Atlantic Richfield Company

Jack Oman
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October 6, 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: **September 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 September 2010.

September 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 were not operated while the pumpback pond was dry. The "wind dancer" bird deterrent was tested with USFWS, Arcadis and EnviroSolve personnel in attendance on September 30 (this deterrent will be installed in October).
- Updated the bird mitigation protocol, and submitted the draft protocol to EPA for approval prior to submission to USFWS for final approval.
- 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 heap leach fluid management system (FMS): total estimated gallons transferred from the VLT Sediment Pond (VLTSP) to the FMS Evaporation Pond = approximately 425,265 gallons; total estimated gallons transferred from the Slot Sediment Pond (SSP) to the FMS Evaporation Pond = approximately 233,400 gallons; total estimated gallons transferred from the Phase 1 Pond to FMS Evaporation Pond = 0.0 gallons (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 graphs and table). A total of approximately 658,665 gallons of solution was transferred to the FMS pond during the month of September.
- A flow meter and solar panel were installed on the FMS pond pipeline, and flow meters were installed on the leak detectors at the Slot and VLT ponds.
- EPA and EQM shipped wastes from the Site on September 8.
- EPA provided a Site tour for Numamta (Alaska) tribal members on September 17.

September 2010 Activities - Continued

Site Characterization

- Site-wide monthly groundwater elevation measurements were obtained September 29-30..
- A pit lake water elevation of 4221.628 feet amsl was recorded on October 1, 2010 from the pressure transducer, an increase of 0.14 feet since September 1, 2010. The pit lake elevation has risen 3.078 feet since October 1 of 2009.
- Continued meteorological monitoring at the AM-6 location including wind speed/direction, temperature, relative humidity, barometric pressure, precipitation and solar radiation.
- No changes have been made to the bottled water program.
- The following changes were made to the domestic well program: DW-61 status changed to "Yes" from "Pending" (the well was sampled during the 3Q 2010 event); DW-59 and DW-106 requested that their respective domestic wells no longer be sampled (status changed from "Yes" to "No"; neither well was sampled during the 3Q 2010 event); and signed access agreements were received for a new resident (DW-177, Linsenmier) and a new owner (DW-134, Telles).
- Conducted the 3Q Site-wide groundwater monitoring and domestic well monitoring events from September 12 through September 28.
- Submitted the 2Q 2010 Site-wide groundwater monitoring report on September 16.
- Continued the 2010 monitor well program (see attached progress update): 1) monitor wells B/W-51I, W4CB-2D1, W4CB-2D2, B/W-44S, B/W-44I, B/W-44D, B/W-65S, B/W-65I, B/W-65D, B/W-44B, W5DB-B, B/W-65D5, and B/W-62B were completed; 2) 40 zonal groundwater samples were collected from four boreholes, and 56 laboratory analytical results were received from the zonal samples; 3) no aquifer solids samples were collected; and 4) surface water samples were collected on September 28 from the Walker River near Bridge Street and from the West Campbell Ditch near Highway 95A.
- Submitted the Aquifer Solids Testing Work Plan (Revision 1) on September 21.
- Submitted the PWS Aquifer Test Results Summary (technical memo) on September 24.
- Continued discussions with EPA regarding the revised Process Areas Vadose Zone and Groundwater Characterization Work Plan, and initiated plans to conducted the geophysical survey described in the Work Plan
- Continued routine database management activities.
- Continued Site wildlife surveys, data management and wildlife observation reports.

AOC Removal Actions

- ARC selected USA Environment (USA) as the removal action contractor, who will perform the three remaining removal actions concurrently.
- Continued discussions with EPA on the Process Areas Radiological Materials Removal Action Plan (RAP) and the Anaconda Evaporations Ponds (Thumb Pond and Sub-Area A) Implementation Work Plan, and worked with USA to provide the EPA-requested SOPs and air quality monitoring (AQM)/dust control plans for inclusion in a revised RAP and Work Plan. USA also developed the SOP for the transite pipe removal action. Received EPA approval for all SOPs and the AQM/dust control plan.
- Obtained chemical and meteoric water mobility procedure leachate (MWMP) results for three samples of gravel materials to be used during the removal actions.
- Developed a plan to provide construction water for the removal actions, to be implemented by USA, including an agreement with Don Tibbals for the water supply.
- Initiated field sampling activities, with EPA oversight, associated with the revised Cover Materials Work Plan (September 28-30).
- Submitted a Draft Dust Suppression Plan for the LEP and UEP on September 22.
- Continued compiling results for the geochemical and geotechnical characterization activities of mineral salt precipitates/sub-grade materials in the north cell of the PWS evaporation pond.

Planned October/November 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 domestic well monitoring report.
- Provide updates to EPA for domestic well access agreements, as needed.
- 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.
- Initiate aquifer solids testing activities.
- Initiate groundwater modeling (i.e., particle tracking) for the PWS based on aquifer test results, as described in the PWS Characterization Work Plan Addendum.
- Implement geophysical surveys in the Process Areas.
- Conduct a tour of the Wabuska Drain with EPA, NDEP and YPT.

