Illinois Creek Mine
2004 Annual Report

Submitted to:
Alaska Department of Natural Resources

Submitted by:
American Reclamation Group, LLC

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[Report ; Appendix A only]

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1 Project Summary

1.1 Mining Operation

No mining took place in 2004. The mining equipment was use for reclamation throughout the year.

1.2 Process Operation

Ore leaching continued on material placed on the pad in previous years. Hydrogen peroxide was added to the barren solution to reduce cyanide concentrations. Leaching and rinsing of the leach pad resumed on April 26th. Approximately 2,300,000 gallons of solution was treated and land applied in 2004. About 33,000,000 gallons of solution remained in the leach pad on December 31, 2004. The WAD Cyanide concentration was 0.38 mg/L on December 31, 2004.

1.2.1 Leach Pad Solution Balance

Daily monitoring of the leach pad operating sump elevations, solution application rates, and precipitation was continued during the year. The Operation and Maintenance Manual solution balance model continued to be updated with the monitoring data. A copy of the current water balance model can be found in Appendix D.

The leach pad height capacity tables (elevation vs. storage capacity) have been updated with as-built surveys in order to obtain the actual solution storage capacity. The solution level on December 31, 2004 was 35.7 feet.

1.2.2 Lime Kiln

There was no limekiln production during the year. The limekiln was dismantled and reclaimed in 2003.

2 Environmental

2.1 Water Quality Monitoring

Sampling of all the Illinois Creek Mine Monitoring Wells and surface water locations was completed. Due to a broken casing MW-6 can no longer be sampled. The remainder of the monitoring wells were sampled during the year. The updated database is in Appendix A.

With the concurrence of the state project permitting team, all groundwater monitoring wells are now being analyzed for dissolved metals in place of total recoverable metals; due to interference of suspended solids often encountered in groundwater wells. Hardness (as CaCO3) has also been added to the monitoring constituent list at all monitoring locations in order to facilitate comparison of some constituents (metals) to state water quality hardness based standards.

2.2 Leach Pad Leak Detection Monitoring

Refer to Appendix B for the results of the leach pad leak detection, collection and recovery system (LDCRS) monitoring for 2004.

A total of 4,725,500 gallons of solution were recovered during 2004. This is an average of 9.0 gpm.

2.3 Water Appropriation Monitoring

A total of 2,400,000 gallons of fresh water was pumped from Illinois Creek during 2004. 122,075 gallons of fresh water was pumped from the well at the new mancamp.

2.4 Air Quality Monitoring/Reporting

Monitoring and record keeping of stationary source parameters continued during 2004. The current data is located in Appendix C.

2.5 Wildlife Monitoring

Daily monitoring for wildlife mortalities at the leach pad and process building areas continued during 2004. One wildlife mortality was observed and reported during 2004 at Illinois Creek Mine.

Appendix A

Site 3
Upper Illinois Creek, just upstream of 6 mile road crossing.

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)	Dissolved Copper (mg/l)
08/25/95				<0.001	<0.001	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002	<0.01
09/23/95	8.61	46.7	46.7	<0.001	<0.001	0.011	<0.003	<0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002	<0.1
07/11/96	9.56	25.9	42.4		<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.0005		<0.0005	
03/17/97					<0.005		<0.0005		<0.005		<0.005		<0.005		<0.001		0.000226	
06/23/97	7.90				<0.005		<0.0005		<0.005		<0.01		<0.005		<0.002		<0.0002	
09/03/97	7.45	34.8	44.6		<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
10/09/97	8.35	52.2	37.5		<0.0025		<0.00025		<0.0025		<0.0025		<0.01		<0.001		<0.0002	
03/16/98	7.42	37.7	34.0		<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
04/28/98	6.94	26.7	34.7															
06/30/98					<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		0.000231	
09/29/98	7.10	30.0	32.0		<0.005		<0.0002		0.0017		<0.001		<0.002		<0.001		<0.0002	
03/22/99	7.50	45.0	32.0		<0.005		<0.002		0.0013		<0.001		<0.002		<0.0001		<0.0002	
06/10/99	7.30	24.0	40.0		<0.005		<0.002		0.0022		<0.001		<0.002		<0.0001		<0.0002	
09/20/99	6.60	43.5	40.0		<0.1		<0.005		<0.01		<0.05		<0.1		<0.005		<0.0002	
12/13/99	7.28	47.7	32.0		<0.1		<0.005		<0.01		<0.05		<0.1		<0.005		N/A	
05/29/00	7.00	28.0	34.0		<0.1		<0.005		<0.01		<0.05		<0.1		<0.005		<0.0002	
08/14/00	7.20	27.0	46.0		<0.1		<0.005		<0.01		<0.07		<0.1		<0.015		<0.0002	
06/19/01	6.60	41.0	41.0		<0.1		<0.005		<0.01		<0.05		<0.1		<0.015		<0.00058	
08/06/01	7.53	44.1	44.0		<0.1		<0.006		<0.01		<0.05		<0.1		<0.015		<0.00005	
10/22/01	7.34	18.9	44.0		<0.1		<0.005		<0.01		<0.05		<0.1		<0.015		<0.00058	
06/10/02	7.20	39.4	41.0		<0.000086		<0.000029		0.00166		0.000287		<0.00001		<0.00011		<0.000058	
09/02/02	7.50	45.0	40.0		<0.001		<0.0002		0.000395		<0.00015		<0.0005		<0.00035		<0.0002	
06/23/03	7.35	34.3	41.0		<0.000086		<0.000029		0.00299		<0.000037		<0.0005		<0.00035		<0.000058	
09/25/03	6.60	41.0	45.0		<0.015		<0.00051		0.00018		<0.011		<0.026		<0.00066		<0.00006	
06/14/04	7.40	40.3	45.0		<0.00025		<0.00018		<0.00036		<0.000052		<0.0025		<0.00031		<0.0002	
08/30/04	7.40	42.8*	48.0		<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	7.04	35.0	34.1		<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

Site 3
Upper Illi

Date	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
08/25/95	<0.01	0.06	0.07	<0.01	0.01	7.1		20.0				20			0.450	<0.01	
09/23/95	<0.1	0.03	0.10	<0.01	0.02	6.3		16.0				20			0.360	<0.01	
07/11/96	<0.025		<0.025		<0.025	6.8	0.12	12.3		0.131	0.8	29	<0.005		0.575	<0.1	<0.02
03/17/97	<0.05		<0.05		<0.05	7.96	0.88	29.0		<0.2	4.8	60	<0.01		0.974	<0.1	<0.02
06/23/97	<0.01		<0.05		<0.02	7.51	0.40	19.6		<0.2	1.0	<20.0	<0.01	<0.005	0.640	<0.1	<0.1
09/03/97	<0.005		0.101		<0.01	7.00	0.15	16.5		<0.2	2.0	20	<0.01	<0.01	0.468	<0.1	<0.1
10/09/97	<0.005		0.0272		<0.01	7.47	0.17	17.2		<0.2	1.2	45	<0.01		0.491	<0.1	<0.1
03/16/98	<0.01		<0.05		<0.02	7.15	0.23	24.7	26.1	1.0	1.0	31	<0.01		3.33	<0.1	<0.1
04/28/98																	
06/30/98	<0.01		<0.05		<0.02	7.3	0.42	24.6	23.2	<0.2	15.6	44	<0.01		0.648	<0.1	<0.1
09/29/98	<0.002		0.076		<0.002	7.1	0.6	11.4	15	<0.05	<4.0	69	<0.005		0.49	<0.02	0.1
03/22/99	<0.002		0.081		<0.002	7.5	1.5	30	23	<0.05	<4.0	40	<0.005		<1.0	<1.0	<0.05
06/10/99	0.0028		0.35		0.0034	7.3	5.1	8.4	16	<0.1	20.0	29	<0.01		<0.5	<0.5	
09/20/99	<0.005		<0.05		0.0066	6.6	<0.2	19.8	16	<0.05	<1.8	24.4	<0.01		0.64	<0.02	<0.1
12/13/99	<0.005		0.11		<0.005	7.28	0.77	N/A	22	<0.05	3.2	12.5	<0.005		0.8	<0.02	<0.1
05/29/00	<0.005		0.18		<0.005	7	2.5	21	10	<0.1	<4.0	20	<0.01		0.935	N/A	<0.02
08/14/00	<0.005		0.026		<0.005	7.2	4.7	22	14	0.16	36.0	31	<0.01		<0.5	<0.5	0.1
06/19/01	<0.005		<0.05		<0.005	6.6	0.73	16	10	<0.05	<5.0	65	<0.002		0.68	<0.026	N/A
08/06/01	<0.005		0.14		<0.005	7.5	0.59	15	18	<0.4	4.4	25	<0.00032		0.66	<0.02	<0.1
10/22/01	<0.005		<0.05		<0.005	6.6	0.73	16	10	<0.05	2.8	65	<0.00032		0.68	<0.026	<0.1
06/10/02	0.0029		0.179		0.00566	7.2	0.24	14.9	18.6	<0.016	6.8	<5.0	<0.00064		0.777	N/A	<0.1
09/02/02	0.000834		<0.05		0.00129	7.54	0.24	21	22	<0.1	<4.0	38	<0.00064		<1.0	<1.0	<0.1
06/23/03	0.002		0.391		0.0039	7.35	6.2	13.8	15.4	0.061	13.5	<5.0	<0.00064		<0.10	<0.10	<0.1
09/25/03	0.062		0.22		0.029	6.6	<0.2	15.7	20	<0.0033	<1.3	<5.0	<0.00064		0.6	N/A	<0.1
06/14/04	<0.00012		N/A		0.029	7.4	<0.2	14.4	N/A	<0.025	1.0	23.8	<0.004		0.529	<0.02	<0.1
08/30/04	<0.00012		<0.004		<0.00077	7.5	0.774	18.9	21.8	<0.0095	<0.5	23.8	<0.00071		0.52	<0.0032	<0.1
10/04/04	0.00185		N/A		<0.00077	7.4	2.63	14.4	16.8	<0.22	4.75	31.3	<0.00064		0.393	<0.0032	<0.1

