	40	3985	3980	3982.5	375	124	1	0								
	4355	395	400	25	3960	3955	3957.5	558	373	0.3	0.2								
	4355	415	420	20	3940	3935	3937.5	583	385	0.4	0								
B/W-33	**Completed**	**Total Borehole Depth: 277 ft below ground surface**																	
	4432	132	137	-	4300	4295	4297.5	125	181	2	0	1.4	22	27	17	24			
	4432	151	156	19	4281	4276	4278.5	145	191	-	0	2.8	20	9.3	1.9	5.1			
	4432	173.5	178.5	22.5	4258.5	4253.5	4256.0	190	175	0	5	<1.0	35	20	30	20			
	4432	197	202	23.5	4235	4230	4232.5	200	152	1	0.1	<1.0	30	20	29	20			
	4432	272	277	75	4160	4155	4157.5	290	134	0.1	0	<1.0	24	15	10	8.6			
B/W-65	**Drilling and zonal sampling in progress**																		
	4355	30	35	-	4325	4320	4322.5	767	342	15	20	2.8	1.8	150	0.9	160			
	4355	54	59	24	4301	4296	4298.5	633	357	0.6	0.3	2.8	17	120	<1.0	100			
	4355	76.5	81.5	22.5	4278.5	4273.5	4276.0	525	325	15	0.8	2.1	8.2	70	<1.0	71			
	4355	103	108	26.5	4252	4247	4249.5	197	258	9	0.6	<1.0	4.5	50	<1.0	46			
	4355	139	144	36	4216	4211	4213.5	56	135	2	0	<1.0	4.8	15	1.4	14			
	4355	171	176	32	4184	4179	4181.5	90	204	8	0.1	<1.0	12	20	<1.0	22			
	4355	202	207	31	4153	4148	4150.5	46	97	0.8	0.1	<1.0	6.3	5.7	5.6	5.5			
	4355	229	234	27	4126	4121	4123.5	32	61	0.2	0	<1.0	6.6	1.9	6.7	2.1			
	4355	251	256	22	4104	4099	4101.5	28	75	1	0.2	<1.0	7.4	2.5	6.8	2.5			
	4355	277	282	26	4078	4073	4075.5	24	81.6	10	0	0.58	7.5	3.2	3.1	1.6			
	4355	301	306	24	4054	4049	4051.5	17	56	0.1	0	<1.0	9.2	1.7	8.7	1.7			