AOC Removal Actions

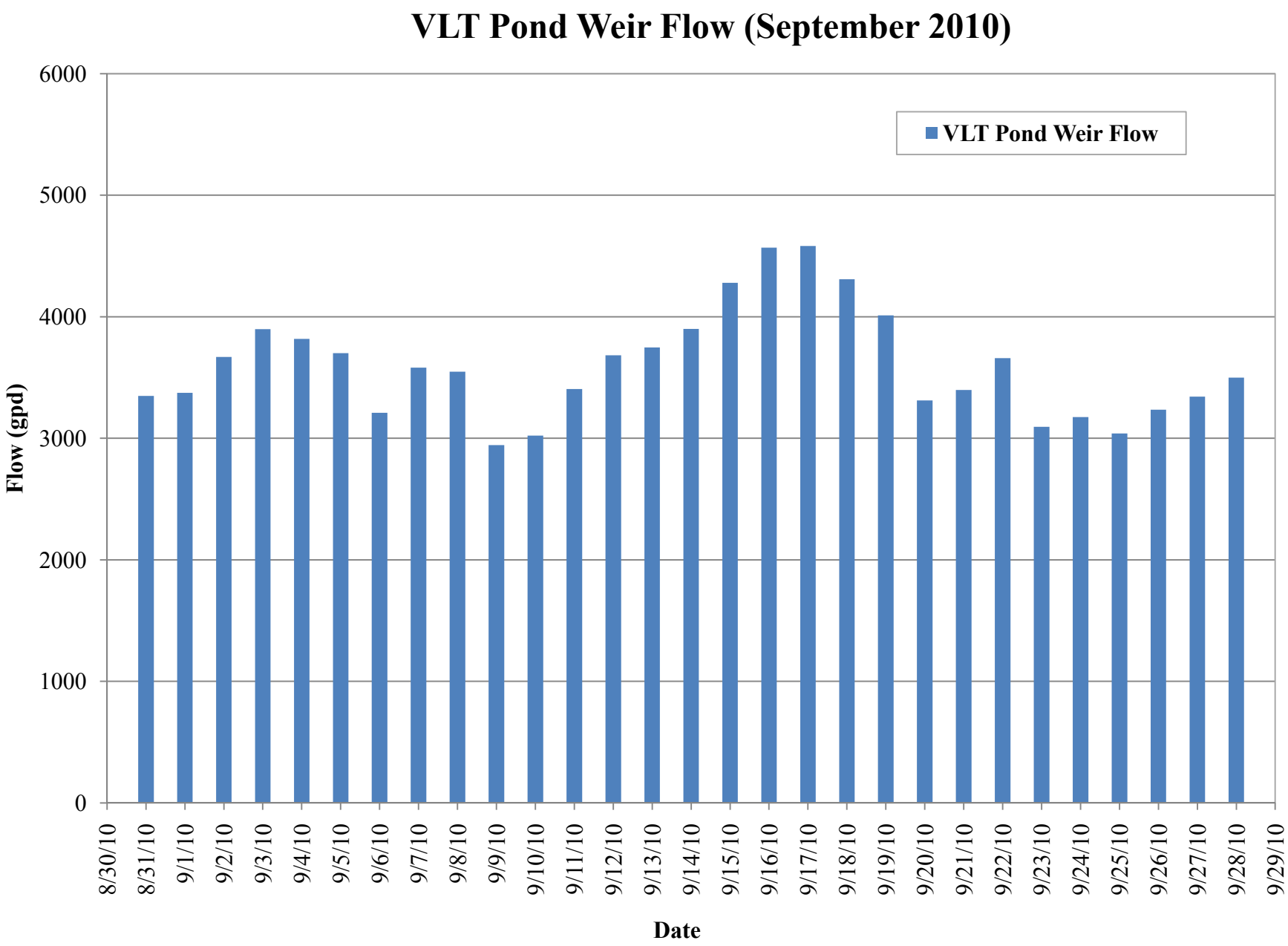
- Continue routine O&M, site security, and bird deterrent activities. Continue flow monitoring and water balance calculations for the Arimetco FMS, and implement other elements of the revised FMS O&M Plan.
- Continue to compile geochemical and geotechnical data resulting from the characterization activities for the north cell of the PWS evaporation pond, and submit a letter report to EPA that summarizes these data.
- Complete the field sampling activities associated with the revised Cover Materials Work Plan. Once received, respond to additional EPA comments on the revised Cover Materials Work Plan and submit a revised Work Plan. Complete the field activities described in the revised Work Plan.
- Mobilize to the Site and begin the three remaining removal actions (Thumb Pond and Sub-Area A interim covers; transite pipe removal; Process Areas radiological materials removal) in accordance with approved work plans and SOPs.
- Submit revised versions of the Process Areas Radiological Materials Removal Action Plan (RAP) and the Anaconda Evaporations Ponds (Thumb Pond and Sub-Area A) Implementation Work Plan, which will include contractor SOPs and AQM/dust control plans.
- Submit the updated bird mitigation protocol to USFWS after receiving approval of the changes from EPA.

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 (September 2010)
VLT Pond Weir Flow
Flow (gpd)
6000
5000
4000
3000
2000
1000
0
8/30/10
8/31/10
9/1/10
9/2/10
9/3/10
9/4/10
9/5/10
9/6/10
9/7/10
9/8/10
9/9/10
9/10/10
9/11/10
9/12/10
9/13/10
9/14/10
9/15/10
9/16/10
9/17/10
9/18/10
9/19/10
9/20/10
9/21/10
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9/26/10
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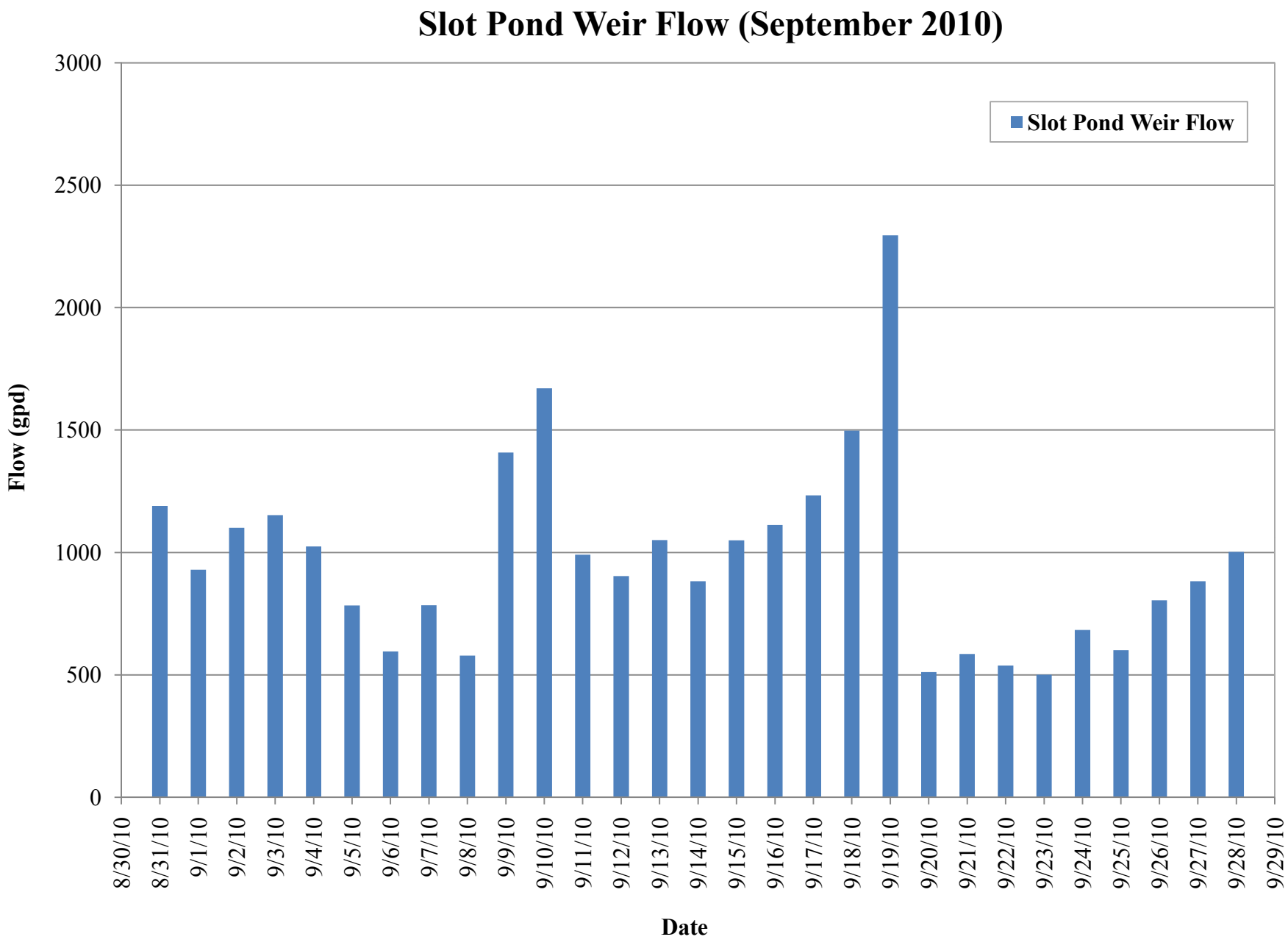
9/28/10
9/29/10
Date