FM-1
Illinois Creek above warm spring

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Flow (gpm)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)	Dissolved Copper (mg/l)
07/02/91					<0.005		<0.0005			<0.05	<0.01		<0.005				<0.0002		<0.05
08/19/91					<0.005		<0.0005			<0.05	<0.005		<0.005				<0.0002		<0.05
09/19/91						0.003		<0.004		<0.008		0.065		0.002				<0.0002	
11/21/91						0.065		<0.004		<0.007		<0.042		<0.002				0.0007	
12/15/91						0.014		<0.004		<0.007		<0.042		<0.002				0.0003	
01/20/92						0.051		<0.004		<0.007		<0.042		<0.002				0.0004	
03/05/92						0.064		<0.004		<0.007		<0.042		<0.002				<0.0002	
04/16/92						0.042		<0.004		<0.007		<0.042		<0.002				<0.0002	
05/23/92						0.003		<0.004		<0.007		<0.042		<0.002				<0.0002	
06/24/97	7.75			3,457.3		<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
08/13/97	7.25	114.7	48.8	3,248.4		0.00385		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
10/06/97	8.01	112.1	37.3	*		0.0141		<0.00025		<0.0025		<0.0025		<0.005		<0.001		<0.0002	
01/19/98	8.43	117.3	35.3	*		0.0119		<0.0005		<0.005		<0.005		<0.005		<0.005		<0.0002	
04/13/98	8.14	101.8	38.5	*															
06/30/98						0.00805		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
09/29/98	7.4	105.0	33.0	*		0.018		<0.002		0.0006		<0.001		<0.002		<0.0001		<0.0002	
11/30/98	8.1	225.0	32.0			0.0076		<0.002		0.0006		<0.001		<0.002		<0.0001		<0.0002	
03/22/99	7.9	225.0	32.0			0.0150		<0.002		0.0017		0.0012		<0.002		<0.0001		<0.0002	
06/10/99	7.5	71.0	42.0			<0.002		<0.0002		0.0046		<0.001		<0.002		<0.0001		<0.0002	
09/20/99	7.3	158.0	40.0			<0.1		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
12/13/99	7.77	137.0	32.0			<0.1		<0.005		<0.01		<0.05		<0.10		<0.005		N/A	
05/29/00	7.7	110.0	44.0			<0.1		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
08/14/00	7.6	105.0	44.0			<0.1		<0.005		<0.01		<0.07		<0.10		<0.015		<0.0002	
10/17/00	7.9	150.0	34.0			<0.1		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
08/06/01	7.87	256.0	64.8			<0.1		<0.006		<0.01		<0.014		<0.027		<0.0043		0.00035	
10/24/01	7.51	196.0	56.4			<0.1		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
06/10/02	7.6	158.0	41.0			0.0205		<0.00029		0.00128		0.000741		<0.00001		<0.00011		<0.000058	
09/02/02	7.8	125.0	39.0			0.0042		<0.0002		<0.0001		<0.0015		<0.0005		<0.00035		<0.0002	
06/09/03	8.00	217.0	43.0			0.00212		<0.000029		0.0024		0.000214		<0.00001		<0.00011		<0.000058	
09/25/03	7.30	244.0	42.0			<0.015		<0.00051		<0.0018		<0.011		<0.026		<0.00066		<0.00006	
06/14/04	7.70	153.0	42.0			0.0224		<0.001		<0.0025		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	7.70	135*	47.0			0.00398		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	7.68	130.0	35.3			0.00314		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

FM-1
Illinois Cr

Date	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
07/02/91			0.2	<0.5							4.3	138	<0.05				
08/19/91			0.27	<0.05							30.6	522	<0.05				
09/19/91	<0.007		0.956		<0.002				80		14.4	77	<0.01				
11/21/91	<0.006		0.114		0.005						3.6	120	<0.01				
12/15/91	<0.006		0.152		0.006						<1.0	88	<0.01				
01/20/92	<0.006		0.084		0.00						2.5	110	<0.01				
03/05/92	<0.006		0.052		0.005						8	95	<0.01				
04/16/92	<0.006		0.065		0.007						1	110	<0.01				
05/23/92	<0.006		1.14		0.006						80	62	<0.01				
06/24/97	<0.01		0.212		<0.02	7.87	0.76	57.6		<0.2	4	101	<0.01	<0.005	<0.1	<0.1	<0.1
08/13/97	<0.005		0.555		0.0343	7.40	1.00	62.4		0.797	8.8	<20.0	<0.01	<0.005	<0.1	<0.1	<0.1
10/06/97	<0.005		<0.01		<0.01	7.62	0.50	79.6		<0.2	1.2	85	<0.01		0.198	<0.1	<0.1
01/19/98	<0.01		0.210		<0.02	7.49	0.52	71.3	77.7	<0.2	8.0	91	<0.01		0.265	<0.1	<0.1
04/13/98																	
06/30/98	<0.01		<0.05		<0.02	7.29	0.45	80.6	86.8	<0.2	5.2	86	<0.01		0.272	<0.1	<0.1
09/29/98	<0.002		<0.05		0.0021	7.4	2.5	53.6	61	<0.05	4	88	<0.005		0.2	<0.02	<0.1
11/30/98	<0.002		0.21		<0.002	8.1	0.16	106	120	<0.05	<4	89	<0.02		0.194	<0.1	<0.05
03/22/99	<0.002		0.88		0.0065	7.9	6	74	83	<0.05	17	77	<0.01		<1.0	<1.0	0.15
06/10/99	0.0033		2.4		0.01	7.5	31	37	45	<0.1	4	20	<0.01		<0.5	<0.5	
09/20/99	<0.005		0.19		0.01	7.3	0.41	90.6	67	<0.05	3.6	66.9	<0.01		0.18	<0.02	<0.1
12/13/99	<0.005		0.24		0.006	7.77	0.91	N/A	75	<0.05	7.6	71.3	<0.01		<0.5	<0.02	<0.1
05/29/00	<0.005		0.6		<0.005	7.7	14	55	48	<0.1	7.7	85	<0.01		0.694	N/A	<0.02
08/14/00	<0.005		0.58		0.005	7.6	5.7	53	57	0.1	23	69	<0.01		<0.5	<0.5	<0.1
10/17/00	<0.005		0.084		0.005	7.9	1	70	76	<0.1	<4	20	<0.01		0.21	<0.1	<0.1
08/06/01	0.0055		0.69		0.021	7.9	0.68	103	120	<0.1	16.6	136	<0.00032		<0.02	0.3	<0.1
10/24/01	<0.005		0.084		0.005	7.9	0.56	83.8	76	<0.1	2.8	118	<0.00032		0.21	<0.1	<0.1
06/10/02	0.000973		0.487		0.00752	7.6	0.79	73.5	79.9	<0.4	10.9	78.6	<0.00064		<0.01	<0.01	<0.1
09/02/02	<0.0005		0.163		0.00275	7.75	0.64	64	69	<0.0001	<4	91	<0.00064		<1.0	<1.0	0.1
06/09/03	0.0242		0.0952		0.0167	8.15	N/A	68.1	65	<0.016	17.2	64.2	<0.00064		1.79	N/A	N/A
09/25/03	0.068		0.62		0.033	7.3	0.2	107	120	<0.0033	<1.3	130	<0.00064		<0.12	<0.12	<0.1
06/14/04	<0.001		N/A		<0.0025	7.7	0.639	74.7	N/A	<0.025	3.2	77.5	<0.004		0.125	<0.02	<0.1
08/30/04	<0.00012		0.272		0.0067	7.7	1.26	72	100	<0.0095	2.3	56.3	<0.0013		0.155	<0.0032	<0.1
10/04/04	0.00362		N/A		0.00307	7.6	2.89	66.6	70.6	1.06	4.2	68.8	<0.00064		0.172	<0.0032	<0.1

SW-4

Illinois Creek below wooden bridge crossing

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Flow (gpm)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)
07/02/91					0.015		<0.0005			<0.05	<0.01		<0.005				<0.0002	
08/19/91					0.018		<0.0005			<0.05	<0.005		<0.005				<0.0002	
09/19/91						0.011		<0.004		<0.008		0.067		<0.002				<0.0002
11/21/91						0.051		<0.004		<0.007		<0.042		<0.002				0.0006
12/15/91						0.050		<0.004		<0.007		<0.042		<0.002				0.0003
01/20/92						0.016		<0.004		<0.007		<0.042		<0.002				0.0004
03/05/92						0.018		<0.004		<0.007		<0.042		<0.002				<0.0002
04/16/92						0.034		<0.004		<0.007		<0.042		<0.002				<0.0002
05/23/92						0.004		0.005		<0.007		<0.042		<0.002				0.0003
09/21/94					0.013	0.017	<0.005	<0.005	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.0002	<0.0002
10/13/94																		
08/10/95	8.18	126.5	51.5		0.025	0.031	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.0002	<0.0002
09/23/95	8.01	135.4	52.0		0.019	0.019	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002
07/11/96	8.66	106.0	46.2			0.0159		<0.00025		<0.0025		<0.0025		<0.0025		<0.0005		<0.0005
03/17/97						0.0944		<0.0005		<0.005		<0.005		<0.005		<0.001		<0.0002
06/24/97	7.70			4,334.3		0.0270		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002
08/13/97	8.47	130.6	50.2	3,968.8		0.0182		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002
10/06/97	8.40	132.9	46.8	4,328.5		0.0229		<0.00025		<0.0025		<0.0025		<0.005		<0.001		<0.0002
01/19/98	8.54	106.3	46.1	2,764.1		0.0243		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002
04/13/98	8.34	113.0	43.3	3,018.7														
06/30/98						0.0182		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002
09/29/98	7.70	105.0	36.0			0.013		<0.0002		0.0004		<0.001		<0.002		<0.0001		<0.0002
11/30/98	7.70	135.0	35.0			<0.005		<0.002		0.002		<0.001		<0.002		<0.0005		<0.0002
03/22/99	7.90	135.0	35.0			0.011		<0.002		0.0011		<0.001		<0.002		<0.0001		<0.0002
09/20/99	7.50	162.0	40.0			<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002
12/13/99	7.60	139.0	36.0			<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		N/A
05/29/00	7.70	120.0	45.0			<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002
08/14/00	7.70	120.0	47.0			<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		<0.0002
10/17/00	7.90	85.0	38.0			<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002
06/19/01	7.20	150.0	46.0			<0.10		<0.005		<0.01		<0.05		<0.10		<0.015		0.0013
08/06/01	8.10	187.0	50.0			<0.017		<0.002		<0.002		<0.014		<0.027		<0.0043		<0.00005
10/22/01	7.47	168.0	43.0			<0.10		<0.005		<0.01		<0.05		<0.10		<0.015		0.0013
06/10/02	7.50	145.0	48.0			0.022		<0.002		0.00194		0.0015		<0.005		<0.00035		<0.00006
09/02/02	7.90	166.0	44.0			0.034		<0.0002		<0.001		0.000193		<0.0005		<0.00035		<0.0002
06/09/03	8.10	135.0	47.0			0.00193		<0.000029		0.00138		0.00103		<0.00001		<0.00011		<0.000058
09/25/03	7.90	1,770.0	42.0			<0.015		<0.00051		<0.0018		<0.011		<0.026		<0.00066		<0.00006
05/18/04	7.70	121.0	35.0			0.0148		<0.0002		<0.0004		<0.0001		<0.0009		<0.0031		<0.00008
08/30/04	7.70	169*	53.0			0.0335		0.00113		<0.0036		<0.000052		<0.00093		<0.00031		<0.00005
10/04/04	7.80	155.0	41.6			0.0226		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009