Borehole and Zonal Sampling Data

Location	GS	Interval		Distance Between Zonal Sampling Intervals	Interval		Interval Midpoint	SO4	Alk (t)	Fe (total)	Ferrous Iron	TOC	Total Aresnic	Total Uranium	Dissolved Arsenic	Dissolved Uranium	U-234	U-235	U-238
	ft amsl	Top (ft bgs)	Bottom (ft bgs)	Feet	Top (ft amsl)	Bottom (ft amsl)	(ft amsl)	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L
	4355	330	335	29	4025	4020	4022.5	15	71	2	0.1	<1.0	11	1.8	8.4	1.7			
	4355	407	412	77	3948	3943	3945.5	17	109	0.1	0	<1.0	26	6.1	24	6.3			
	4355	436	441	29	3919	3914	3916.5	24	130	4	0								
	4355	480	485	44	3875	3870	3872.5	35	120	0	0								
	4355	507	512	27	3848	3843	3845.5	35	110	0.4	0								
	4355	531	536	NS	3824	3819	3821.5	-	-	-	-	-	-	-	-	-	-	-	-
	4355	547	552	16	3808	3803	3805.5	38	135	0	0								
W5DB	**Drilling and zonal sampling in progress**																		
	4356	31	36	-	4325	4320	4322.5	37000	0	>300	>300	12	<50	1800	<50	1800			
	4356	77	82	46	4279	4274	4276.5	376	66	300	37.5	<1.0	110	210	<5.0	5.7			
	4356	100	105	23	4256	4251	4253.5	200	65	1	0.2	<1.0	3.7	8.8	2.8	9.2			
	4356	137	142	37	4219	4214	4216.5	405	125	1	0	<1.0	2.4	100	<1.0	120			
	4356	157.5	162.5	20.5	4198.5	4193.5	4196	100	45	0.4	0	<1.0	9.4	6.3	9.6	7.2			
	4356	183.5	188.5	26	4172.5	4167.5	4170	280	81	8	0	<1.0	8.7	9.3	1.3	7.3			
	4356	213	218	29.5	4143	4138	4140.5	82	86	0.3	0	<1.0	6.7	11	5.7	12			
	4356	229	234	16	4127	4122	4124.5	48	121	0.1	0	<1.0	11	15	9.9	16			
	4356	243	248	14	4113	4108	4110.5	102	126	0.2	0.1	<1.0	7.1	30	6.8	29			
	4356	271	276	28	4085	4080	4082.5	1520	1164	35	30	4	<1.0	880	<1.0	860			
	4356	288	293	17	4068	4063	4065.5	1840	1416	30	25	4.8	2.9	1500	1.5	1500			
	4356	314	319	26	4042	4037	4039.5	1680	1090	25	20								
	4356	333	338	19	4023	4018	4020.5	1300	1160	5	4								
	4356	369	374	36	3987	3982	3984.5	1200	1020	9	6								
	4356	395	400	26	3961	3956	3958.5	684	535	10	6								
B/W-52	**Drilling and zonal sampling in progress**																		
	4344	37.5	42.5	-	4306.5	4301.5	4304	95	169	0.3	0	<1.0	8.2	24	7.7	28			
	4344	60	65	22.5	4284	4279	4281.5	74	270	0.1	0.1	<1.0	4.7	17	5.3	20			
	4344	80	85	20	4264	4259	4261.5	80	127	1	0.4	<1.0	5.1	21	5.1	22			
	4344	100	105	20	4244	4239	4241.5	88	119	0.5	0.1	<1.0	3.4	5.5	3.4	6.4			
	4344	155	160	55	4189	4184	4186.5	54	89	0.3	0	<1.0	8.3	3.7	9.0	3.6			
	4344	171	176	16	4173	4168	4170.5	74	92	0.6	0.1	<1.0	6	4	6.5	3.9			
	4344	190	195	19	4154	4149	4151.5	55	55	0.4	0								
MW-4	**Completed**	**Total Borehole Depth: 207 ft below ground surface**																	
	4406	92	97	-	4314	4309	4311.5	560	174	0.2	0								
	4406	109.5	114.5	17.5	4296.5	4291.5	4294	590	181	1	0								
	4406	132	137	22.5	4274	4269	4271.5	600	174	0.1	0								
	4406	151	156	19	4255	4250	4252.5	520	212	0.1	0.1								

NS means no sample collected due to insufficient yield from the target sampling interval.