Slot Pond Weir Flow (September 2010)
Slot Pond Weir Flow
Flow (gpd)
3000
2500
2000
1500
1000
500
0
8/30/10
8/31/10
9/1/10
9/2/10
9/3/10
9/4/10
9/5/10
9/6/10
9/7/10
9/8/10
9/9/10
9/10/10
9/11/10
9/12/10
9/13/10
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9/15/10
9/16/10
9/17/10
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9/21/10
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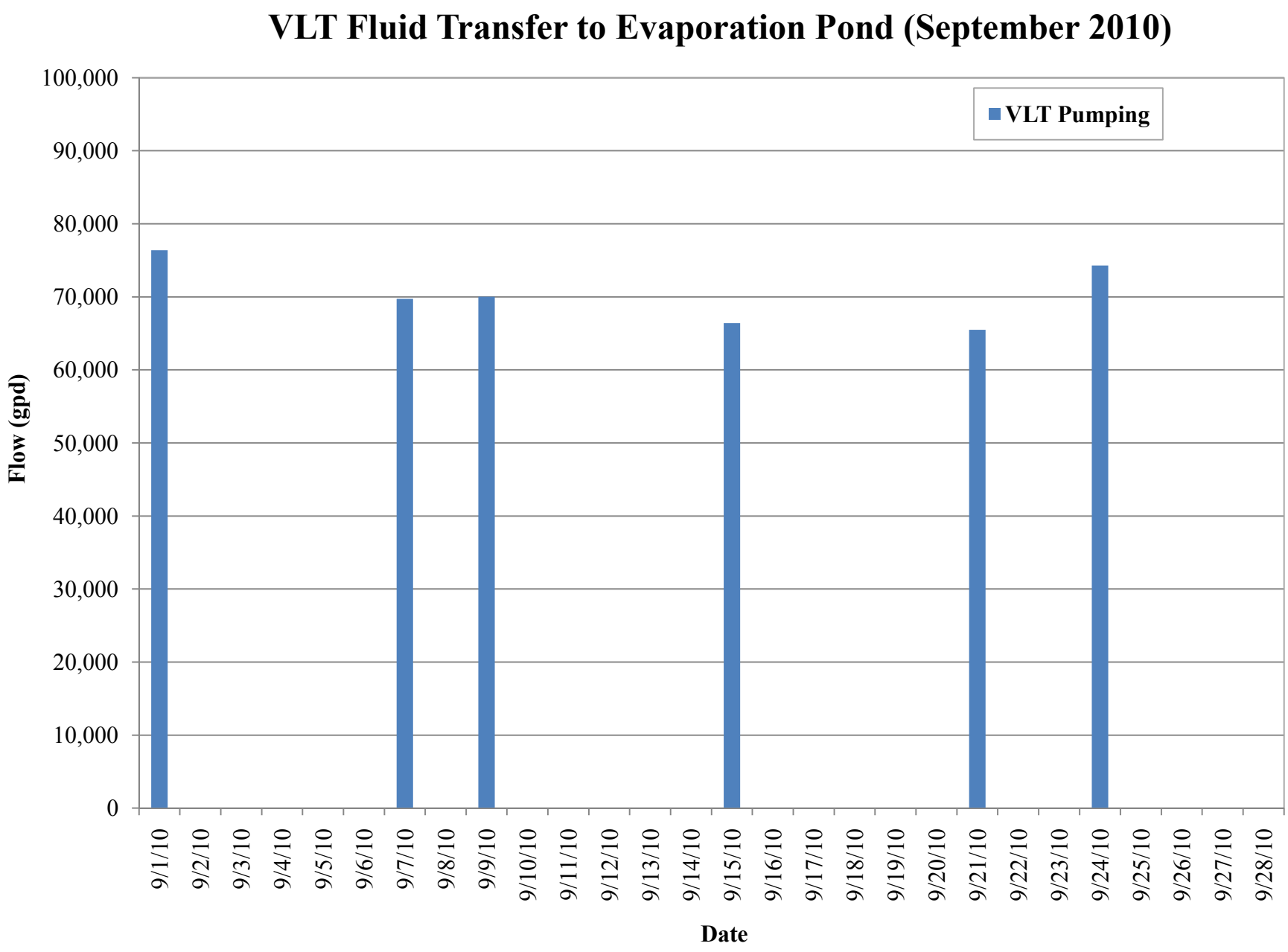
9/28/10
9/29/10
Date


VLT Fluid Transfer to Evaporation Pond (September 2010)
VLT Pumping
Flow (gpd)
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
9/1/10
9/2/10
9/3/10
9/4/10
9/5/10
9/6/10
9/7/10
9/8/10
9/9/10
9/10/10
9/11/10
9/12/10
9/13/10
9/14/10
9/15/10
9/16/10
9/17/10
9/18/10
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9/20/10
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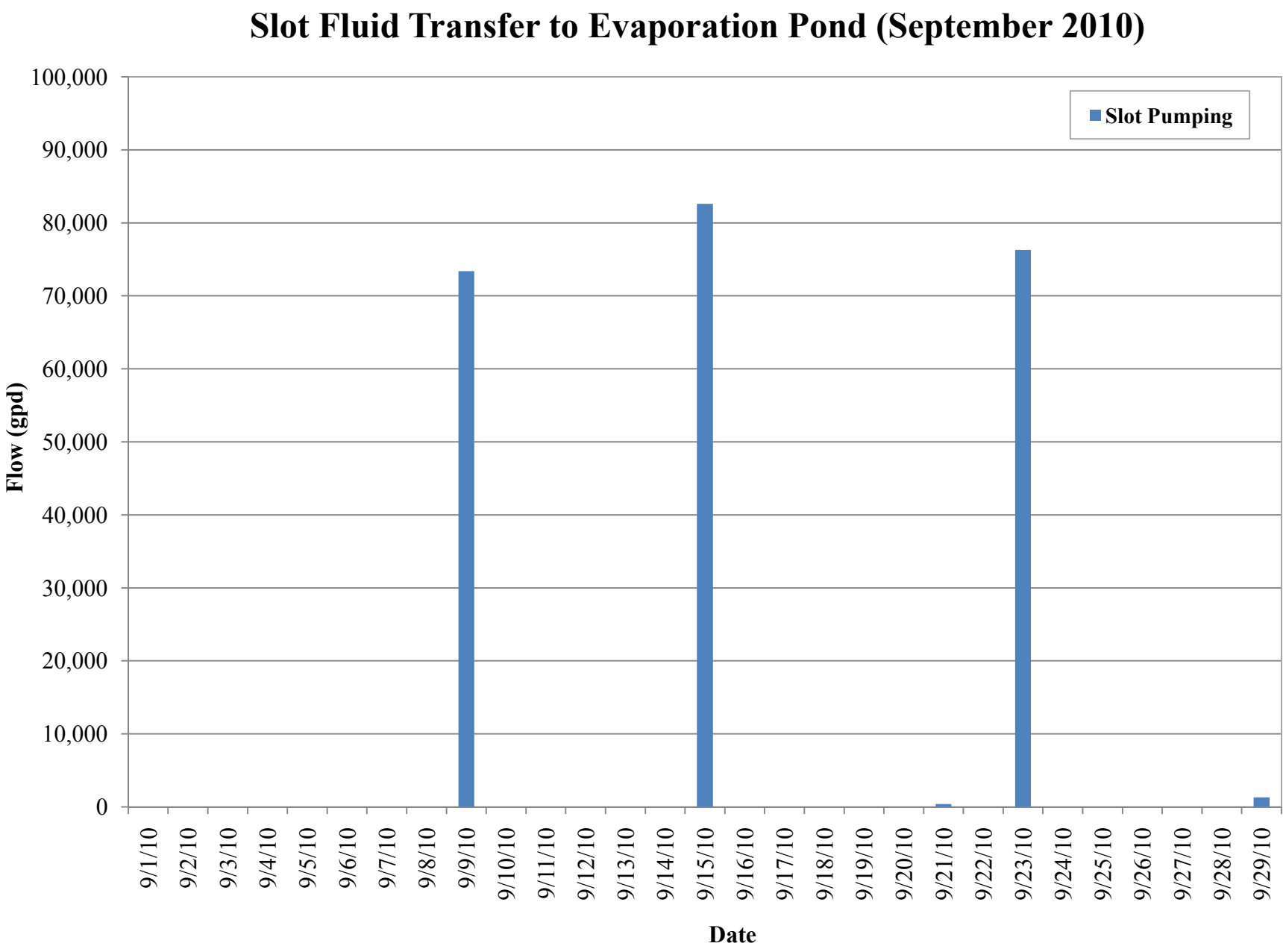
9/26/10
9/27/10
9/28/10
Date