SW-4
Illinois Cr

Date	Dissolved Copper (mg/l)	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
07/02/91	<0.05			0.19	<0.5							3.2	113	<0.05				
08/19/91	<0.05			0.34	<0.05							39.6	604	<0.05				
09/19/91		<0.007		0.332		<0.002				80		13.5	81	<0.01				
11/21/91		<0.006		0.235		0.003						8	110	<0.01				
12/15/91		<0.006		0.137		0.01						4	110	<0.01				
01/20/92		<0.006		0.14		0.00						8.5	87	<0.01				
03/05/92		<0.006		0.224		0.005						14	86	<0.01				
04/16/92		<0.006		0.076		<0.003						3	100	<0.01				
05/23/92		<0.006		1.16		0.007						98.0	54	<0.01				
09/21/94	<0.01	<0.01	0.05	0.18	<0.01	0.01	7.7			70			64			0.13	<0.01	
10/13/94						0.013										0.3	<0.01	
08/10/95	<0.01	<0.01	0.06	0.24	<0.01	0.02	6.7		80				72			0.1	<0.01	
09/23/95	<0.01	<0.01	0.12	0.28	<0.01	0.02	6.9		72				77			0.16	<0.01	
07/11/96		<0.025		0.306		<0.025	7.1	2.1	64		<0.1	6.2	81	<0.005		0.124	<0.1	<0.02
03/17/97		<0.05		<0.05		<0.05	8.32	0.15	98.8		<0.2	<0.2	152	<0.01		0.118	<0.1	0.04
06/24/97		<0.01		0.235		<0.02	7.86	0.59	67.1		<0.2	2.6	131	<0.01	<0.005	<0.1	<0.1	<0.1
08/13/97		<0.005		0.46		0.0182	7.48	1.00	71.2		3.88	8.0	<20.0	<0.01	<0.005	<0.1	<0.1	<0.1
10/06/97		<0.005		0.177		<0.01	7.59	0.36	84.2		<0.2	2.0	74	<0.01		0.175	<0.1	<0.1
01/19/98		<0.01		0.156		<0.02	7.71	0.44	77.3	85.0	<0.2	3.6	95	<0.01		0.252	<0.1	<0.1
04/13/98																		
06/30/98		<0.01		0.157		<0.02	7.29	0.9	73.8	80.4	0.221	4.0	96	<0.01		0.195	<0.1	<0.1
09/29/98		<0.002		0.15		0.002	7.7	1.1	55	60	<0.05	<4	92	<0.005		0.2	<0.02	<0.1
11/30/98		<0.002		0.075		<0.002	7.7	2.4	70	76	<0.05	6.0	92	<0.02		0.253	<0.02	<0.05
03/22/99		<0.002		0.42		0.0043	7.9	3.1	68	85	<0.05	4.0	20	<0.01		<1.0	<1.0	<0.05
09/20/99		<0.005		0.18		<0.005	7.5	0.25	74	72	<0.05	<1.8	75.6	<0.01		0.14	<0.02	<0.1
12/13/99		<0.005		0.026		<0.005	7.6	0.81	N/A	77	<0.05	4.4	81.3	<0.01		<0.5	<0.02	<0.1
05/29/00		<0.005		0.75		0.0057	7.7	13	55	46	<0.1	26.0	92	<0.01		0.734	N/A	<0.02
08/14/00		<0.005		0.51		<0.005	7.7	4.2	58	67	<0.1	16.0	66	<0.01		<0.5	<0.5	<0.1
10/17/00		<0.005		0.12		<0.005	7.9	1.1	77	82	<0.1	<4	73	<0.01		0.2	<0.1	<0.1
06/19/01		<0.005		1.2		0.0067	7.2	15	70	67	<0.05	<5	120	<0.002		0.15	<0.1	N/A
08/06/01		<0.0012		0.14		<0.001	8.07	<0.4	71	84	<0.016	4	92.5	<0.00032		0.16	<0.02	<0.1
10/22/01		<0.005		1.2		0.0067	7.2	0.55	70	67	<0.05	<1.8	121	<0.00032		0.15	<0.1	<0.1
06/10/02		0.0011		0.735		0.0075	7.50	1.2	69.7	76.7	<0.016	27.0	74.2	<0.00064		<0.01	<0.01	<0.1
09/02/02		<0.005		0.069		0.004	7.91	0.41	80	90	<0.1	<4	110	<0.00064		<1.0	<1.0	<0.1
06/09/03		0.00289		2.12		0.00714	8.12		65.1	30.2	<0.016	68.6	42.6	<0.00064		2.15	<0.12	
09/25/03		0.058		0.17		0.026	11.8*	1.36	588	81	<0.0033	51.5	415	<0.00064		<0.12	<0.12	<0.1
05/18/04		<0.0001		N/A		<0.0008	7.7	6.31	57.6	59	<0.0095	58.8	77.5	<0.00064		<0.0032	0.219	<0.1
08/30/04		0.00231		0.288		<0.00077	7.7	1.32	81.9	100	<0.0095	5.9	90	<0.0013		0.155	<0.0032	<0.1
10/04/04		<0.00012		N/A		0.004	7.7	2.84	76.5	89	<0.22	3.4	96.3	<0.00064		0.152	<0.0032	<0.1

Site 1
California Creek east of runway

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)	Dissolved Copper (mg/l)
08/16/95				0.001	0.002	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002	<0.01
09/24/95	8.91	81.8	54.2	0.002	<0.001	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002	<0.01
07/11/96	10.47	62.8	50.2		<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.0005		<0.0005	
03/16/97					<0.005		<0.0005		<0.005		<0.005		<0.005		<0.001		0.000226	
06/23/97	7.73				<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
09/03/97	6.85	70.3	46.5		<0.0025		<0.00025		<0.0025		<0.0025		<0.01		<0.001		<0.0002	
11/03/97					<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
02/23/98	7.86	75.7	35.7		<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
04/13/98	7.96	58.2	34.5															
06/30/98					<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
09/29/98	7.00	55.0	32.0		<0.005		<0.0002		0.0007		<0.001		<0.002		<0.0001		<0.0002	
03/22/99	8.10	135.0	37.0		0.0052		<0.002		0.0011		0.001		<0.002		<0.0001		<0.0002	
06/10/99	7.30	24.0	45.0		<0.005		<0.0002		0.0016		<0.001		<0.002		<0.0001		<0.0002	
09/21/99	6.95	86.3	38.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
10/18/99	6.51	95.4	33.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
05/29/00	7.40	57.0	36.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
08/15/00	7.60	71.0	46.0		<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		<0.0002	
10/16/00	7.60	71.0	33.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
08/06/01	7.50	72.0	46.6		<0.017		<0.002		<0.002		<0.014		<0.027		<0.0043		<0.00005	
06/19/01	6.60	54.0	45.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		0.0018	
06/10/02	7.30	64.6	47.0		0.00163		<0.000029		0.00112		0.000499		<0.00001		<0.00011		<0.000058	
09/02/02	7.80	83.0	38.0		0.00121		<0.0002		<0.0001		<0.00015		<0.0005		<0.00035		<0.0002	
06/23/03	7.30	59.0	43.0		0.00527		0.0104		0.00988		0.0051		<0.00001		<0.00011		<0.000058	
09/25/03	7.90	77.3	42.0		<0.015		<0.00051		<0.0018		<0.011		<0.026		<0.00066		<0.00006	
06/14/04	7.70	78.1	34.0		<0.0025		<0.001		<0.0025		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	7.50	88.4*	52.0		<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	7.52	85.0	36.7		<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

Site 1
California

Date	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
08/16/95	<0.01	0.31	0.59	<0.01	0.02	7.4		37.0				48			0.190	0.01	
09/24/95	<0.01	0.42	0.68	<0.01	0.02	6.5		36.0				53			0.240	<0.01	
07/11/96	<0.025		0.507		<0.025	6.8	1.4	28.8		0.185	7.5	47	<0.005		0.145	<0.1	<0.02
03/16/97	<0.05		0.3		<0.05	8.05	0.9	35.6		0.224	1.2	<40.0	<0.01		0.337	<0.1	<0.02
06/23/97	<0.01		0.35		<0.02	7.76	0.96	30.4		<0.2	10.6	107	<0.01	<0.005	<0.1	<0.1	<0.1
09/03/97	<0.005		0.594		0.0184	7.03	0.7	30.9		<0.2	6.0	91	<0.01		0.194	<0.1	<0.1
11/03/97	<0.005		0.473		<0.01	6.61	0.83	37.0		<0.2	4.4	74	<0.01		0.298	<0.1	<0.1
02/23/98	<0.01		0.322		<0.02	7.11	0.75	37.7	50.2	<0.2	0.8	67	<0.01		0.386	<0.1	<0.1
04/13/98																	
06/30/98	<0.01		0.325		<0.02	7.39	1.00	30.4	36.7	0.204	3.0	48	<0.01		0.143	<0.1	<0.1
09/29/98	<0.002		0.36		0.0039	7.0	2.6	23	34	<0.05	5	48	<0.005		0.32	<0.02	0.1
03/22/99	<0.002		0.3		0.0088	8.1	1.6	70	75	<0.05	4	60	<0.01		<1.0	<1.0	<0.05
06/10/99	<0.002		1.1		0.0047	7.3	9.5	20	16	<0.1	35	48	<0.01		<0.5	<0.5	
09/21/99	<0.005		0.35		<0.005	7.0	0.6	35.4	32	<0.05	<1.8	38.1	<0.01		0.23	<0.02	<0.1
10/18/99	<0.005		0.29		0.0058	6.5	6.1	N/A	41	<0.05	<1.8	45	<0.01		<0.5	<0.02	<0.1
05/29/00	<0.005		1.8		0.012	7.4	28	23	23	<0.1	56	48	<0.01		0.769	N/A	<0.02
08/15/00	<0.005		0.53		0.01	7.6	1.2	27	42	0.11	7	28	<0.01		<0.5	N/A	0.1
10/16/00	<0.005		0.084		<0.005	7.6	1.4	28	76	<0.1	<4.0	27	<0.01		0.31	<0.1	<0.1
08/06/01	<0.0012		0.31		<0.001	7.5	1.7	31	34	<0.4	3.2	37.5	<0.00032		0.17	<0.02	<0.1
06/19/01	<0.005		0.4		<0.005	6.6	1.7	20	21	<0.050	<5.0	49	<0.00032		0.3	<0.1	N/A
06/10/02	0.0014		0.799		0.00412	7.30	1.3	26.5	33.5	<0.016	16	37.2	<0.00064		<0.095	<0.096	<0.1
09/02/02	<0.005		0.389		0.00205	7.75	1.1	34	42	<0.0001	<4.0	78	<0.00064		<1.0	<1.0	<0.1
06/23/03	0.00988		7.39		0.0426	7.40	29	24.2	35.7	0.076	70.7	33.2	<0.00064		<0.12	<0.12	<0.1
09/25/03	0.063		0.61		0.032	6.9	0.54	30.4	37	6.9	6.9	37.6	<0.00064		<0.12	<0.12	<0.1
06/14/04	<0.001		N/A		<0.0025	7.7	1.11	18	N/A	0.028	13.0	40	<0.004		0.172	<0.02	<0.1
08/30/04	<0.00012		0.585		<0.00077	7.5	2.91	37.8	59.9	0.025	1.1	33.8	<0.00071		0.133	<0.0032	<0.1
10/04/04	<0.00012		N/A		0.00317	7.7	3.34	35.1	37.7	<0.22	2.8	55	<0.00064		0.242	<0.0032	<0.1