2010 Groundwater Investigations Update - August Monthly Report
Geoprobe Sampling Data

	Interval					Date	Cations/Anions	Dissolved Metals	TOC	U isotopes	Sulfur and Oxygen Isotopes	QA/QC sample	Field Parameters: Sulfate (SO4)	Total Alkalinity	pH	Specific Conductivity	Temperature	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)
Ground Surface (ft amsl)	Top (ft bgs)	Bottom (ft bgs)	Top (ft amsl)	Bottom (ft amsl)	Interval		Bottle filled in 10 minute sample collection criterion?					Y/N	mg/L	mg/L	su	µS/cm	°C	mg/L	mg/L	mg/L
OU1-DPT-100																				
4347.25	18	22	4329.25	4325.25	Upper	6/23/2010	Yes	Yes	Yes	Yes	Yes	No	850	228	7.22	2281	22.46	280	280	< 2.0
	25	29	4322.25	4318.25	Middle	6/23/2010	Yes	Yes	Yes	Yes	Yes	No	940	267	7.29	2243	18.32	330	330	< 2.0
	38	42	4309.25	4305.25	Lower	6/23/2010	Yes	Yes	Yes	Yes	Yes	Field Blank	460	281	7.90	1516	18.61	340	340	< 2.0
OU1-DPT-101																				
4353.5	28	33	4325.5	4320.5	Upper	6/20/2010	Yes	Yes	Yes	Yes	Yes	No	740	281	7.16	2238	22.67	330	330	< 2.0
	35	40	4318.5	4313.5	Middle	6/20/2010	Yes	Yes	Yes	Yes	Yes	No	800	288	7.14	2296	29.51	340	340	< 2.0
OU1-DPT-102																				
4345.75	20	24	4325.75	4321.75	Upper	6/19/2010	Yes	Yes	Yes	Yes	Yes	No	720	284	6.74	2171	20.86	330	330	< 2.0
	28	32	4317.75	4313.75	Middle	6/19/2010	Yes	Yes	Yes	Yes	Yes	Field Duplicate	710	294	7.11	2117	21.29	380	380	< 2.0
	35	39	4310.75	4306.75	Lower	6/19/2010	Yes	Yes	Yes	Yes	Yes	No	740	320	7.09	2144	18.66	350	350	< 2.0
OU1-DPT-103																				
4346.25	16	21	4330.25	4325.25	Upper	6/22/2010	Yes	Yes	Yes	Yes	Yes	No	760	285	7.18	2357	17.37	350	350	< 2.0
	26	31	4320.25	4315.25	Middle	6/22/2010	Yes	Yes	Yes	Yes	Yes	Field Duplicate	640	308	7.14	82077	18.39	340	340	< 2.0
	43	47	4303.25	4299.25	Lower	6/22/2010	Yes	Yes	Yes	Yes	Yes	MS/MSD	340	335	7.35	1419	21.39	360	360	< 2.0
OU1-DPT-104																				
4345.5	27	32	4318.5	4313.5	Middle	6/21/2010	Yes	Yes	Yes	Yes	Yes	MS/MSD	410	300	7.37	1514	23.87	330	330	< 2.0
	38	43	4307.5	4302.5	Lower	6/21/2010	Yes	Yes	Yes	Yes	Not Sampled	No	433	285	7.17	1862	24.61	550	550	< 2.0
OU1-DPT-105																				
4367.25	44	48	4323.25	4319.25	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	48	52	4319.25	4315.25	Middle	7/8/2010	Yes	Yes	Yes	Yes	Yes	Field Duplicate	455	621	7.33	1531	-	1100	1100	< 2.0
OU1-DPT-106																				
No sample collected			-	-	-	7/10/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OU1-DPT-107																				
4357.5	33	37	4324.5	4320.5	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	38	42	4319.5	4315.5	Middle	7/8/2010	Yes	Yes	Yes	Yes	Yes	No	300	304	7.54	1328	27.44	360	360	< 2.0
OU1-DPT-108																				
Location not accessible at the time of Geoprobe work.																				
OU1-DPT-109																				
4359.0	38	42	4321.0	4317.0	Upper	7/9/2010	Yes	Yes	Yes	Yes	Yes	Field Blank	120	180	7.69	686	24.75	340	340	< 2.0