Slot Fluid Transfer to Evaporation Pond (September 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
9/1/10
9/2/10
9/3/10
9/4/10
9/5/10
9/6/10
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9/10/10
9/11/10
9/12/10
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9/14/10
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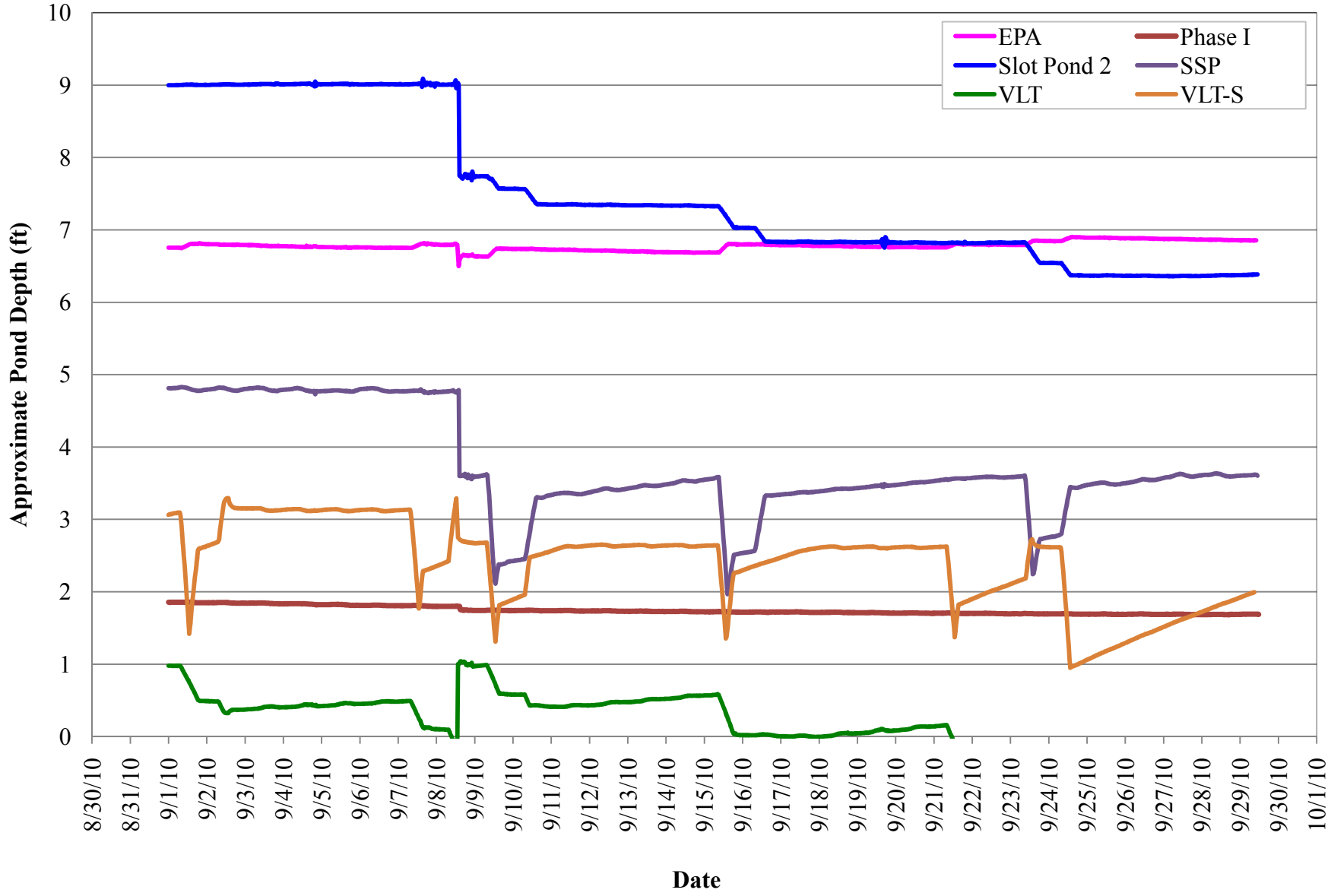
9/29/10
Date

FMS Pond Transducer Levels*



ARIMETCO FLUID MANAGEMENT SYSTEM - 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	0	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	W	35	W	1843	D	0	D	0	D	0	W/T	0	D	0	W/T	0	W	2	D	0	D	0	W	20491	D	**0**
OCT																										
NOV																										
DEC																										
TOTAL		119		2843		0		42		0		50		17		5		102		0		0		20991		**0**
YEAR TO DATE TOTALS:								**24169**																		

COMMENTS:

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 - September 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-22B	4478	224	244	4254	4234	20	5/8/2010
B/W-27I	4355	80	100	4275	4255	20	8/17/2010
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-33D	4432	195	205	4237	4227	10	7/29/2010
B/W-33B	4432	267	277	4165	4155	10	7/26/2010
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-51I	4377	120	140	4257	4237	20	9/9/2010
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-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
B/W-61B	4355	673	693	3682	3662	20	7/9/2010
B/W-62	4355	663	683	3692	3672	20	9/25/2010
B/W-6B	4436	260	280	4176	4156	20	4/26/2010
MW-4I	4406	125	145	4281	4261	20	8/30/2010
MW-4B	4406	159	179	4247	4227	20	8/28/2010
W4CB-2B	4354	511	531	3843	3823	20	7/9/2010
W4CB-2D1	4354	115	135	4239	4219	20	9/15/2010
W4CB-2D2	4354	290	310	4064	4044	20	9/14/2010
B/W-44S	4369	44	64	4325	4305	20	9/24/2010
B/W-44I	4369	139	159	4230	4210	20	9/23/2010
B/W-44D	4369	216	236	4153	4133	20	9/22/2010
B/W-44B	4369	244	264	4125	4105	20	9/16/2010
W5DB-B	4356	584	604	3772	3752	20	9/26/2010
B/W-65D5	4355	600	610	3755	3745	10	9/23/2010
B/W-65D	4355	137	157	4218	4198	20	9/27/2010
B/W-65I	4355	65	85	4290	4270	20	9/29/2010
B/W-65S	4355	25	45	4330	4310	20	9/29/2010