SW-1
Little Mud River above 5 O'Clock Drainage

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)	Dissolved Copper (mg/l)
09/21/94				<0.001	<0.001	<0.005	<0.005	<0.01	<0.01	<0.001	0.002	<0.001	<0.001	<0.01	<0.01	<0.0002	<0.0002	<0.01
08/24/95				0.001	<0.001	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	0.002	<0.001	<0.005	<0.005	<0.0002	<0.0002	<0.01
09/24/95	8.82	17.6	54.9	0.002	<0.001	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002	<0.01
07/13/96	7.85	95.5	55.1		0.00265		<0.00025		<0.0025		<0.0025		<0.0025		<0.0005		<0.0005	
03/16/97					<0.005		<0.0005		<0.005		<0.005		<0.005		<0.001		<0.0002	
06/25/97	7.45	73.7	64.0		<0.0025		<0.00025		0.00345		<0.0025		<0.0025		<0.001		<0.0002	
09/03/97	7.50	54.6	47.7		<0.0025		<0.00025		0.00415		<0.0025		<0.0025		<0.001		<0.0002	
11/05/97					0.0031		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
02/23/98	7.85	95.9	40.8		<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
06/29/98			55.0		<0.0025		<0.00025		<0.0025		0.0026		<0.0025		<0.001		<0.0002	
09/28/98	6.9	47.0	35.0		<0.005		<0.0002		0.0016		<0.001		<0.002		<0.0001		<0.0002	
12/29/98	6.8	100.0	32.0		0.0024		0.0011		<0.05		0.0026		<0.002		0.0031		<0.0002	
03/22/99	7.0	105.0	32.0		0.0072		<0.002		0.0011		0.0012		<0.002		<0.0001		<0.0002	
06/14/99	7.1/6.5	62.0	43.0		<0.005		<0.0002		0.0016		0.001		<0.002		<0.0001		<0.0002	
09/20/99	7.2	104.0	42.0		<0.10		<0.005		<0.01		<0.10		<0.005		<0.005		<0.0002	
10/18/99	6.2	114.0	33.0		<0.10		<0.005		<0.01		<0.10		<0.005		<0.005		<0.0002	
06/26/00	7.7	91.0	43.0		<0.10		<0.005		<0.01		<0.05		<0.005		<0.005		<0.0002	
09/25/00	7.1	51.0	N/A		<0.10		<0.005		<0.01		<0.07		<0.1		<0.015		<0.0002	
10/16/00	7.2	91.0	33.0		<0.10		<0.005		<0.01		<0.05		<0.1		<0.005		<0.0002	
08/06/01	7.1	38.0	49.8		<0.017		<0.002		<0.002		<0.014		<0.027		<0.0043		<0.00005	
06/10/02	7.1	74.8	48.0		0.00298		<0.000029		0.00282		0.00123		<0.00001		<0.00011		<0.000058	
09/02/02	7.6	99.0	46.0		0.00193		<0.0002		<0.0001		<0.00015		<0.0005		<0.00035		<0.0002	
06/09/03	7.60	58.2	45.0		0.0218		<0.000029		0.00118		0.00215		<0.00001		<0.00011		<0.000058	
09/24/03	6.80	94.7	42.0		<0.015		<0.00051		<0.0018		<0.011		<0.026		<0.00066		<0.00006	
05/18/04	7.20	61.7	34.0		<0.005		<0.0002		<0.0004		<0.0001		<0.0009		<0.0031		<0.00008	
08/30/04	7.40	113*	42.0		0.00266		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	7.21	107.0	37.2		<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

SW-1
Little Mud

Date	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
09/21/94	<0.01	0.66	1.15	0.02	0.02	6.3			12			12			0.13	<0.01	
08/24/95	<0.01	3.15	3.11	<0.01	<0.01	7.3		46				52			0.12	<0.01	
09/24/95	<0.01	0.42	0.58	0.02	0.02	6		5							0.05	<0.01	
07/13/96	<0.025		2.93		<0.025	6.3	17	34.0		0.135	19	48	<0.005		0.185	<0.1	<0.02
03/16/97	<0.05		2.07		<0.05	8.08	7.7	46.1		<0.2	1.6	74	<0.01		0.268	<0.1	<0.02
06/25/97	<0.005		2.53		<0.01	7.54	7.4	34.0		<0.2	7.5	22	<0.01	<0.005	<0.1	<0.1	<0.1
09/03/97	<0.005		1.99		0.0124	6.82	2.8	28.6		<0.2	13.7	56	<0.01		0.127	<0.1	<0.1
11/05/97	<0.005		3.33		0.0135	6.42	9.0	51.2		0.288	3.2	55	<0.01		0.241	<0.1	<0.1
02/23/98	<0.01		<0.05		<0.02	6.93	1.5	41.2	44.7	<0.2	10.6	65	<0.01		0.387	<0.1	<0.1
06/29/98	0.00511		2.56		0.0136	7.17	5.6	35.6	37.9	0.238	24.8	64	<0.01		0.147	<0.1	<0.1
09/28/98	0.0047		1.7		0.014	6.9	3.5	20	32	<0.05	21	43	<0.005		0.16	<0.1	<0.1
12/29/98	<0.05		2.0		0.068	6.8	10	47	66	0.18	30	55	<0.02		0.314	<0.1	<0.05
03/22/99	0.0041		4.2		0.017	7.0	11	92	36	0.17	5	45	<0.01		<1.0	<1.0	<0.05
06/14/99	0.0065		2.6		0.02	7.1	0.8	63	22	<0.1	35	71	<0.01		0.5	<1.0	<0.1
09/20/99	<0.005		2.0		0.0066	7.2	4.22	44.8	42	0.06	3.6	56.9	<0.01		0.13	<0.02	<0.1
10/18/99	<0.005		2.8		0.0096	6.2	1.92	N/A	54	0.21	4	70	<0.01		0.21	<0.02	<0.1
06/26/00	<0.005		3.0		<0.005	7.7	14	35	39	0.26	17	67	<0.005		<.5	N/A	<0.1
09/25/00	<0.005		1.6		0.0057	7.1	12	20	24	<0.1	30	52	<0.01		0.11	<0.1	<0.1
10/16/00	<0.005		1.8		0.005	7.2	12	29	39	<0.1	9	38	<0.01		0.26	<0.1	<0.1
08/06/01	<0.0012		2.4		0.0063	7.1	4.31	38	44	<0.4	10.4	70	<0.000032		0.18	<0.02	0.1
06/10/02	0.00326		3.7		0.00847	7.1	14	31.4	38.8	<0.016	42.2	50	<0.00064		<0.095	<0.096	0.32
09/02/02	0.000591		2.3		0.00133	7.6	7.3	45	50	<0.1	<4	73	<0.00064		<1.0	<1.0	0.13
06/09/03	0.00184		0.701		0.00906	7.63		24.8	71.6	0.179	54.1	<5.0	<0.00064		0.555	<0.12	
09/24/03	0.063		2.1		0.026	6.8	3.62	41.2	45	0.11	6.1	46.2	0.011*		<0.12	<0.12	<0.1
05/18/04	<0.0001		N/A		<0.0008	7.2	21	25.2	32	0.064	69.1	56.3	<0.00064		0.332	0.219	<0.1
08/30/04	<0.00012		3.3		0.0067	7.4	6.68	52.2	59.9	0.042	2.42	75	<0.00071		0.149	<0.0032	<0.1
10/04/04	0.0048		N/A		0.00316	7.1	10.2	48.6	55.2	<0.22	4.7	67.5	<0.00064		0.101	<0.0032	<0.1

SP-1

Drill Spring; southeast of pits

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Flow (gpm)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)	Dissolved Copper (mg/l)
07/02/91					<0.005		<0.0005			<0.05	<0.01		<0.005				<0.0002		<0.05
08/19/91					<0.005		<0.0005			<0.05	<0.005		<0.005				<0.0002		<0.05
09/19/91						0.003		<0.004		<0.008		0.072		<0.002				<0.0002	
11/21/91						<0.001		<0.004		<0.007		<0.042		<0.002				0.0003	
12/15/91						<0.001		<0.004		<0.007		<0.042		<0.002				0.0002	
01/20/92						0.002		<0.004		<0.007		<0.042		<0.002				0.0003	
03/05/92						<0.001		<0.004		<0.007		<0.042		<0.002				<0.0002	
04/16/92						<0.001		<0.004		<0.007		<0.042		<0.002				<0.0002	
09/21/94					<0.001	0.002	<0.005	<0.005	<0.01	<0.01	<0.001	0.002	<0.001	<0.001	<0.01	<0.01	<0.002	<0.002	<0.01
10/13/94																			0.004
08/10/95	7.46	84.0	44.5		<0.001	<0.001	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.0002	<0.0002	<0.01
09/23/95	8.27	78.9	46.6		0.001		<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002	<0.01
07/10/96	7.13	56.1	37.0	50-100		<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.0005		<0.0005	
06/25/97	7.56	71.6	54.0	60		<0.0025		0.000485		0.0398		0.0432		<0.0025		<0.001		<0.0002	
08/20/97	7.41	75.4	36.2	30-40		<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
11/03/97				20		<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
02/23/98	8.02	65.3	36.8			<0.0025		0.00041		<0.0025		<0.0025		<0.005		<0.001		<0.0002	
04/28/98	6.49	48.4	36.2	10.0															
06/30/98						<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
09/29/98	7.00	80.0	N/A	20.0		<0.005		<0.0002		0.0019		<0.001		<0.002		<0.0001		<0.0002	
09/29/98	7.70	140.0	33.0	20.0		0.014		<0.0002		0.0006		<0.001		<0.002		<0.0001		<0.0002	
03/22/99	7.40	82.0	34.0	20.0		<0.005		<0.002		0.003		<0.001		<0.002		<0.0001		<0.0002	
06/10/99	7.20	82.0	38.0	20.0		0.1		<0.002		0.0006		<0.001		<0.002		<0.0001		<0.0002	
09/20/99	6.88	96.0	36.0	20.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
12/13/99	7.27	71.2	33.0	20.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
05/29/00	7.20	85.0	36.0	20.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
08/14/00	7.20	84.0	42.0	20.0		<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		<0.0002	
10/16/00	7.40	85.0	36.0	15.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
10/22/01	7.96	94.5	36.0	15.0		<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
08/06/01	7.40	77.0	34.8	15.0		<0.016		<0.002		<0.002		<0.014		<0.027		<0.015		<0.00005	
06/10/02	7.20	87.1	36.0	15.0		<0.000086		<0.000029		0.00168		0.000233		<0.00001		<0.00011		<0.000058	
09/02/02	7.40	85.0	35.0	15.0		<0.001		<0.0002		0.000616		<0.00015		<0.0005		<0.00035		<0.0002	
06/09/03	7.90	86.8	35.0	15.0		0.0284		<0.000029		0.00108		0.000501		<0.00001		<0.00011		<0.000058	
09/24/03	6.60	87.3	42.0	15.0		<0.015		<0.00051		<0.0018		<0.011		<0.026		<0.00066		<0.00006	
06/14/04	7.20	91.0	34.0	15.0		<0.0025		<0.001		<0.0025		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	7.20	86.6*	40.0	15.0		<0.00025		<0.0018		<0.0036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	6.99	85.0	34.3	15.0		<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

