

Antero Resources Pro Water System 7/27/2010 Spill: Robinson A Pad to River Ranch A Pad Pipeline Segment

	Parameter	Diesel Range Organics	Gasoline Range Organics	Benzene	Ethylbenzene	m,p-Xylene	o-Xylene	Toluene	Xylenes, Total	Chloride
Sample Location	Date Sampled	(mg/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
Groundwater Seep 1										
	07/28/2010	4.1	2200	310	30	220	30	170	250	120
	07/29/2010			630	180	2500	460	1700	2900	140
	07/30/2010			1600	180	2800	560	4100	3400	170
	08/02/2010			340	43	350	32	200	390	140
	08/03/2010			280	6.3	280	42	120	320	140
	08/04/2010			390	50	640	54	320	720	150
	08/05/2010			350	61	280	71	130	310	150
	08/06/2010			300	42	230	23	120	260	140
	08/09/2010			650	89	2800	490	1500	3300	160
08/17/2010			320	42	210	13	50	220	160	
08/21/2010			85	27	160	14	54	170	160	
Groundwater Seep 2										
	07/28/2010		3800	850	22	430	120	750	550	160
	07/29/2010			NS	NS	NS	NS	NS	NS	NS
	07/30/2010			NS	NS	NS	NS	NS	NS	NS
	08/02/2010			700	20	340	72	130	390	170
	08/03/2010			660	<1.0	510	92	69	600	170
	08/04/2010			910	24	420	63	99	480	170
	08/05/2010			500	18	250	38	36	270	180
	08/06/2010			870	260	3800	800	1200	4700	160
	08/09/2010			1500	840	1300	2100	6600	16000	170
08/17/2010			850	110	1300	270	1000	1600	190	
08/21/2010			1500	190	2200	390	2800	2600	610	
Groundwater Seep 3										
	07/28/2010		<200	10	4.2	3.5	<1.0	<1.0	3.5	170
	07/29/2010			12	3.8	2.8	<1.0	<1.0	<3.0	180
	07/30/2010			14	6.5	15	1.8	2	17	180
	08/02/2010			17	7.1	7.5	<1.0	1.2	7.5	180
	08/03/2010			15	5.3	5.8	<1.0	2.4	6.1	190
	08/04/2010			21	6.8	7.5	<1.0	4.1	8.4	190
	08/05/2010			20	6.9	7.1	<1.0	4.1	8	190
	08/06/2010			24	7.7	9.6	1.2	7.5	11	170
	08/09/2010			28	5.9	11	2	17	13	170
08/17/2010			60	8.9	33	7.2	28	41	190	
08/21/2010			49	8.1	39	4.8	10	44	190	
Seep 4	08/03/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	200
	08/04/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	200
	08/05/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	200
	08/06/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/09/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/21/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	190
Seep 5	08/03/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	110
	08/04/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	150
	08/05/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	140
	08/06/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	120
	08/09/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	120
	08/21/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	150
Seep 6	08/03/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
Produced Water Seep	07/27/2010	53	26,000	920	500	7200	1500	5800	8600	160
DG1										
	07/27/2010	83.4	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	07/28/2010		<200	6.9	<1.0	8	2	6.8	10	170
	07/29/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	07/30/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	07/31/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/02/2010									180
	08/03/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/04/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	230
	08/05/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/06/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
	08/09/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
08/21/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180	
DG2										
	07/30/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	120
	07/31/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	130
	08/02/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	130
	08/04/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	130
	08/05/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	130
	08/06/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	120
	08/09/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	120
08/21/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	140	
Pond 1										
	07/27/2010	<0.10	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	07/28/2010		<200	2.2	<1.0	2.1	<1.0	1.3	<3.0	180
	07/29/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	07/30/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	170
	07/31/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/02/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/04/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/05/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/06/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
08/09/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160	
08/21/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180	
Pond 2	07/27/2010	<0.10	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	190

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Sample Location	Parameter	Diesel Range Organics (mg/L)	Gasoline Range Organics (ug/L)	Benzene (ug/L)	Ethylbenzene (ug/L)	m,p-Xylene (ug/L)	o-Xylene (ug/L)	Toluene (ug/L)	Xylenes, Total (ug/L)	Chloride (mg/L)
	07/28/2010		<200	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	07/30/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	07/31/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/02/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/04/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	180
	08/05/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	190
	08/06/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	170
	08/09/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	170
	08/21/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	190
Pond 3 (Outlet Pond)	07/30/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
	08/03/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
	08/04/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	150
	08/05/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
	08/06/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	140
	08/09/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	140
	08/17/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
	08/21/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	160
Sprinkler	07/31/2010			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	130
MCL for drinking water				5	700	10	10	1000	10	250
West Field North Soil	07/30/2010	39 mg/kg	<2,800 ug/kg	<24 ug/kg	<17 ug/kg	<22 ug/kg	<17 ug/kg	<16 ug/kg	<39 ug/kg	
West Field South (soil)	07/30/2010	48 mg/kg	<2,800 ug/kg	<24 ug/kg	<17 ug/kg	<22 ug/kg	<17 ug/kg	<16 ug/kg	<39 ug/kg	
S.W. Field 1 (soil)	07/30/2010	25 mg/kg	<2,700 ug/kg	<23 ug/kg	<16 ug/kg	<21 ug/kg	<17 ug/kg	<16 ug/kg	<38 ug/kg	
S.W. Field 2 (soil)	07/30/2010	95 mg/kg	<2,700 ug/kg	<23 ug/kg	<16 ug/kg	<21 ug/kg	<17 ug/kg	<16 ug/kg	<38 ug/kg	
South Field (soil)	07/30/2010	140 mg/kg	<2600 ug/kg	<22 ug/kg	<15 ug/kg	<20 ug/kg	<16 ug/kg	<15 ug/kg	<35 ug/kg	
Water Line Trench (soil)	08/05/2010	8700 mg/kg	580 mg/kg	0.120 mg/kg	0.580 mg/kg	57.0 mg/kg	11.0 mg/kg	2.4 mg/kg	68.0 mg/kg	26
Table 910-1 Standards (soil)		500 mg/kg	500 mg/kg	0.17 mg/kg	100 mg/kg				175 mg/kg	

\*MCL: Maximum Contaminate Level

\*NS: Not Sampled