Location	GS	Interval		Distance Between Zonal Sampling Intervals	Interval		Interval Midpoint	SC	DO	pH	ORP	Turbidity (Unfiltered)	SO4	Alk (t)	Fe (total)	Ferrous Iron	TOC	Total Arsenic	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)	µS/cm	mg/L	su	mV	NTU	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	337	0.98	8.27	52	1.1	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	1,458	0.80	7.46	-92.3	213.8	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	274	1.44	8.15	-2.4	3.8	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	988	2.18	7.79	44.9	0.2	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	1,171	2.66	6.97	14.1	7.1	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	1,528	1.73	6.93	-280	10.8	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	2,186	0.81	6.87	-65.1	89.5	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	455	0.78	7.87	54.6	42.0	84	123	6	0.2	<1.0	16	8.7	11.0	8.6	5.51	0.133	3.04
	4354.6	Qa/Bdrk	650			3704.6																		
	4354.6	TD	705			3649.6																		
	4354.6		655			3699.6																		
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	3,760	0.21	6.97	-415.7	377.4	1933	275	10	5	<1.0	1.4	16	<1.0	16	6.57	0.196	4.48
B/W-37	**Completed**	**Total Borehole Depth: 292 ft below ground surface**																						
	4415	97	102	-	4318	4313	4315.5	5,140	0.30	7.19	-52.4	3.3	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	3,604	0.07	7.59	-206.4	25.6	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	1,340	0.62	7.81	-84.3	9.6	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	1,824	0.07	7.65	-182.2	4.3	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	1,560	0.06	7.72	-183.4	1.2	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	854	3.32	8.48	-81.6		158	74.8	1	0	<1.0	18	10	13	9.6	5.78	0.149	2.92
	4377	142	147	NS	4235	4230	4232.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4377	190	195	48	4187	4182	4184.5	1,029	3.46	8.64	-287.3	>1000	190	68	-	0	26	49	250	2.0	0.97	0.404	<0.0249	0.292
B/W-61	**Completed**	**Total Borehole Depth: 715 ft below ground surface**																						
	4355	21	26	-	4334	4329	4332	1,949	4.63	6.86	19	-	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	1,017	6.15	7.48	-35.6	141.3	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	1,132	3.69	7.19	-31	0.1	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	1,260	3.11	7.27	-29.5	13.1	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	481	5.71	7.71	21.3	0.2	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	479	5.10	7.70	19.8	1.5	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	1,337	0.81	7.37	-41.9	1.7	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	2,155	1.17	7.99	-78.7	97.2	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	1,030	0.10	7.91	-300.1	1.0	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	1,864	0.14	7.74	-157.8	12.3	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	1,156	0.82	7.73	-109.7	42.1	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	956	0.71	7.51	-133	42.7	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	2,965	0.64	6.81	-34.7	117.4	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	3,034	0.23	6.98	-48.2	1.5	1466	303	1	1	<1.0	2.7	290	2.0	290	180	4.09	102
	4355	361	366	35	3994	3989	3991.5	3,326	0.18	6.85	-274	9.3	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	1,541	0.11	7.41	-231.6	1.7	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	630	2.64	7.75	-293.7	48.6	145	117	0.6	0	<1.0	20	18	17	19	12.4	0.251	5.5
W4CB-2	**Completed**	**Total Borehole Depth: 556 ft below ground surface**																						
	4354	51.5	56.5	-	4302.5	4297.5	4300.0	5,573	0.75	5.76	-157.7	4.4	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	2,763	1.05	7.20	-202.8	35.1	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	1,121	0.85	7.29	-179.9	38.8	367.4	211	2	1	<1.0	<1.0	36	<1.0	30	17.2	0.356	10.8
	4354	155.5	160.5	39.5	4198.5	4193.5	4196.0	1,367	0.51	7.47	-221.5	45.6	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	853	0.22	7.58	-247.5	127.8	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	984	1.00	7.47	-82.4	34.8	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	3,516	0.43	6.30	-172	28.6	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	3,825	0.18	6.20	56	20.1	1775	704	1	2	<1.0	1.7	620	1.4	670	365	10.8	195
	4354	326	331	26	4028	4023	4025.5	2,997	0.08	6.49	-51.1	13.5	1275	594	7	6	<1.0	<1.0	260	<1.0	250	146	3.01	75.1
	4354	395	400	69	3959	3954	3956.5	1,481	0.07	7.09	-40.8	28.7	433	287	1	0.3	<1.0	7.2	92	5.1	99	64.8	1.31	31.7
	4354	438	443	43	3916	3911	3913.5	563	0.14	7.95	-304.7	182.4	116	131	10	0.2	<1.0	8.9	6.3	1.4	2.8	1.89	<0.0586	1.03
B/W-54	**Completed**	**Total Borehole Depth: 137 ft below ground surface**																						
	4350	52	57	-	4298	4293	4295.5	424	0.99	8.04	-137.5	42.2	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	463	0.42	8.19	-317.7	86.2	94	105	3	0	4.4	2.1	1.3	<1.0	0.85	0.503	<-0.00000086	0.277
B/W-62	**Completed**	**Total Borehole Depth: 717 ft below ground surface**																						
	4355	20	25	NS	4335	4330	4332.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-
	4355	31	36	11	4324	4319	4321.5	2,894	3.03	7.26	114.9	48.0	840	510	0.3	0.1	5.1	7.2	190	4.3	200	77.2	2.47	61.4
	4355	51	56	20	4304	4299	4301.5	1,301	0.53	7.65	143.1	48.3	483	103	0.2	0	<1.0	5.2	30	3.7	31	14.5	0.363	10.1
	4355	81	86	30	4274	4269	4271.5	1,312	0.40	7.57	129.4	157.3	450	113	0.4	0.1	2	7.5	39	3.1	36	15.2	0.353	11.2
	4355	118	123	NS	4237	4232	4234.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-
	4355	120	125	2	4235	4230	4232.5	1,535	0.47	7.32	0.3	4.4	550	260	0.2	0.1	<1.0	1.3	82	1.8	82	39	1.2	25.8
	4355	145	150	NS	4210	4205	4207.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-