SP-1
Drill Spri

Date	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
07/02/91			<0.05	<0.5							1.3	143	<0.05				
08/19/91			<0.05	<0.05							25.4	617	<0.05				
09/19/91	<0.007		0.056		<0.002				48		1	63	<0.01				
11/21/91	<0.006		0.031		<0.002						5.4	66	<0.01				
12/15/91	<0.006		0.056		0.004						32	64	<0.01				
01/20/92	<0.006		0.045		0.00						1	71	<0.01				
03/05/92	<0.006		<0.007		<0.002						2	58	<0.01				
04/16/92	<0.006		0.009		<0.002						2	60	<0.01				
09/21/94	<0.01	0.03	0.93	0.01	0.01	7.2			45.0			64			0.4	<0.01	
10/13/94					0.009										0.6		
08/10/95	<0.01	<0.01	0.05	<0.01	0.02	6.80		45							0.39	<0.01	
09/23/95	<0.01	<0.01	0.04	<0.01	0.02	6.5		44							0.41	<0.01	
07/10/96	<0.025		0.030		<0.025	6.2	0.25	40.8		<0.1	1.4	45	<0.005		0.362	<0.1	<0.02
06/25/97	<0.005		<0.025		0.0307	7.2	0.13	37.1		<0.2	2.3	45	<0.01	<0.005	0.412	<0.1	<0.1
08/20/97	<0.01		<0.05		<0.02	7.43	4.1	41.0		<0.2	126	<20.0	<0.01		0.356	<0.1	<0.1
11/03/97	<0.005		<0.025		<0.01	6.81	0.21	45.6		<0.2	1.2	67	<0.01		0.364	<0.1	<0.1
02/23/98	<0.005		1.74		0.0126	6.70	7.8	49.7	54.6	0.207	2.2	78	<0.01		0.293	<0.1	<0.1
04/28/98																	
06/30/98	<0.01		<0.05		<0.02	7.38	2.0	42.4	43.6	<0.2	0.4	75	<0.01		0.384	<0.1	<0.1
09/29/98	<0.002		0.068		<0.002	7	0.64	41	43	<0.05	<4	66	<0.005		0.41	<0.02	<0.1
09/29/98	<0.002		0.21		0.0031	7.7	1.7	73.6	78	<0.05	12	110	<0.005		0.241	<0.1	<0.05
03/22/99	<0.002		0.32		0.0031	7.4	6.2	42	44	<0.05	20	46	<0.01		<1.0	<1.0	<0.05
06/10/99	<0.002		<0.05		0.006	7.2	1.6	42	120	<0.1	7	76	<0.01		<0.5	<0.5	
09/20/99	<0.005		0.058		0.0064	6.88	0.29	44.8	41	<0.05	<1.8	53.1	<0.01		0.32	<0.02	<0.1
12/13/99	<0.005		2		0.0087	7.27	4.93	N/A	42	<0.05	34	53.8	<0.01		<0.5	<0.02	<0.1
05/29/00	<0.005		0.29		<0.005	7.2	3.2	41	210	<0.1	3.2	7	<0.01		0.854	N/A	<0.02
08/14/00	<0.005		<0.05		<0.005	7.2	3.2	41	43	0.22	<4	35	<0.01		<0.5	<0.5	<0.1
10/16/00	<0.005		<0.05		<0.005	7.4	0.71	31	40	<0.1	<4	38	<0.01		0.39	<0.1	<0.1
10/22/01	<0.005		<0.05		<0.005	7.94	0.62	41	40	<0.1	2	93.8	<0.00632		0.39	<0.1	<0.1
08/06/01	<0.0012		<0.0004		<0.001	7.41	<0.4	41	39	<0.4	2.4	53.8	<0.00032		0.49	<0.02	<0.1
08/10/02	<0.00017		0.0674		0.00136	7.20	0.52	42.6	46.2	<0.016	<1.3	53.4	<0.00064		0.665	N/A	<0.1
09/02/02	<0.0005		<0.05		0.00192	7.38	0.29	42	44	<0.1	<4	59	<0.00064		<1.0	<1.0	<0.1
06/09/03	0.00065		0.414		0.0046	7.87	N/A	42.7	76.4	<0.1	8.6	45.6	<0.00064		2.46	N/A	N/A
09/24/03	0.064		0.24		0.04	6.6	<0.4	41.2	44	<0.0033	<1.3	49.2	<0.00064		<0.12	<0.12	<0.1
06/14/04	<0.001		N/A		<0.0025	7.2	0.2	41.4	N/A	0.05	1.0	57.5	<0.004		0.386	<0.02	<0.1
08/30/04	<0.00012		<0.004		<0.00077	7.2	0.702	42.3	45.8	<0.0095	1.8	55	<0.0013		0.398	<0.0032	<0.1
10/04/04	<0.00012		N/A		<0.00077	7.1	0.724	40.5	42.1	<0.22	<0.5	58.8	<0.00064		0.372	<0.0032	<0.1

SP-2

Warm spring flowing into Illinois Creek above bridge

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Flow (gpm)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)
07/02/91					0.077		<0.0005			<0.05	<0.01		<0.005				<0.0002	
08/19/91					0.073		<0.0005			<0.05	<0.005		<0.005				<0.0002	
09/19/91						0.059		<0.004		<0.008		0.053		<0.002				<0.0002
11/04/91						0.102		<0.004		0.004				0.005				<0.0002
11/21/91						0.092		<0.004		<0.007		<0.042		<0.002				0.0008
12/15/91						0.104		<0.004		<0.007		<0.042		<0.002				0.0004
01/20/92						0.098		<0.004		0.007		<0.042		<0.002				0.001
03/05/92						0.090		<0.004		<0.007		<0.042		<0.002				<0.0002
04/16/92						0.104		<0.004		<0.007		<0.042		<0.002				<0.0002
05/23/92						0.056		<0.004		<0.007		<0.042		<0.002				0.0004
09/21/94					0.110	0.122	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002
08/10/95	8.08	238.0	64.0		0.117	0.115	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.0002	<0.0002
09/23/95	7.94	247.0	64.9		0.105	0.103	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002
07/11/96	8.38	277.0	65.2			0.0968		<0.00025		<0.0025		<0.0025		<0.0025		0.00057		<0.0005
03/17/97						0.0944		<0.0005		<0.005		<0.005		<0.005		<0.001		<0.0002
06/24/97	7.55			336.0		0.0990		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002
08/13/97	8.92	258.0	64.5	242.0		0.0985		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002
10/06/97	8.23	277.0	65.1	224.0		0.0936		<0.00025		<0.0025		<0.0025		<0.005		<0.001		<0.0002
01/19/98	8.35	177.2	64.4	224.0		0.0934		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002
04/13/98	8.15	155.5	65.0	224.0														
06/30/98						0.0983		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002
09/29/98	8.00	225.0	60.0	224.0		0.1		<0.0002		0.0004		<0.001		<0.002		<0.0001		<0.0002
09/29/98	7.70	135.0	64.0	224.0		<0.005		<0.0002		0.002		<0.001		<0.002		<0.0001		<0.0002
03/22/99	8.20	225.0	61.0	224.0		0.1		<0.002		0.0005		<0.001		<0.002		<0.0001		<0.0002
06/10/99	8.20	225.0	66.0	224.0		0.1		<0.002		0.0006		<0.001		<0.002		<0.0001		<0.0002
09/20/99	7.71	264.0	60.0	224.0		<0.10		<0.01		<0.005		<0.10		<0.005		<0.005		<0.0002
09/20/99	7.91	225.0	60.0	224.0		<0.10		<0.01		<0.005		<0.10		<0.005		<0.005		<0.0002
05/29/00	7.70	110.0	65.0	224.0		<0.10		<0.01		<0.005		<0.10		<0.005		<0.005		<0.0002
08/14/00	8.10	235.0	65.0	224.0		<0.10		<0.005		<0.01		<0.07		<0.1		<0.015		<0.0002
10/16/00	8.20	240.0	62.0	224.0		<0.10		<0.005		<0.01		<0.05		<0.1		<0.005		<0.0002
06/19/01	7.50	200.0	N/A	224.0		<0.10		<0.005		<0.01		<0.05		<0.1		<0.015		0.00024
08/06/01	8.00	256.0	65.0	224.0		<0.017		<0.002		<0.002		<0.014		<0.027		<0.0043		<0.00005
10/22/01	7.78	249.0	63.0	224.0		<0.10		<0.005		<0.01		<0.05		<0.1		<0.015		0.00024
06/10/02	7.80	241.0	65.0	224.0		0.0935		<0.00003		0.000558		0.00126		<0.00001		<0.00011		<0.000058
09/02/02	8.10	236.0	64.0	224.0		0.092		<0.0002		<0.0001		0.000491		<0.0005		<0.00035		<0.0002
06/09/03	8.30	86.8	64.0	224.0		0.089		<0.000029		0.000462		0.000486		<0.00001		<0.00011		<0.000058
09/25/03	8.10	169.0	59.0	224.0		<0.015		<0.00051		<0.0018		<0.011		<0.026		<0.00066		<0.00006
06/14/04	7.90	260.0	58.0	224.0		0.0902		<0.001		<0.0025		<0.001		<0.0025		<0.001		<0.0002
08/30/04	7.90	241*	67.0	224.0		0.0958		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005
10/04/04	8.04	240.0	64.4	224.0		0.869		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009

SP-2
Warm spi

Date	Dissolved Copper (mg/l)	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
07/02/91	<0.05			<0.05	<0.5							0.8	137	<0.05				
08/19/91	<0.05			<0.05	<0.05							66.5	589	<0.05				
09/19/91		<0.007		<0.008		0.003				125		1.2	150	<0.01				
11/04/91		<0.007		0.071		<0.002												
11/21/91		<0.006		0.01		0.01						3	140	<0.01				
12/15/91		<0.006		<0.007		0.01						<1.0	144	<0.01				
01/20/92		<0.006		<0.007		0.005						1	140	<0.01				
03/05/92		<0.006		<0.007		0.006						1	140	<0.01				
04/16/92		<0.006		<0.007		0.005						<1.0	140	<0.01				
05/23/92		<0.006		<0.007		0.007						<1.0	120	<0.01				
09/21/94	<0.01	<0.01	<0.01	0.06	<0.01	0.02	8.00		110	132			138			0.14	<0.01	
08/10/95	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	7.7		111				141			0.18	<0.01	
09/23/95	<0.01	<0.01	<0.01	<0.01	0.010	0.02	7.6		111				136			0.18	<0.01	
07/11/96		<0.025		<0.025		<0.025	7.3	0.1	105		<0.1	1	133	<0.005		<0.1	<0.1	<0.02
03/17/97		<0.05		<0.05		<0.05	8.32	0.15	98.8		<0.2	<0.2	152	<0.01		0.118	<0.1	0.04
06/24/97		<0.01		<0.05		<0.02	8.08	0.1	94.1		<0.2	<0.2	<20.0	<0.01	<0.005	<0.1	<0.1	<0.1
08/13/97		<0.005		<0.025		<0.01	7.89	0.4	108		0.956	<0.2	103	<0.01	<0.005	0.127	<0.1	<0.1
10/06/97		<0.005		<0.025		<0.01	7.68	<0.1	117		<0.2	0.4	147	<0.01		0.147	<0.1	<0.1
01/19/98		<0.01		<0.05		<0.02	8.02	<0.1	104	127	<0.2	0.4	151	<0.01		0.154	<0.1	<0.1
04/13/98																		
06/30/98		<0.01		<0.05		<0.02	7.44	0.15	109	135	<0.2	0.6	145	<0.01		0.132	<0.1	<0.1
09/29/98		<0.002		<0.05		0.0067	8	0.24	105	130	<0.05	<4	145	<0.005		0.18	<0.1	<0.1
09/29/98		<0.002		0.075		<0.002	7.7	2.4	70	76	<0.05	6	92	<0.005		0.253	<0.1	<0.05
03/22/99		<0.002		<0.05		0.0088	8.2	0.47	110	130	<0.05	<4	130	<0.01		<1.0	<1.0	0.08
06/10/99		<0.002		<0.05		0.006	8.2	1.6	42	120	<0.1	7	76	<0.01		<0.5	<0.5	
09/20/99		<0.05		<0.05		0.0077	7.71	<0.20	119	110	<0.05	<1.8	128	<0.01		0.17	<0.02	<0.1
09/20/99		<0.05		<0.05		0.0075	7.91	<0.20	N/A	120	<0.05	2	122	<0.01		<0.5	<0.02	<0.1
05/29/00		<0.05		<0.05		0.007	7.7	8.2	100	110	<0.1	<4	160	0.018		0.769	N/A	<0.1
08/14/00		<0.005		<0.05		0.0091	8.1	0.32	110	130	0.13	<4	140	<0.01		<0.5	<0.5	<0.1
10/16/00		<0.005		<0.05		0.0062	8.2	<0.05	110	120	<0.1	<4	110	<0.01		0.16	<0.1	<0.1
06/19/01		<0.005		0.54		<0.005	7.5	7.6	94	100	<0.004	<5	140	<0.002		0.14	<0.1	N/A
08/06/01		<0.0012		<0.004		<0.001	8.03	<0.4	96	120	<0.4	<1.8	132	<0.00032		0.18	<.02	<0.1
10/22/01		<0.005		0.54		<0.005	7.5	<0.40	110	100	<0.004	<1.8	154	<0.00032		0.14	<0.1	<0.1
06/10/02		<0.00017		0.08		0.00719	7.80	<0.05	105	131	<0.002	<1.3	136	<0.00064		0.532	<0.1	<0.1
09/02/02		<0.0005		<0.05		0.00936	8.06	0.49	104	129	<0.1	<4	145	<0.00064		<1.0	<1.0	<0.1
06/09/03		<0.00017		0.0737		0.00737	8.34	N/A	109	126	<0.1	<1.3	116	<0.00064		0.932	N/A	N/A
09/25/03		0.06		0.13		0.023	8.1	3.62	79.2	83	0.068	4.3	74.6	<0.00064		<0.12	<0.12	<0.1
06/14/04		<0.001		N/A		0.00319	7.9	0.45	108	N/A	0.06	<1.0	136	<0.004		0.129	<0.02	<0.1
08/30/04		<0.00012		<0.004		0.0067	7.9	<0.05	112	127	<0.0095	<0.5	136	<0.0013		0.149	<0.0032	<0.1
10/04/04		0.021		N/A		0.0072	8	0.396	112	128	<0.22	<0.5	138	<0.00064		0.162	<0.0032	<0.1