"J" indicates estimated concentration

Geoprobe Sampling Data

	Interval					Date	Water Quality Parameters (Lab)													
							Total Dissolved Solids (TDS)	Total Organic Carbon (TOC)	Chloride	Fluoride	Sulfate	Nitrate-N	Nitrite-N	Nitrate/Nitrite-N (calculated)	Aluminum, dissolved	Antimony, dissolved	Arsenic, dissolved	Barium, dissolved	Beryllium, dissolved	Boron, dissolved
Ground Surface (ft amsl)	Top (ft bgs)	Bottom (ft bgs)	Top (ft amsl)	Bottom (ft amsl)	Interval		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	mg/L
OU1-DPT-100																				
4347.25	18	22	4329.25	4325.25	Upper	6/23/2010	1900	3.7	93	0.38 J	790	24	0.31	24	< 0.05	0.38 J	15	44	< 0.5	1.8
	25	29	4322.25	4318.25	Middle	6/23/2010	1900	3.6	95	0.36 J	760	18	0.24	19	< 0.05	< 2.0	20	53	< 0.5	1.5
	38	42	4309.25	4305.25	Lower	6/23/2010	1200	2.5	73	0.32 J	440	4.1	0.2	4.3	< 0.05	0.96 J	2.8	86	< 0.5	0.65
OU1-DPT-101																				
4353.5	28	33	4325.5	4320.5	Upper	6/20/2010	1700	2.9	94	0.34 J	720	22	< 0.15	22	< 0.05	1.9 J	2.8	76	< 0.5	1.8
	35	40	4318.5	4313.5	Middle	6/20/2010	1800	3.5	110	0.41 J	770	24	< 0.15	24	< 0.05	1.9 J	13	54	< 0.5	2
OU1-DPT-102																				
4345.75	20	24	4325.75	4321.75	Upper	6/19/2010	1500	2.6	85	0.45 J	660	21	0.23	22	< 0.05	0.42 J	1.7	78	< 0.5	1.2
	28	32	4317.75	4313.75	Middle	6/19/2010	1600	3.4	90	0.40 J	710	22	0.17	22	< 0.05	0.70 J	1.0	110	< 0.5	1.5
	35	39	4310.75	4306.75	Lower	6/19/2010	1700	3.6	92	0.28 J	730	28	0.17	28	< 0.05	1.7 J	2.4	95	< 0.5	1.5
OU1-DPT-103																				
4346.25	16	21	4330.25	4325.25	Upper	6/22/2010	1800	8.2	96	0.49 J	690	37	0.4	38	< 0.05	0.74 J	4.6	63	< 0.5	2
	26	31	4320.25	4315.25	Middle	6/22/2010	1600	6.6	66	0.38 J	620	29	< 0.15	29	< 0.05	0.37 J	3.4	67	< 0.5	1.5
	43	47	4303.25	4299.25	Lower	6/22/2010	1100	5.9	46	0.32 J	350	5.2	< 0.15	5.2	< 0.05	0.86 J	4.2	71	< 0.5	1.3
OU1-DPT-104																				
4345.5	27	32	4318.5	4313.5	Middle	6/21/2010	1100	4.6	57	0.33 J	420	4.6	< 0.15	4.6	< 0.05	0.30 J	10	51	< 0.5	1.2
	38	43	4307.5	4302.5	Lower	6/21/2010	1200	6.5	74	0.46 J	440	3.7	< 0.15	3.7	< 0.05	2.5	3.2	70	< 0.5	0.78
OU1-DPT-105																				
4367.25	44	48	4323.25	4319.25	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	48	52	4319.25	4315.25	Middle	7/8/2010	1200	1.7	85	0.5	390	15	0.13 J	15	< 0.05	0.6 J	5.1	61	< 0.5	1.3
OU1-DPT-106																				
No sample collected			-	-	-	7/10/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OU1-DPT-107																				
4357.5	33	37	4324.5	4320.5	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	38	42	4319.5	4315.5	Middle	7/8/2010	960	1.5	47	0.6	280	4.3	< 0.15	4.3	0.068	2	4.2	61	< 0.5	1.2
OU1-DPT-108																				
Location not accessible at the time of Geoprobe work.																				
OU1-DPT-109																				
4359.0	38	42	4321.0	4317.0	Upper	7/9/2010	450	< 1.0	20	0.67	92	0.55	< 0.15	0.55	< 0.05	1.2 J	3.8	35	< 0.5	0.49