Location	GS	Interval		Distance Between Zonal Sampling Intervals	Interval		Interval Midpoint	SC	DO	pH	ORP	Turbidity (Unfiltered)	SO4	Alk (t)	Fe (total)	Ferrous Iron	TOC	Total Arsenic	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)	µS/cm	mg/L	su	mV	NTU	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	150	155	NS	4205	4200	4202.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-
	4355	155	160	37	4200	4195	4197.5	2,070	0.07	7.49	-48.8	3.3	933	225	0.4	0.2	<1.0	<1.0	130	<1.0	120	57.8	1.68	38
	4355	187	192	32	4168	4163	4165.5	404	1.26	8.06	152.9	6.7	1150	53	0	0	<1.0	8.2	2.4	7.7	2.7	1.32	<0.0189	0.919
	4355	207	212	20	4148	4143	4145.5	218	0.06	8.20	-108.2	5.7	1067	64	0.3	0	<1.0	12	2.5	12	2.8	1.39	0.0557	0.863
	4355	235	240	28	4120	4115	4117.5	307	0.25	7.99	111.4	2.8	45	78	0	0	<1.0	12	4.4	10	4.5	2.75	0.0621	1.57
	4355	260	265	25	4095	4090	4092.5	414	0.77	8.03	222	3.8	85	78	0.2	0	<1.0	9.4	6	8.4	6.2	3.92	0.0968	2.27
	4355	285	290	25	4070	4065	4067.5	716	1.42	7.84	106.3	6.2	200	100	0.1	0	<1.0	3.9	19	4.2	21	12.9	0.378	6.89
	4355	330	335	45	4025	4020	4022.5	1,263	4.31	7.57	98.3	4.1	516	134	0.3	0	<1.0	4.4	49	4.1	55	35.8	0.68	19
	4355	370	375	40	3985	3980	3982.5	1,130	1.83	7.77	46.7	5.2	375	124	1	0	<1.0	7.3	41	6.8	42			
	4355	395	400	25	3960	3955	3957.5	1,751	1.60	6.83	80.3	1.2	558	373	0.3	0.2	<1.0	1.6	180	2.5	200			
	4355	415	420	20	3940	3935	3937.5	1,772	2.25	6.78	-49.8	2.8	583	385	0.4	0	<1.0	1.9	250	1.7	250			
	4355	450	455	35	3905	3900	3902.5	1,055	3.80	7.88	75	3.1	367	80	0.3	0	<1.0	6.6	13	6.6	13			
	4355	474	479	24	3881	3876	3878.5	1,398	2.54	6.84	-95.8	0.8	383	349	0	0	<1.0	2.9	160	2.9	160			
	4355	495	500	21	3860	3855	3857.5	2,078	1.65	6.81	-10.7	1.4	542	567	1	1	<1.0	1.8	350	1.5	370			
	4355	518	523	23	3837	3832	3834.5	1,977	1.65	6.66	27.5	0.8	508	586	0.6	0.6	<1.0	2.6	450	2.7	450			
	4355	537	542	19	3818	3813	3815.5	1,439	2.77	7.36	-52.4	1.5	392	357	0.2	0								
	4355	568	573	31	3787	3782	3784.5	930	4.37	7.64	30.9	0.8	250	190	0	0								
	4355	595	600	27	3760	3755	3757.5	609	2.42	7.49	-242.7	19.9	145	125	1	0								
	4355	625	630	30	3730	3725	3727.5	463	1.60	7.04	-83.9	3.3	75	123	0.3	0								
B/W-33	**Completed**	**Total Borehole Depth: 277 ft below ground surface**																						
	4432	132	137	-	4300	4295	4297.5	774	0.33	7.99	-109.7	625.8	125	181	2	0	1.4	22	27	17	24	15.5	0.273	6.77
	4432	151	156	19	4281	4276	4278.5	813	1.98	8.15	-153.2	512.8	145	191	-	0	2.8	20	9.3	1.9	5.1	3.67	0.0829	1.68
	4432	173.5	178.5	22.5	4258.5	4253.5	4256.0	904	2.79	7.99	42.1	458.1	190	175	0	5	<1.0	35	20	30	20	15.1	0.216	6.5
	4432	197	202	23.5	4235	4230	4232.5	882	2.77	8.02	-113.5	61.4	200	152	1	0.1	<1.0	30	20	29	20	14.4	0.265	6.33
	4432	272	277	75	4160	4155	4157.5	1,114	1.51	8.25	181.7	967.3	290	134	0.1	0	<1.0	24	15	10	8.6	6.12	0.0861	2.78
B/W-65	**Completed**	**Total Borehole Depth: 676 ft below ground surface**																						
	4355	30	35	-	4325	4320	4322.5	2,111	0.19	6.95	-265.1	44.7	767	342	15	20	2.8	1.8	150	0.9	160	58.7	2.02	47.8
	4355	54	59	24	4301	4296	4298.5	1,799	0.30	7.28	-287.1	784.5	633	357	0.6	0.3	2.8	17	120	<1.0	100	41.6	1.19	33.6
	4355	76.5	81.5	22.5	4278.5	4273.5	4276.0	1,631	0.24	7.38	-180.2	431.2	525	325	15	0.8	2.1	8.2	70	<1.0	71	31.3	1.05	24.6
	4355	103	108	26.5	4252	4247	4249.5	935	0.70	7.41	-292.4	116.7	197	258	9	0.6	<1.0	4.5	50	<1.0	46	24	0.66	17.6
	4355	139	144	36	4216	4211	4213.5	473	0.83	7.74	-214.3	194.3	56	135	2	0	<1.0	4.8	15	1.4	14	7.06	0.221	4.61
	4355	171	176	32	4184	4179	4181.5	656	0.45	7.60	-205.3	149.4	90	204	8	0.1	<1.0	12	20	<1.0	22	9.69	0.285	7.03
	4355	202	207	31	4153	4148	4150.5	356	0.81	7.87	-59.5	7.2	46	97	0.8	0.1	<1.0	6.3	5.7	5.6	5.5	3.05	0.0991	1.78
	4355	229	234	27	4126	4121	4123.5	280	0.54	8.10	-181.6	5.2	32	61	0.2	0	<1.0	6.6	1.9	6.7	2.1	1	<0.03	0.6
	4355	251	256	22	4104	4099	4101.5	246	0.67	8.05	-144.6	8.4	28	75	1	0.2	<1.0	7.4	2.5	6.8	2.5	1.29	<0.0462	0.785
	4355	277	282	26	4078	4073	4075.5	240	0.49	8.52	-104.9	65.4	24	81.6	10	0	0.58	7.5	3.2	3.1	1.6	0.949	<0.0302	0.568
	4355	301	306	24	4054	4049	4051.5	209	1.07	8.11	-151.7	3.0	17	56	0.1	0	<1.0	9.2	1.7	8.7	1.7	7.22	0.145	4.1
	4355	330	335	29	4025	4020	4022.5	207	1.03	8.29	-178.8	33.2	15	71	2	0.1	<1.0	11	1.8	8.4	1.7	543	33.8	329
	4355	361	366	NS	3994	3989	3991.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-
	4355	383	388	NS	3972	3967	3969.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-
	4355	407	412	77	3948	3943	3945.5	279	1.08	8.20	49.2	3.7	17	109	0.1	0	<1.0	26	6.1	24	6.3	3.89	0.0776	2.09
	4355	436	441	29	3919	3914	3916.5	326	0.83	8.35	-109	94.5	24	130	4	0	<1.0	15	8.2	15	7.4			
	4355	480	485	44	3875	3870	3872.5	374	1.22	8.05	-69.9	11.9	35	120	0	0	<1.0	16	10	17	10			
	4355	507	512	27	3848	3843	3845.5	398	1.68	8.04	-4.5	2.8	35	110	0.4	0	<1.0	17	13	18	13			
	4355	531	536	NS	3824	3819	3821.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-
	4355	547	552	16	3808	3803	3805.5	413	1.69	8.17	72.6	27.1	38	135	0	0	<1.0	21	13	21.0	13			
	4355	570	575	23	3785	3780	3782.5	417	2.04	8.22	-95.7	2.5	41	122	0.2	0	<1.0	20	13	20.0	13			
	4355	603	608	33	3752	3747	3749.5	422	0.49	8.34	-107.9	868.6	68	116	0.9	0								
W5DB	**Competed**	**Total Borehole Depth: 632 ft below ground surface**																						
	4356	31	36	-	4325	4320	4322.5	29,222	0.54	3.70	197.1	272.8	37000	0	>300	>300	12	<50	1800	<50	1800	869	22.1	658
	4356	77	82	46	4279	4274	4276.5	1,034	3.45	6.28	-73.3	897.1	376	66	300	37.5	<1.0	110	210	<5.0	5.7	2.5	0.109	1.72
	4356	100	105	23	4256	4251	4253.5	748	0.36	7.50	-101.8	16.2	200	65	1	0.2	<1.0	3.7	8.8	2.8	9.2	4.92	0.127	3.05
	4356	137	142	37	4219	4214	4216.5	1,421	0.93	7.76	-146.9	37.1	405	125	1	0	<1.0	2.4	100	<1.0	120	74.8	1.5	41.7
	4356	157.5	162.5	20.5	4198.5	4193.5	4196	473	1.73	8.27	-70.6	7.9	100	45	0.4	0	<1.0	9.4	6.3	9.6	7.2	4.24	<0.0551	2.07
	4356	183.5	188.5	26	4172.5	4167.5	4170	1,242	2.53	7.87	-169	257.6	280	81	8	0	<1.0	8.7	9.3	1.3	7.3	4.18	0.0938	2.57
	4356	213	218	29.5	4143	4138	4140.5	1,057	2.85	7.98	76.7	3.5	82	86	0.3	0	<1.0	6.7	11	5.7	12	0.875	<0.0532	0.585
	4356	229	234	16	4127	4122	4124.5	641	2.82	7.90	-29	11.3	48	121	0.1	0	<1.0	11	15	9.9	16	10.3	0.348	5.64
	4356	243	248	14	4113	4108	4110.5	962	1.68	7.86	-128.8	31.0	102	126	0.2	0.1	<1.0	7.1	30	6.8	29	18	0.441	10.7
	4356	271	276	28	4085	4080	4082.5	4,307	0.50	6.20	-272.2	92.6	1520	1164	35	30	4	<1.0	880	<1.0	860	476	16.6	271
	4356	288	293	17	4068	4063	4065.5	5,066	0.82	6.28	-61.8	9.1	1840	1416	30	25	4.8	2.9	1500	1.5	1500	1.69	<0.0199	0.836
	4356	314	319	26	4042	4037	4039.5	4,541	1.36	6.21	-14.9	36.8	1680	1090	25	20	2.7	2.8	840	1.3	800			
	4356	333	338	19	4023	4018	4020.5	3,809	4.14	6.27	-241.1	8.3	1300	1160	5	4	1.8	1.6	510	1.3	530			
	4356	369	374	36	3987	3982	3984.5	3,413	3.53	6.28	-74.2	69.8	1200	1020	9	6	<1.0	1.8	580	1.9	610			
	4356	395	400	26	3961	3956	3958.5	2,353	1.77	6.85	-99.6	85.3	684	535	10	6	<1.0	4.4	360	<1.0	380			
	4356	479	484	84	3877	3872	3874.5										<1.0	21	34	1.6	26			
	4356	529	534	50	3827	3822	3824.5	995	3.58	7.86	1.4	15.8	285	137	0.9	0								
B/W-52	**Completed**	**Total Borehole Depth: 197 ft below ground surface**																						
	4344	37.5	42.5	-	4306.5	4301.5	4304	569	0.29	7.50	-61.9	28.3	95	169	0.3	0	<1.0	8.2	24	7.7	28	11.8	0.32	9.78
	4344	60	65	22.5	4284	4279	4281.5	512	0.20	7.64	-107.1	2.3	74	270	0.1	0.1	<1.0	4.7	17	5.3	20	7.72	0.326	6.61
	4344	80	85	20	4264	4259	4261.5	517	0.12	7.78	-154.1	3.2	80	127	1	0.4	<1.0	5.1	21	5.1	22	9.78	0.236	7.17