MW-1 TD = 80.0' Collar Coordinates: Northing Easting Elevation

Groundwater monitoring well southwest of leach pad 3,665,596 508,728 327.4

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Depth to Water (ft)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)
08/10/95	8.28	33.0	41.8	26.7	<0.001	<0.001	<0.003	<0.003	<0.01	0.02	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.0002	<0.0002
09/20/95	6.81	34.1	46.9	28.5	<0.001	<0.001	<0.003	<0.003	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.0002
07/10/96	Not enough water to sample.			39.6														
08/26/96	8.57	25.8	39.9	40.4		<0.0025		<0.00025		0.0118		<0.0025		<0.0025		<0.0005		<0.0005
11/24/96						<0.0025		<0.00025		0.00325		<0.0025		<0.005		0.000725		<0.0005
06/25/97				dry														
09/02/97	7.70	37.6	41.7	47.5		<0.0025		<0.00025		0.0326		0.00415		<0.01		<0.001		<0.0002
10/08/97	8.32	37.0	40.1	47.0		<0.0025		0.000285		0.152		0.019		<0.005		<0.001		<0.0002
03/02/98	8.52	28.3	36.2	47.5	<0.005		<0.005		<0.005		<0.005		<0.005		<0.002		<0.0002	
06/29/98			40.0	45.0	<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002	
09/29/98	6.80	35.0	36.0	50.0	<0.005		<0.0002		0.0029		<0.001		<0.005		<0.0001		<0.0002	
03/01/99	6.70	35.0	34.0	N/A	<0.005		<0.0002		0.0022		<0.05		<0.005		<0.0001		<0.0002	
06/14/99			40.0	40	<0.005		<0.0002		0.0037		<0.001		<0.005		<0.0001		<0.0002	
09/20/99		36.9	40.0	37	<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
06/26/00	7.60	42.0	40.0	37	<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
09/25/00	6.90	38.0	N/A	N/A	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		<0.0002	
08/06/01	6.89	40.6	38.6	28.0	<0.017				<0.002		<0.014		<0.027		<.0043		<0.00005	
10/23/01	6.63	20.6	35.0	N/A	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		<0.00005	
06/17/02		Dry																
09/02/02		Dry																
06/23/03		Dry																
09/24/03	6.10	45.5	46.0	48.0	<0.015		<0.000062		<0.0018		<0.011		<0.026		<0.00066		<0.00006	
06/14/04	6.60	54.7	45.0	38.0	<0.0025		<0.001		0.00447		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	6.30	49.8*	34.0	40.0	<0.00025		<0.00018		0.00411		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	6.12	55.0	36.6	41.0	<0.00025		0.00122		0.00405		<0.000052		<0.00093		<0.00031		<0.00009	

MW-1
Groundwa

Date	Dissolved Copper (mg/l)	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
08/10/95	<0.01	<0.01	0.03	0.57	0.01	0.03	6.9		25.0				53			0.04	<0.01	
09/20/95	<0.01	<0.01	0.01	0.14	<0.01	0.02	5.9		16.0				20			0.09	<0.01	
07/10/96																		
08/26/96		<0.025		2.21		<0.025	6.55	72.0	16.0		<0.1	199	81	<0.005		<0.1	<0.1	
11/24/96		<0.025		1.59		0.0428	7.04	4.4	19		0.2	32.5	40	<0.01		<0.1	<0.1	<0.02
06/25/97																		
09/02/97		0.0332		12.6		0.0343	6.39	18	20.5		<0.2	550	132	<0.01		<0.1	<0.1	<0.1
10/08/97		0.147		56.1		0.16	6.92	99	23.3		<0.2	2720	61	<0.01		0.103	<0.1	<0.1
03/02/98	<0.01		<0.05		<0.02		6.41	370	20.1	15.3	0.658	1770	46	<0.01		<0.1	<0.1	0.18
06/29/98	<0.01		<0.05		<0.02		6.89	75	21.5	16.2	<0.2	791	58	<0.01		<0.1	<0.1	<0.1
09/29/98	<0.002		<0.05		0.0074		6.80	1000	17.2	68	<0.05	1200	87	<0.005		<0.1	<0.02	<0.1
03/01/99	<0.002		<0.05		0.0025		6.70	270	17	18	<0.05	440	<20	<0.01		<1.0	<1.0	0.15
06/14/99	<0.002		<0.05		0.0085		6.90	38	16	19	<0.1	75	38	<0.01		<1.0	<1.0	<0.1
09/20/99	<0.005		<0.05		0.012		6.74	12	20.8	16	<0.05	14.4	31.9	<0.01		<0.1	<0.02	<0.1
06/26/00	<0.005		<0.05		0.0084		7.60	92	16	35	0.076	225	51	<0.005		<0.5	N/A	<0.1
09/25/00	<0.005		<0.05		0.0066		6.90	7	19	15	<0.1	4	20	<0.01		<0.1	<0.1	<0.1
08/06/01	<0.0012		<0.004		0.012		6.89	12	18.4	33	<0.40	133	1.8	<0.00032		<0.1	<0.02	<0.1
10/23/01	<0.005		<0.05		0.0066		6.63	22	17.4	15	<0.1	58.4	68.8	<0.00032		<0.1	<0.1	<0.1
06/17/02																		
09/02/02																		
06/23/03																		
09/24/03	<0.0013		<0.0027		0.029		6.1	9			<0.003	182	40.4	<0.00064		<0.12	<0.12	<0.1
06/14/04	0.00509		0.13		0.0209		6.6	5.45	24.3	19	0.03	29.2	35	<0.004		<0.1	<0.02	<0.1
08/30/04	0.00901		N/A		0.013		6.3	76.9	23.4	22.6	<0.0095	57.1	56.3	<0.0013		<0.015	<0.0032	<0.1
10/04/04	0.00632		N/A		0.0196		6.3	204	23.4	48.8	<0.22	492.0	53.8	<0.00064		<0.015	<0.0032	<0.1

MW-2 TD = 278' Collar Coordinates: Northing 3,668,133 Easting 517,876

Groundwater monitoring well between mine and Illinois Creek

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Depth to Water (ft)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)
08/10/95	7.86	183.0	42.0	269.2	<0.001	0.043	<0.003	0.004	<0.01	0.02	<0.001	0.122	<0.001	<0.001	<0.005	<0.005	0.0004	<0.0002
09/21/95	8.32	183.3	41.2	267.1	0.001	0.174	0.003	0.01	0.02	0.33	<0.001	0.23	<0.001	<0.001	<0.005	0.006	<0.0002	0.01
07/11/96				dry														
09/18/96						<0.0025		0.00101		0.00605		0.0032		<0.0025		<0.0005		<0.01
06/25/97	7.64	166.0	61.0	272.0		0.0301		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		0.000362
09/03/97	8.05	126.0	40.9	272.0		0.0162		0.0052		0.0312		0.0975		<0.01		0.00237		0.00044
11/03/97				272.0		<0.0025		0.00055		0.0155		0.0128		<0.0025		<0.001		<0.0002
03/16/98	7.55	121.7	46.4	272.5	<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
06/29/98	Unable to sample (not enough wate			275														
09/28/98	8.20	160.0	40.0	272.0	<0.005		<0.0002		0.00057		<0.001		<0.005		<0.0001		<0.0002	
03/02/99	8.20	165.0	38.0	278.0	<0.005		<0.005		0.00080		<0.001		<0.005		<0.0001		<0.0002	
06/15/99	8.20	172.0	40.0	275	<0.005		<0.0002		0.00098		<0.001		<0.005		<0.0001		<0.0002	
09/20/99	Unable to sample (not enough wate			273.5														
06/26/00	8.30	180.0	38.0	274	<0.1		<0.005		<0.01		<0.05		<0.005		<0.005		<0.0002	
09/25/00	8.20	165.0	N/A	274	<0.1		<0.005		<0.01		<0.07		<0.1		<0.015		N/A	
08/06/01	8.09	179.0	36.8	274	<0.017		<0.002		<0.002		<0.014		<0.027		<0.043		<0.00005	
10/22/01	11.40	768.0	N/A	274	<0.1		<0.005		<0.01		<0.07		<0.1		<0.015		N/A	
06/17/02	8.00	134.0	38.2	273	0.00218		<0.0002		0.000919		0.000231		<0.0005		<0.0001		<0.0002	
09/02/02	8.10	166.0	42.0	274	0.00158		<0.0002		0.000984		0.000355		<0.0005		<0.0001		<0.0002	
06/23/03	8.10	165.0	40.0	273	0.000858		<0.000062		0.000597		0.000135		<0.00005		<0.0001		<0.000058	
09/24/03	7.40	171.0	42.0	274.0	<0.015		<0.000062		<0.0018		<0.011		<0.026		<0.00066		<0.00006	
06/14/04	8.00	183.0	42.0	273.0	<0.0025		<0.001		<0.0025		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	7.80	168*	47.0	275.0	0.00356		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00006	
10/04/04	8.20	167.0	38.0	273.0	<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