"J" indicates estimated concentration

Geoprobe Sampling Data

	Interval					Date	Dissolved Metals (Lab)													
							Cadmium, dissolved	Calcium, dissolved	Chromium, dissolved	Cobalt, dissolved	Copper, dissolved	Iron, dissolved	Lead, dissolved	Lithium, dissolved	Magnesium, dissolved	Manganese, dissolved	Mercury, dissolved	Molybdenum, dissolved	Nickel, dissolved	Phosphorus, dissolved
Ground Surface (ft amsl)	Top (ft bgs)	Bottom (ft bgs)	Top (ft amsl)	Bottom (ft amsl)	Interval		µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	mg/L	µg/L	µg/L	mg/L
OU1-DPT-100																				
4347.25	18	22	4329.25	4325.25	Upper	6/23/2010	0.11 J	210	1.1 J	1.7	6	0.046	< 1.0	0.084	42	650	< 0.0002	6.4	4.8	0.043
	25	29	4322.25	4318.25	Middle	6/23/2010	< 1.0	270	< 2.0	1.8	4.8	0.027 J	< 1.0	0.065	54	210	< 0.0002	22	4.8	0.032 J
	38	42	4309.25	4305.25	Lower	6/23/2010	0.11 J	190	< 2.0	4.3	3.9	0.038 J	< 1.0	0.041 J	36	470	< 0.0002	40	17	0.03 J
OU1-DPT-101																				
4353.5	28	33	4325.5	4320.5	Upper	6/20/2010	< 1.0	190	< 2.0	7.8	8	0.091	< 1.0	0.076	42	440	< 0.0002	10	3.7	0.029 J
	35	40	4318.5	4313.5	Middle	6/20/2010	< 1.0	230	< 2.0	4.9	9.6	0.23	< 1.0	0.08	45	240	< 0.0002	15	2.9	0.059
OU1-DPT-102																				
4345.75	20	24	4325.75	4321.75	Upper	6/19/2010	0.20 J	190	< 2.0	9.6	5.1	0.05	< 1.0	0.084	47	2400	< 0.0002	15	4.3	< 0.04
	28	32	4317.75	4313.75	Middle	6/19/2010	0.26 J	210	1.0 J	7	6.1	0.42	< 1.0	0.075	54	1600	< 0.0002	38	7.7	< 0.04
	35	39	4310.75	4306.75	Lower	6/19/2010	0.15 J	210	< 2.0	7.8	6.2	1.2	< 1.0	0.068	55	1000	< 0.0002	33	9.7	0.023 J
OU1-DPT-103																				
4346.25	16	21	4330.25	4325.25	Upper	6/22/2010	0.19 J	210	< 2.0	1.3	8.2	0.016 J	< 1.0	0.081	53	1400	< 0.0002	40	5.5	0.045
	26	31	4320.25	4315.25	Middle	6/22/2010	0.11 J	200	1 J	1.1	4.7	< 0.04	< 1.0	0.063	51	310	< 0.0002	23	5.2	0.049
	43	47	4303.25	4299.25	Lower	6/22/2010	< 1.0	160	0.9 J	0.96 J	3.3	0.48	< 1.0	0.045 J	33	100	< 0.0002	13	7	0.036 J
OU1-DPT-104																				
4345.5	27	32	4318.5	4313.5	Middle	6/21/2010	< 1.0	160	< 2.0	1.3	3.1	0.043	< 1.0	0.05	38	130	< 0.0002	6.1	0.50 J	0.057
	38	43	4307.5	4302.5	Lower	6/21/2010	0.12 J	200	0.98 J	7.7	7.7	0.018 J	< 1.0	0.036 J	43	880	< 0.0002	23	6.1	0.029 J
OU1-DPT-105																				
4367.25	44	48	4323.25	4319.25	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	48	52	4319.25	4315.25	Middle	7/8/2010	< 1.0	180	< 2.0	2.3	4	< 0.04	< 1.0	0.056	35	93	< 0.0002	4.3	6.5	0.032 J
OU1-DPT-106																				
No sample collected			-	-	-	7/10/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OU1-DPT-107																				
4357.5	33	37	4324.5	4320.5	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	38	42	4319.5	4315.5	Middle	7/8/2010	< 1.0	130	< 2.0	5.5	4.3	0.07	< 1.0	0.044 J	27	82	< 0.0002	15	7.4	0.053
OU1-DPT-108																				
Location not accessible at the time of Geoprobe work.																				
OU1-DPT-109																				
4359.0	38	42	4321.0	4317.0	Upper	7/9/2010	< 1.0	58	< 2.0	2.3	1.4 J	< 0.04	< 1.0	0.035 J	13	49	< 0.002	12	3.8	0.035 J