Borehole and Zonal Sampling Data

Location	GS	Interval		Distance Between Zonal Sampling Intervals	Interval		Interval Midpoint	SC	DO	pH	ORP	Turbidity (Unfiltered)	SO4	Alk (t)	Fe (total)	Ferrous Iron	TOC	Total Arsenic	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)	µS/cm	mg/L	su	mV	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L
	4344	100	105	20	4244	4239	4241.5	453	0.24	7.97	-165.8	4.7	88	119	0.5	0.1	<1.0	3.4	5.5	3.4	6.4	2.75	0.114	1.77
	4344	155	160	55	4189	4184	4186.5	311	0.22	7.95	-90.2	4.6	54	89	0.3	0	<1.0	8.3	3.7	9.0	3.6	1.91	0.0606	1.3
	4344	171	176	16	4173	4168	4170.5	380	0.09	7.89	-164.3	2.2	74	92	0.6	0.1	<1.0	6	4	6.5	3.9	2.07	0.0532	1.4
	4344	190	195	19	4154	4149	4151.5	329	0.29	7.99	-24.5	1.0	55	55	0.4	0	<1.0	9.2	3.7	9.5	3.7			
MW-4	**Completed**	**Total Borehole Depth: 207 ft below ground surface**																						
	4406	92	97	-	4314	4309	4311.5	1,663	3.85	7.63	50.6	2.9	560	174	0.2	0	<1.0	12	63	12	60			
	4406	109.5	114.5	17.5	4296.5	4291.5	4294	1,689	1.77	7.77	-103.5	10.2	590	181	1	0	<1.0	9.9	37	9.3	36			
	4406	132	137	22.5	4274	4269	4271.5	1,622	3.55	7.92	-53.3	1.3	600	174	0.1	0	<1.0	12	47	12	46			
	4406	151	156	19	4255	4250	4252.5	1,528	1.97	7.86	-53.3	6.7	520	212	0.1	0.1	<1.0	11	56	10	57			
B/W-44	**Completed**	**Total Borehole Depth: 297 ft below ground surface**																						
	4369	52	57	NS	4317	4312	4314.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4369	68	73	16	4301	4296	4298.5	1040	4.41	8.09	-13	23.2	270	132	0.2	0.1	<1.0	44	6.7	43	6.8			
	4369	90	95	22	4279	4274	4276.5	941	4.51	8.43	-75.6	2.5	290	113	0.4	0	<1.0	33	7	31	6.8			
	4369	112	117	22	4257	4252	4254.5	851	4.79	8.19	-141.7	19.5	240	77	0.3	0.1	<1.0	32	9	31	8.4			
	4369	127	132	15	4242	4237	4239.5	996	4.31	8.17	-120.3	1.7	285	90	0.2	0								
	4369	145	150	18	4224	4219	4221.5	1,232	3.62	7.78	-149.7	12.1	360	167	0.6	0								
	4369	182	187	37	4187	4182	4184.5	2,241	2.45	2.07	-26	23.7	690	401	0.3	0.1								
	4369	202	207	20	4167	4162	4164.5	2,493	1.49	6.98	-103.6	2.3	550	510	0.3	0.2								
	4369	227	232	25	4142	4137	4139.5	2,483	1.45	6.95	-118.3	6.5	780	500	0.4	0.3								
LEP MW-2I	**Drilling and zonal sampling in progress**																							
	4361	61	66	-	4300	4295	4297.5	2,345	3.09	8.29	-163.1	124.9	240	83	0.4	0								
	4361	86	91	25	4275	4270	4272.5	724	2.91	8.32	-127.1	284.4	110	129	4	0								
	4361	120	125	34	4241	4236	4238.5	485	2.08	8.58	-154.6	827.6	70	155	8	0								
	4361	141	146	21	4220	4215	4217.5	444	2.73	8.60	-109	339.1	43	196	3	0								
	4361	158	163	17	4203	4198	4200.5	443	2.74	8.38	-140	1.2	42	175	0.1	0								
	4361	181	186	23	4180	4175	4177.5	454	2.22	8.38	-157.9	162.3	46	89	8	0								
	4361	201	206	20	4160	4155	4157.5	471	1.43	8.46	-172.7	552.4	49	171	10	0								
	4361	227	232	26	4134	4129	4131.5	480	3.71	8.35	-166.8	3.3	67	122.8	0.1	0								
B/W-32	**Drilling and zonal sampling in progress**																							
	4348	49	54	NS	4299	4294	4296.5	-	-	-	-	-			-	-	-	-	-	-		-	-	-
	4348	62	67	67	4286	4281	4283.5	292	0.50	9.10	19.2	197.6	26	120	0.6	0.1								
	4348	83	88	NS	-	-	-	-	-	-	-	-			-	-	-	-	-	-		-	-	
	4348	107	112	24	4241	4236	4238.5	247	0.14	8.38	-60.6	56.3	19	154	0.6	0								
	4348	132	137	25	4216	4211	4213.5	319	0.14	7.98	75.1	4.4	42	97	0	0								
	4348	149	154	17	4199	4194	4196.5	306	0.05	8.02	-236.4	3.6	41	95	0	0								
	4348	165	170	16	4183	4178	4180.5	264	0.12	8.60	-70.1	37.4	17	100	0.4	0								
	4348	192	197	27	4156	4151	4153.5	305	0.11	8.55	-32.6	9.0	19	123	0.2	0								
	4348	216	221	24	4132	4127	4129.5	297	0.97	8.61	-267.3	16.2	23	113	0.4	0								
B/W-55	**Drilling and zonal sampling in progress**																							
	4339	20	25	25	4319	4314	4316.5	650	0.31	6.58	20.1	84.8	78	167	1	0.2								
	4339	37	42	17	4302	4297	4299.5	516	0.33	7.49	-103.1	46.3	56	131	1	0.3								
	4339	58	63	21	4281	4276	4278.5	447	0.76	7.38	134.7	210.9	43	127	3	0								
	4339	75	80	17	4264	4259	4261.5	429	0.73	7.48	-135.5	123.8	49	145	2	0.6								
	4339	93	98	18	4246	4241	4243.5	531	0.28	7.42	-111.3	10.6	64	195	0.5	0.1								
	4339	113	118	20	4226	4221	4223.5	553	0.33	7.50	-14.2	194.2	64	175	1	0								
	4339	135	140	22	4204	4199	4201.5	421	0.34	7.49	-162	43.8	44	138	1	0.1								
	4339	170	175	35	4169	4164	4166.5	373	0.52	7.30	-169.3	8.3	45	126	1	0.2								
B/W-38R	**Drilling and zonal sampling in progress**																							
	4420	87	92	NS	4333	4328	4330.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4420	117	122	30	4303	4298	4300.5	1,717	0.40	7.59	-213.7	1.0	810	130	0.1	0.4								
	4420	137	142	20	4283	4278	4280.5	3,788	0.34	7.62	-48.2	6.7	1980	144	0.1	0								
	4420	195	200	58	4225	4220	4222.5	1,799	2.17	7.84	-120.4	5.3	520	118	0.1	0.2								
B/W-66	**Drilling and zonal sampling in progress**																							
	4348	31	36	NS	4317	4312	4314.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4348	51	56	20	4297	4292	4294.5	1,361	1.04	7.40	-69.8	30.7	360	276	0.3	0.1								
	4348	81	86	30	4267	4262	4264.5	612	0.30	7.95	-153.3	4.2	120	66	0.1	0.1								
	4348	100	105	19	4248	4243	4245.5	420	0.17	7.92	-210.7	3.9	114	113	0.1	0								
B/W-42	**Drilling and zonal sampling in progress**																							
	4347	32	37	-	4315	4310	4312.5	2,436	0.30	7.19	-160.8	9.1	900	336	3	3								
	4347	59	64	27	4288	4283	4285.5	1,088	0.28	7.60	-135.6	9.0	233	204	1	0.4								