MW-2	Elevation																	
Groundw	498.7																	
Date	Dissolved Copper (mg/l)	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
08/10/95	<0.01	0.05	0.04	29.5	0.15	0.87	6.8		106.0				156			0.04	0.01	
09/21/95	<0.01	0.03	0.06	99.80	0.02	1.57	7.1		105.0				117			0.029	<0.1	
07/11/96																		
09/18/96		<0.025		0.586		0.27	7.88	96.0	90.0		0.1	211	118	<0.01	<0.005	0.249	<0.1	
06/25/97		0.0219		32.1		0.862	8.03	32.5	80.6		<0.2	1140	68	<0.01	<0.005	0.273	<0.1	0.4
09/03/97		0.0195		24.9		0.80	7.88	17	101		<0.2	1860	140	<0.01		0.254	<0.1	11.8
11/03/97		0.00691		1.29		0.0932	7.75	13	101		<0.2	67.8	108	<0.01		0.235	<0.1	1.2
03/18/98	<0.01		<0.05		<0.02		7.96	41.5	92.9	98.5	<0.2	126	88	<0.01		0.270	<0.1	1.0
06/29/98																		
09/28/98	<0.002		<0.05		0.0035		8.2	6.6	90	97	<0.05	49	113	<0.005		0.28	<0.1	0.1
03/02/99	<0.002		<0.05		0.005		8.2	9.6	92	94	<0.05	12	68	<0.01		<1.0	<1.0	0.3
06/15/99	0.0021		<0.05		0.0039		8.2	38	100	170	<0.1	38	120	<0.01		<1.0	<1.0	0.6
09/20/99																		
06/26/00	<0.005		<0.05		0.0067		8.3	84	87	230	1.9	190	95	<0.005		<0.5	N/A	0.4
09/25/00	<0.005		<0.05		<0.005		8.2	270	130	390	<0.1	360	95	<0.01		0.33	<0.1	0.3
08/06/01	0.0066		<0.004		<0.001		8.09	26.1	75	150	<0.40	165	92.5	<0.00032		0.36	<0.02	<0.1
10/22/01	<0.005		<0.05		<0.005		11.4	66.5	331	390	<0.1	325	259	<0.00032		0.33	<0.1	0.4
06/17/02	0.00338		<0.05		0.011		8	5.7	70	71	0.154	12	69	<0.00064		<0.5	<0.5	0.14
09/02/02	0.00366		<0.05		0.014		8.08	18	89	97	<0.1	284	107	<0.00064		<1.5	<1.5	1.1
06/23/03	0.00563		<0.015		0.0105		8.1	5.9	83.9	74.1	<0.0033	15.6	88.8	<0.00064		<0.12	<0.12	0.2
09/24/03	<0.0013		<0.0027		0.038		7.4	1.81	86.3	86	0.12	47	85.2	<0.00064		<0.12	<0.12	<0.1
06/14/04	0.00349		0.23		0.0113		8	7.47	87.3	95	0.11	32.7	85	<0.004		0.231	<0.02	<0.1
09/30/04	0.0118		N/A		0.0103		7.8	9.2	89.1	103	<0.0095	57.1	78.8	<0.0013		0.221	<0.0032	<0.1
10/04/04	0.00511		N/A		0.00877		7.7	38.5	95.4	95.8	<0.22	44.3	97.5	<0.00064		0.283	<0.0032	<0.1

MW-3 TD = 97.0' Collar Coordinates: Northing Easting Elevation

Groundwater monitoring well south of leach pad 3,664,729 509,985 286.1

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Depth to Water (ft)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)
08/10/95	7.9	117.0	40.2	73.8	0.001	0.61	<0.003	0.01	<0.01	2.08	0.002	2.5	<0.001	<0.001	<0.005	<0.005	0.0002	<0.0002
09/21/95	8.11	156.4	45.6	75.1	<0.001	0.51	<0.003	<0.003	<0.01	0.84	0.002	0.76	<0.001	<0.001	<0.005	<0.005	<0.0002	0.0005
07/10/96	Not enough water to sample			79.4														
08/24/96	8.94	58.5	39.0	84.2		0.00355		<0.00025		0.0195		0.0199		<0.0025		<0.0005		<0.0005
11/24/96				79.8		0.0036		<0.00025		0.0255		0.0398		<0.005		<0.0005		<0.0005
06/25/97				dry														
09/02/97	7.95	129.0	43.5	82.0		0.0782		0.00181		1.93		1.44		<0.0025		0.00183		0.000647
10/08/97	7.59	161.8	43.4	82.0		0.05		0.00082		0.835		0.61		<0.005		<0.001		0.000296
03/02/98	7.86	67.4	40.5	82.5	<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
06/30/98				dry														
09/28/98				dry														
03/01/99	Unable to pump																	
06/15/99	Unable to pump																	
06/15/99	Unable to pump			83.0														
06/26/00	6.40	90.0	44.0	83.0	<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
09/25/00	6.10	62.0	N/A	82.0	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		N/A	
06/06/01	6.9	159.0	37.8	76.0	<0.017		<0.002		<0.002		<0.014		<0.027		<0.043		<0.00005	
10/23/01	6.52	129.0	N/A	82.0	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		N/A	
06/17/02				dry														
09/02/02				dry														
06/09/03	7.3	154	42	82.0	<0.000044		<0.000062		0.00141		<0.00003		<0.00014		<0.000028		<0.000058	
09/24/03	6.8	132	42	82.0	<0.000044		<0.000062		0.00141		<0.00003		<0.00014		<0.000028		<0.000058	
06/14/04	6.80	143.0	41.0	81.0	<0.0025		<0.001		0.00277		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	7.00	132*	43.0	81.0	0.00298		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	6.58	137.0	35.6	80.0	<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

MW-3

Groundw

Date	Dissolved Copper (mg/l)	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
08/10/95	<0.01	0.49	0.06	227	<0.01	0.73	6.9		85.0				109			0.45	0.02	
09/21/95	<0.01	0.21	0.03	106	<0.01	0.73	6.5		80.0				82			0.57	<0.1	
07/10/96																		
08/24/96		<0.0250		1.75		<0.025	6.7	25.0	70.5		<0.1	59	126			0.542	<0.1	
11/24/96		<0.0250		2.59		0.054	7.17	62	74		0.2	222	25	0.01		0.498	<0.1	0.08
06/25/97																		
09/02/97		0.348		198		0.587	6.60	6	73		0.4	5120	<20.0	<0.01		0.713	0.185	<0.1
10/08/97		0.158		94.8		0.279	6.92	60	82.1		<0.2	2230	106	<0.01		0.568	<0.1	<0.1
03/02/98	<0.01		<0.05		0.0203		6.80	760	76.3		<0.2	3010	103	<0.01		0.487	<0.1	<0.1
06/30/98																		
09/28/98																		
03/01/99																		
06/15/99																		
06/15/99																		
06/26/00	<0.005		0.37		0.012		6.4	8200	63	4100	0.36	23000.0	1590.0	<0.005		0.7	N/A	<0.1
09/25/00	<0.005		0.093		0.013		6.1	9100	63	27	<0.1	61300.0	530.0	<0.01		0.26	<0.1	<0.1
08/06/01	<0.002		<0.0012		0.009		6.91	2640	67.2	89	<0.40	6930.0	262.0	<0.00032		0.33	0.03	<0.1
10/23/01	<0.005		0.093		0.013		6.25	1530	53.2	27	<0.1	1660.0	161.0	<0.00032		0.26	<0.1	<0.1
06/17/02																		
09/02/02																		
06/09/03	<0.000034		<0.015		0.00167		7.29		72.3	42.6	0.103	1660	88.8	<0.00064		<0.095	<0.095	
09/24/03	0.0063		<0.015		0.039		6.8	56.6	66.7	63.0	0.057	1500	90	<0.00064		0.55	n/a	
06/14/04	0.0142		0.098		0.0157		6.8	86.2	67.5	62	<0.000025	138	82.5	<0.004		0.258	<0.02	<0.1
08/30/04	0.0298		N/A		0.0103		7	526	67.5	101	<0.0095	204.0	95	<0.0013		0.199	<0.0032	<0.1
10/04/04	0.00362		N/A		0.00557		6.7	1720	72.9	129	<0.22	235.0	144	<0.00064		0.173	<0.0032	<0.1

MW-5A TD = 272' Collar Coordinates: Northing 3,668,382 Easting 509,005 Elevation 483.7

Groundwater monitoring well west of leach pad

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Depth to Water (ft)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)
08/10/95	7.60	144.0	40.6	224.3	0.002	0.024	<0.003	0.005	<0.01	0.07	0.002	0.026	<0.001	<0.001	<0.005	0.009	<0.0002	<0.0002
09/23/95	7.58	117.3	52.3	224.0	0.001	0.004	<0.003	<0.003	5.7	0.01	<0.001	0.004	<0.001	<0.001	<0.005	<0.005	0.0006	0.0006
07/10/96	7.18	47.9	47.6	222.4		0.0104		<0.00025		0.00395		<0.0025		<0.0025		0.00078		<0.0005
06/30/97	8.01	25.8	50.9	223.0		0.0041		0.000355		<0.025		0.00745		<0.0025		<0.001		<0.0002
08/19/97	8.01	23.5	52.5	235.0		0.0037		0.000655		0.00345		0.0269		<0.0025		<0.001		<0.0002
11/05/97				225.0		0.0053		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		<0.0002
03/16/98	6.92	14.8	45.2	227.0	<0.005		<0.005		<0.0005		<0.005		<0.005		<0.002		<0.0002	
06/29/98			40.0	230.0	<0.0025		<0.00025		<0.0025		<0.0025		<0.0025		<0.001		0.000925	
09/28/98	6.2	17	40	225.0	<0.005		<0.0002		0.00180		<0.001		<0.005		<0.0001		<0.0002	
03/01/99	6.1	16	38	225.0	<0.005		<0.005		0.00090		<0.001		<0.005		<0.0001		<0.0002	
06/14/99	6.3	16	40	231.0	<0.005		<0.0002		0.00064		<0.001		<0.005		<0.0001		<0.0002	
09/20/99	Unable to sample (not enough water)			225.0														
06/26/00	6.8	18	40	235.0	<0.10		<0.005		<0.01		<0.05		<0.10		0.0074		<0.0002	
09/25/00	6.1	16		233.0	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		N/A	
08/06/01	6.7	21.1	37.4	234.0	<0.017		<0.002		<0.002		<0.014		<0.027		<0.0043		<0.0002	
10/23/01	7.03	18.9		233.0	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		N/A	
06/17/02	6.1	24	40.4	235.0	0.000553		<0.0002		0.00143		0.0016		<0.0005		<0.0001		<0.0002	
09/02/02	6.2	20	41	235.0	0.000363		<0.0002		0.000479		0.000275		<0.0005		<0.0001		<0.0002	
06/23/03	6.1	24	40.4	235.0	0.000553		<0.0002		0.00143		0.0016		<0.0005		<0.0001		<0.0002	
09/24/03	5.9	22.9	40.4	235.0	0.000553		<0.0002		0.00143		0.0016		<0.0005		<0.0001		<0.0002	
06/14/04	6.30	21.4	38.0	234.0	<0.0025		<0.001		<0.0025		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	6.00	13.1*	44.0	N/A	<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	6.42	15.0	37.4	238.0	<0.00025		<0.00018		<0.00036		0.00192		<0.00093		<0.00031		<0.00009	