"J" indicates estimated concentration

Geoprobe Sampling Data

	Interval					Date	Potassium, dissolved	Selenium, dissolved	Silica (as SiO2), dissolved	Silver, dissolved	Sodium, dissolved	Strontium, dissolved	Thallium, dissolved	Tin, dissolved	Titanium, dissolved	Uranium, dissolved	Vanadium, dissolved	Zinc, dissolved
Ground Surface (ft amsl)	Top (ft bgs)	Bottom (ft bgs)	Top (ft amsl)	Bottom (ft amsl)	Interval		mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L
OU1-DPT-100																		
4347.25	18	22	4329.25	4325.25	Upper	6/23/2010	4.3	1.9 J	56	0.26 J	280	1.8	< 1.0	< 0.1	< 0.005	84	17	2.8 J
	25	29	4322.25	4318.25	Middle	6/23/2010	6.1	1.1 J	53	< 1.0	180	2.3	< 1.0	< 0.1	< 0.005	93	20	2.8 J
	38	42	4309.25	4305.25	Lower	6/23/2010	7.6	0.82 J	44	0.42 J	86	1.7	< 1.0	< 0.1	< 0.005	160	5.2	19 J
OU1-DPT-101																		
4353.5	28	33	4325.5	4320.5	Upper	6/20/2010	5.4	1.0 J	52	< 1.0	260	1.7	< 1.0	< 0.1	< 0.005	110	6.9	5.1 J
	35	40	4318.5	4313.5	Middle	6/20/2010	5.2	0.58 J	60	< 1.0	270	2	< 1.0	< 0.1	< 0.005	120	13	5.8 J
OU1-DPT-102																		
4345.75	20	24	4325.75	4321.75	Upper	6/19/2010	7.6	0.59 J	47	< 1.0	190	1.6	< 1.0	< 0.1	< 0.005	45	4.2	3.7 J
	28	32	4317.75	4313.75	Middle	6/19/2010	8.6	< 2.0	44	< 1.0	210	1.7	< 1.0	< 0.1	< 0.005	91	4.1	3.4 J
	35	39	4310.75	4306.75	Lower	6/19/2010	10	< 2.0	44	< 1.0	200	1.7	< 1.0	< 0.1	< 0.005	82	3.6	4.6 J
OU1-DPT-103																		
4346.25	16	21	4330.25	4325.25	Upper	6/22/2010	9.7	1.3 J	40	0.22 J	260	1.6	0.25 J	< 0.1	< 0.005	110	5.9	< 20
	26	31	4320.25	4315.25	Middle	6/22/2010	8.7	0.63 J	39	< 1.0	190	1.5	< 1.0	< 0.1	< 0.005	130	4.8	< 20
	43	47	4303.25	4299.25	Lower	6/22/2010	11	0.72 J	50	< 1.0	100	1.4	0.23 J	< 0.1	< 0.005	130	4.9	25
OU1-DPT-104																		
4345.5	27	32	4318.5	4313.5	Middle	6/21/2010	5.6	< 2.0	55	< 1.0	130	1.3	< 1.0	< 0.1	< 0.005	110	12	< 20
	38	43	4307.5	4302.5	Lower	6/21/2010	8.1	< 2.0	49	< 1.0	92	2	< 1.0	< 0.1	< 0.005	150	5.1	2.9 J
OU1-DPT-105																		
4367.25	44	48	4323.25	4319.25	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-
	48	52	4319.25	4315.25	Middle	7/8/2010	2.8	1 J	57	< 1.0	100	1.7	< 1.0	< 0.1	< 0.005	43	7.6	7.1 J
OU1-DPT-106																		
No sample collected			-	-	-	7/10/2010	-	-	-	-	-	-	-	-	-	-	-	-
OU1-DPT-107																		
4357.5	33	37	4324.5	4320.5	Upper	7/8/2010	-	-	-	-	-	-	-	-	-	-	-	-
	38	42	4319.5	4315.5	Middle	7/8/2010	5.5	0.83 J	49	< 1.0	110	1.1	< 1.0	< 0.1	0.003 J	89	7.3	8.1 J
OU1-DPT-108																		
Location not accessible at the time of Geoprobe work.																		
OU1-DPT-109																		
4359.0	38	42	4321.0	4317.0	Upper	7/9/2010	4.2	0.87 J	47	< 1.0	57	0.51	< 1.0	< 0.1	< 0.005	20	5.9	< 20