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

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

					Field Parameters						Water Quality Parameters (Lab)												Radiological (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)	Alpha, Gross	Beta, Gross	Radium-226	Radium-228	Thorium-228	Thorium-230	Uranium-234 (total)	Uranium-235 (total)	Uranium-238 (total)	Uranium-234 (dissolved)	Uranium-235 (dissolved)	Uranium-238 (dissolved)
		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	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/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	5.71	8.24	0.394	<0.138	0.446	0.333	1.26	0.046	0.897	0.93	<0.0417	0.62
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	3.22	6.99	<0.044	<0.346	0.585	<0.138	1.02	<0.00634	0.786	0.913	<0.0152	0.657
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	4.84	6.89	0.353	<0.18	<0.126	<0.0613	1.94	<0.0521	1.5	1.72	0.0971	1.4
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	2.9	7.4	<0.266	<0.599	<0.115	0.179	2.02	0.0707	1.46	1.71	<0.0249	1.28
August 2010 Sampling Event																																		
SW-WR-01	8/31/2010	Yes	8/30/2010	8/31/2010	22.30	189	6.74	7.70	231.9	59.8	72	72	<2.0	140	3.1	6.1	0.66	19	<0.5	<0.11	<0.15	<0.26												
SW-WCD-01	8/31/2010				23.50	197	7.32	7.45	219.5	73.0	76	76	<2.0	140	3	5.9	0.63	19	<0.5	<0.11	<0.15	<0.26												
September 2010 Sampling Event																																		
SW-WR-01	9/28/2010	Yes	9/28/2010	9/30/2010	19.34	167	7.48	7.98	217.5	81.5																								
SW-WCD-01	9/28/2010				18.45	232	6.56	7.86	224.9	72.3																								

					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	0.087	4.2	12	5.8 J
August 2010 Sampling Event																																				
SW-WR-01	8/31/2010	Yes	8/30/2010	8/31/2010	0.54	<2.0	8.3	31	<0.5	0.16	<1.0	19	<2.0	0.21 J	1.4 J	0.59	0.21 J	<0.05	4.8	33	<0.0002	5.3	0.69 J	-	3.1	<2.0	15	<1.0	18	0.2	<1.0	<0.1	0.02	4.5	2	<20
SW-WCD-01	8/31/2010				0.27	<2.0	7.1	31	<0.5	0.16	<1.0	19	<2.0	0.14 J	1.1 J	0.29	<1.0	<0.05	4.8	20	<0.0002	5.3	0.67 J	-	2.9	<2.0	14	<1.0	18	0.2	<1.0	<0.1	0.0086	4.1	1.5 J	<20
September 2010 Sampling Event																																				
SW-WR-01	9/28/2010	Yes	9/28/2010	9/30/2010																																
SW-WCD-01	9/28/2010																																			

					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
August 2010 Sampling Event																																				
SW-WR-01	8/31/2010	Yes	8/30/2010	8/31/2010	<0.05	<2.0	7	27	<0.5	0.17	<1.0	19	<2.0	0.11 J	0.76 J	0.02 J	<1.0	<0.05	4.7	11	0.00017 J	5.1	0.64 J	-	2.9	<2.0	13	<1.0	19	0.19	<1.0	<0.1	<0.005	4.2	2	<20
SW-WCD-01	8/31/2010				<0.05	<2.0	6.3	28	<0.5	0.17	<1.0	19	<2.0	0.11 J	0.94 J	0.042	<1.0	<0.05	4.9	6.4	<0.0002	5.1	0.71 J	-	2.8	<2.0	13	<1.0	18	0.19	<1.0	<0.1	<0.005	4	1.8 J	<20
September 2010 Sampling Event																																				
SW-WR-01	9/28/2010	Yes	9/28/2010	9/30/2010																																
SW-WCD-01	9/28/2010																																			

"J" indicates "estimated" concentration