MW-5A
Groundwa

Date	Dissolved Copper (mg/l)	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
08/10/95	<0.01	0.26	3.4	72.7	0.13	1	6.7		74.0				102			0.3	0.2	
09/23/95	<0.01	0.03	2.65	5.65	0.09	0.19	6.5		58.0				73			0.19	<0.1	
07/10/96		<0.025		1.71		<0.025	5.9	15.0	21.0		0.1	3.5	24	<0.005		<0.1	<0.1	<0.02
08/30/97		<0.005		0.928		0.0765	6.51	4.8	13.5		<0.2	102	<20.0	<0.01	<0.005	<0.1	<0.1	<0.1
08/19/97		0.0283		1.2		0.174	6.21	0.12	12.7		<0.2	92.5	<20.0	<0.01		<0.1	<0.1	<0.1
11/05/97		<0.005		0.91		0.03	6.01	3.5	9.13		<0.2	17.8	39	<0.01		0.143	<0.1	<0.1
03/16/98	<0.01		0.205		0.0263		6.08	44	9.48	6.54	<0.2	10.6	20	<0.01		0.66	<0.1	<0.1
06/29/98	<0.01		0.0573		0.0379		6.5	1.4	8.38	6.24	<0.2	3.4	30	<0.01		0.206	<0.1	<0.1
09/28/98	<0.002		<0.05		0.025		6.2	3.1	5.8	<10	<0.05	4	35	<0.005		0.54	<0.1	<0.1
03/01/99	<0.002		<0.05		0.023		6.1	33	4.4	12	<0.05	79	23	<0.01		<1.0	<1.0	0.1
06/14/99	<0.002		<0.05		0.025		6.3	4	2	<10	<0.1	14	39	<0.01		<0.5	<0.5	<0.1
09/20/99																		
06/26/00	<0.005		<0.05		0.018		6.8	19	2.6	7	0.14	93	26	<0.005		0.86	N/A	0.15
09/25/00	<0.005		<0.05		0.011		6.1	6.9	2.1	6	<0.1	46	22	<0.01		0.9	<0.1	<0.1
06/06/01	<0.001		<0.004		0.016		6.68	23.4	8.2	13	<0.40	258	22.5	<0.00032		1.01	<0.02	<0.1
10/23/01	<0.005		<0.05		0.011		7.03	11.2	7	6	<0.1	65.6	43.8	<0.00032		0.9	<0.1	0.2
06/17/02	0.00251		<0.05		0.02		6.1	18	6.66	5.2	0.111	64	<20	<0.00064		<0.5	<0.5	0.32
09/02/02	0.00234		<0.05		0.026		6.17	17	5.95	5.6	<0.1	69	32	<0.00064		<1.5	<1.5	0.24
06/23/03	0.00251		<0.05		0.02		6.1	18	6.66	5.2	0.111	64	<20	<0.00064		<0.5	<0.5	0.32
09/24/03	0.011		<0.05		0.03		6.1	18	6.86	6	0.111	368	<5	<0.00064		<0.5	<0.5	<0.1
06/14/04	0.0184		0.17		0.0217		6.3	6.45	4.5	5.9	<0.025	71.5	<20	<0.004		0.663	<0.02	<0.1
08/30/04	0.0301		N/A		0.00799		6	18.4	<0.77	6.36	<0.0095	54.0	<6	<0.0013		0.638	<0.0032	<0.1
10/04/04	0.014		N/A		0.0309		6.2	24.7	10.8	7.01	<0.22	93.2	22.5	<0.00064		0.538	<0.0032	<0.1

MW-7 TD = 220' Collar Coordinates: Northing 3,666,185 Easting 511,080 Elevation 414.0

Groundwater monitoring well south of leach pad

Date	Field pH (S.U.)	Field S.C. (µS/cm)	Field Temp. (°F)	Depth to Water (ft)	Dissolved Arsenic (mg/l)	Total Arsenic (mg/l)	Dissolved Cadmium (mg/l)	Total Cadmium (mg/l)	Dissolved Chromium (mg/l)	Total Chromium (mg/l)	Dissolved Lead (mg/l)	Total Lead (mg/l)	Dissolved Selenium (mg/l)	Total Selenium (mg/l)	Dissolved Silver (mg/l)	Total Silver (mg/l)	Dissolved Mercury (mg/l)	Total Mercury (mg/l)
08/26/96	7.90	82.0	52.6	150.3		0.00325		<0.00025		0.0079		0.0029		<0.0025		<0.0005		<0.0005
11/24/96				150.6		0.00255		<0.00025		<0.00250		<0.00250		<0.005		<0.0005		<0.0005
06/25/97	7.86	114.0	59.6	152.0		0.0044		0.00565		0.00315		0.116		<0.0025		<0.001		<0.0002
09/03/97	8.45	80.7	40.8	145.0		0.0098		0.000775		0.0098		0.0344		<0.01		<0.001		<0.0002
11/03/97				153.0		0.0039		<0.00025		<0.0025		0.00605		<0.0025		<0.001		<0.0002
03/18/98	7.50	78.1	45.3	154.0	<0.005		<0.0005		<0.005		<0.005		<0.005		<0.002		<0.0002	
06/29/98			40.0	155.0	0.00295		<0.00025		<0.00250		<0.00250		<0.00250		<0.001		0.00198	
09/28/98	8.1	115	38	155.0	<0.005		<0.0002		0.00054		<0.001		<0.005		<0.0001		<0.0002	
03/09/99	8.3	110	38	156.0	<0.005		<0.005		0.00048		<0.001		<0.005		<0.0001		<0.0002	
06/14/99	8.3	115	40	155.0	<0.005		<0.0002		0.00033		<0.002		<0.005		<0.0001		<0.0002	
09/20/99	Unable to sample (not enough water)			157.0														
09/21/99	Unable to sample (not enough water)			157.0														
06/26/00	7.9	140	47	155.0	<0.10		<0.005		<0.01		<0.05		<0.10		<0.005		<0.0002	
09/25/00	8.1	125	N/A	159.0	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		N/A	
06/06/01	7.88	59.6	39.2	160.0	<0.017		<0.002		<0.002		<0.014		<0.027		<0.0043		<0.00005	
10/23/01	7.33	143	N/A	159.0	<0.10		<0.005		<0.01		<0.07		<0.10		<0.015		N/A	
06/17/02	7.9	135	41.8	160.0	0.00347		0.000293		0.000552		0.000189		<0.0005		<0.0001		<0.0002	
09/02/02	7.9	130	37	159.0	0.00307		0.000325		0.000724		0.000459		<0.0005		<0.0001		<0.0002	
06/23/03	8.1	156	42	160.0	0.00271		0.000248		0.000573		0.000256		<0.00014		<0.000028		<0.000058	
09/24/03	7.4	169	42	160.0	<0.015		<0.00051		<0.0018		<0.011		<0.00014		<0.000028		<0.000058	
06/14/04	7.90	157.0	38.0	157.0	0.00257		<0.001		0.00263		<0.001		<0.0025		<0.001		<0.0002	
08/30/04	7.60	151*	43.0	160.0	0.00301		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00005	
10/04/04	8.12	142.0	38.8	161.0	<0.00025		<0.00018		<0.00036		<0.000052		<0.00093		<0.00031		<0.00009	

MW-7
Groundwa

Date	Dissolved Copper (mg/l)	Total Copper (mg/l)	Dissolved Iron (mg/l)	Total Iron (mg/l)	Dissolved Zinc (mg/l)	Total Zinc (mg/l)	pH SU	Turbidity NTU	Alkalinity as $CaCO_3$ (mg/l)	Hardness (mg/l)	Ammonia-N (mg/l)	TSS (mg/l)	TDS (mg/l)	CN Total (mg/l)	CN WAD (mg/l)	Nitrate-N (mg/l)	Nitrite-N (mg/l)	Total Residual Chlorine (mg/l)
08/26/96		<0.025		0.177		0.0794	7.66	12.0	70.5		0.1	10	130	0.07		0.164	<0.1	
11/24/96		<0.025		0.39		0.0945	8.07	2.8	71.5		0.1	35.5	<20.0	<0.01		0.219	<0.1	<0.02
06/25/97		<0.005		0.276		0.0566	8.01	2.8	60.3		<0.2	57	64	<0.01	<0.005	0.302	<0.1	<0.1
09/03/97		0.0141		1.01		0.172	7.65	1.5	70.0		<0.2	49.6	115	<0.01		0.261	<0.1	<0.1
11/03/97		<0.005		0.299		0.137	7.67	0.55	71.0		<0.2	39.2	82	<0.01		0.227	<0.1	<0.1
03/16/98	<0.01		<0.05		0.0364		8.09	0.83	59.7	68.9	<0.2	1.6	66	<0.01		0.245	<0.1	<0.1
06/29/98	<0.01		<0.05		0.0281		7.28	1.0	64.9	68.0	<0.2	2.00	82	<0.01		0.256	<0.1	<0.1
09/28/98	<0.002		<0.05		0.027		8.1	1.4	62.6	64	<0.05	<4.0	87	<0.005		0.28	<0.1	0.1
03/08/99	<0.002		<0.05		0.02		8.3	0.75	63	63.0	<0.05	<4.0	57.8	<0.01		<1.0	<1.0	0.1
06/14/99	<0.002		<0.05		0.022		8.3	0.8	63	67.0	<0.1	8	100	<0.01		<1.0	<1.0	0.1
09/20/99																		
09/21/99																		
06/26/00	0.019		<0.05		0.049		7.9	18	61	79.0	0.14	49	76	<0.005		<0.5	N/A	0.1
09/25/00	<0.005		<0.05		0.027		8.1	2	61	62.0	<0.1	9	75	<0.01		0.26	<0.1	<0.1
06/06/01	<0.0012		<0.004		0.0073		7.88	93	59.6	70.0	<0.40	287	63.8	<0.00032		0.3	<0.02	0.4
10/23/01	<0.005		<0.05		0.027		7.33	16.4	67	62.0	<0.1	80	102	<0.00032		0.26	<0.1	<0.1
06/17/02	0.00397		<0.05		0.028		7.9	9.6	69	64.0	<0.1	40	69	<0.00064		<0.5	<0.5	0.17
09/02/02	0.00456		<0.05		0.036		7.93	13	64	76.0	<0.1	44	83	<0.00064		<1.5	<1.5	0.19
06/23/03	0.0107		<0.015		0.0449		8.1	8.6	79.9	61.2	0.082	21.2	75.2	<0.00064		<0.12	<0.12	0.2
09/24/03	0.013		<0.015		0.038		7.4	55.2	85.3	74.0	<0.0033	1030	90.6	<0.00064		<0.12	<0.12	0.4
06/14/04	0.00114		0.063		0.165		7.9	0.816	72.9	75	<0.025	<1.2	68.8	<0.004		0.265	<0.02	<0.1
09/30/04	0.00569		N/A		0.0293		7.6	67.2	78.3	97.6	0.026	83.4	77.5	<0.0013		0.266	<0.0032	<0.1
10/04/04	0.00543		N/A		0.0357		8	14.7	75.6	78.8	<0.22	45.4	81.3	<0.00064		0.233	<0.0032	<0.1