"J" indicates estimated concentration

2010 Groundwater Investigations Update - July Monthly Report
Surface Water Sampling Data

					Field Parameters						Water Quality Parameters (Lab)											
Location	Date of sample collection	Water in West Campbell Ditch?	Monthly Water Level Start Date	Monthly Water Level End Date	Temperature	SC	DO	pH	ORP	Turbidity	Total Alkalinity (as $CaCO_3$)	Bicarbonate Alkalinity (as $CaCO_3$)	Carbonate (as $CaCO_3$)	Total Dissolved Solids (TDS)	Total Organic Carbon (TOC)	Chloride	Fluoride	Sulfate	Orthophosphate (as PO_4)	Nitrate-N	Nitrite-N	Nitrate/Nitrite-N (calculated)
		Y/N			°C	µS/cm	mg/L	su	mV	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
June 2010 Sampling Event																						
SW-WR-01	6/30/2010	Yes	6/30/2010	7/2/2010	18.09	143	5.97	7.60	271.3	61.4	54	54	<2.0	110	1.6	4.2	0.26 J	7.7	<0.50	<0.11	<0.15	<0.26
SW-WCD-01	6/30/2010				19.64	131	6.36	7.21	241.6	49.3	56	56	<2.0	110	1.5	3.9	0.27 J	7.7	<0.50	<0.11	<0.15	<0.26
July 2010 Sampling Event																						
SW-WR-01	7/28/2010	Yes	7/26/2010	7/28/2010	29.49	211	7.32	7.96	195.1	74.6	72	72	<2.0	140	2.7	5.1	0.73	16	<0.5	0.12	<0.15	<0.26
SW-WCD-01	7/28/2010				25.50	252	6.72	8.19	229.2	64.5	74	74	<2.0	150	2.9	5.1	0.73	17	0.42 J	0.12	<0.15	<0.26

					Total Metals (Lab)																															
Location	Date of sample collection	Water in West Campbell Ditch?	Monthly Water Level Start Date	Monthly Water Level End Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silica (as SiO_2)	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
		Y/N			mg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	mg/L	µg/L	µg/L	mg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L
June 2010 Sampling Event																																				
SW-WR-01	6/30/2010	Yes	6/30/2010	7/2/2010	3.7	<2.0	8	54	0.13 J	0.14	<1.0	13	1.9 J	1.6	5.6	3.5	1.5	<0.05	4.4	140	<0.0002	2.9	2.2	0.16	2.7	<2.0	24	<1.0	11	0.14	<1.0	<0.1	0.11	3.1	9.7	10 J
SW-WCD-01	6/30/2010				3.3	<2.0	7.6	48	0.10 J	0.14	<1.0	13	1.7 J	1.3	5.4	3.2	1.4	<0.05	4.2	120	<0.0002	2.9	2.1	0.15	2.8	<2.0	22	<1.0	12	0.15	<1.0	<0.1	0.093	2.9	9	9.2 J
July 2010 Sampling Event																																				
SW-WR-01	7/28/2010	Yes	7/26/2010	7/28/2010	1.9	0.42 J	13	48	0.49 J	0.17	0.40 J	18	1.2 J	1.2	5.4	2	1.5	<0.05	4.7	85	<0.0002	5.7	2.2	0.14	3.2	<2.0	25	0.13 J	17	0.18	0.63 J	<0.1	0.062	4.2	8.5	4.7 J
SW-WCD-01	7/28/2010				3	0.41 J	13	54	0.23 J	0.17	0.16 J	19	2.1	1.4	7.6	3.3	1.7	<0.05	5	95	<0.0002	5.3	6.5	0.17	3.2	<2.0	32	<1.0	17	0.19	0.40 J	<0.1	0.09	4.2	12	5.8 J

					Dissolved Metals (Lab)																															
Location	Date of sample collection	Water in West Campbell Ditch?	Monthly Water Level Start Date	Monthly Water Level End Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silica (as SiO_2)	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Uranium	Vanadium	Zinc
		Y/N			mg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	mg/L	µg/L	µg/L	mg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L
June 2010 Sampling Event																																				
SW-WR-01	6/30/2010	Yes	6/30/2010	7/2/2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW-WCD-01	6/30/2010				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
July 2010 Sampling Event																																				
SW-WR-01	7/28/2010	Yes	7/26/2010	7/28/2010	<0.05	<2.0	10	27	0.16 J	0.16	<1.0	17	<2.0	0.13 J	1.9 J	0.041	<1.0	<0.05	4.1	4.8	<0.0002	5.8	<2.0		2.9	<2.0	15	<1.0	17	0.17	0.29 J	<0.1	<0.005	3.9	3.7	<20
SW-WCD-01	7/28/2010				<0.05	<2.0	10	26	0.18 J	0.17	<1.0	18	<2.0	0.11 J	1.7 J	0.029 J	<1.0	<0.05	4.2	2.5	<0.0002	5.9	<2.0		2.8	<2.0	15	<1.0	17	0.18	0.28 J	<0.1	<0.005	3.7	3.5	<20

s "estimated" concentration