



Appendix 10-1 Baseline and Restoration Values for Mine Unit 1

Parameter	Groundwater Standard ²	MU-1 Baseline	MU-1 Standard Deviation	MU-1 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	<0.372	N/A	10.0
Arsenic (mg/L)	0.05	<0.00214	N/A	0.05
Barium (mg/L)	1.0	<0.1	N/A	1.0
Cadmium (mg/L) ¹	0.01	<0.00644	N/A	0.005 ¹
Chloride (mg/L)	250.0	203.9	38	250.0
Copper (mg/L)	1.0	<0.017	N/A	1.0
Fluoride (mg/L)	4.0	0.686	0.04	4.0
Iron (mg/L)	0.3	<0.0441	N/A	0.3
Mercury (mg/L)	0.002	<0.001	N/A	0.002
Manganese (mg/L)	0.05	<0.011	N/A	0.05
Molybdenum (mg/L)	1.0	<0.0689	N/A	1.0
Nickel (mg/L)	0.15	<0.0340	N/A	0.15
Nitrate (mg/L)	10.0	<0.050	N/A	10.0
Lead (mg/L)	0.05	0.0315	N/A	0.05
Radium (pCi/L)	5.0	229.7	177.1	584.0
Selenium (mg/L)	0.01	<0.00323	N/A	0.05
Sodium (mg/L)	N/A	412	19.2	4120
Sulfate (mg/L)	250.0	356.2	9.4	375
Uranium (mg/L)	5.0	0.0922	0.089	5.0
Vanadium (mg/L)	0.2	<0.0663	N/A	0.2
Zinc (mg/L)	5.0	<0.036	N/A	5.0
pH (Std. Units)	6.5 - 8.5	8.46	0.2	6.5 – 8.5
Calcium (mg/L)	N/A	12.5	3.2	125.0
Total Carbonate (mg/L)	N/A	351	31.1	585
Potassium (mg/L)	N/A	12.5	1.5	125.0
Magnesium (mg/L)	N/A	3.2	0.8	32.0
TDS (mg/L)	N/A	1170.2	47.6	1170.2

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-2 Baseline and Restoration Values for Mine Unit 2

Parameter	Groundwater Standard ²	MU-2 Baseline	MU-2 Standard Deviation	MU-2 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	0.37	0.07	10.0
Arsenic (mg/L)	0.05	<0.001	N/A	0.05
Barium (mg/L)	1.0	<0.1	N/A	1.0
Cadmium (mg/L) ¹	0.005	<0.007	N/A	0.005
Chloride (mg/L)	250.0	208.6	30.8	250.0
Copper (mg/L)	1.0	<0.013	N/A	1.0
Fluoride (mg/L)	4.0	0.67	0.04	4.0
Iron (mg/L)	0.3	<0.045	N/A	0.3
Mercury (mg/L)	0.002	<0.001	N/A	0.002
Manganese (mg/L)	0.05	<0.01	N/A	0.05
Molybdenum (mg/L)	1.0	<0.073	N/A	1.0
Nickel (mg/L)	0.15	<0.037	N/A	0.15
Nitrate (mg/L)	10.0	<0.039	N/A	10.0
Lead (mg/L)	0.05	<0.035	N/A	0.05
Radium (pCi/L)	5.0	234.5	411.8	1058.0
Selenium (mg/L)	0.05	<0.001	N/A	0.05
Sodium (mg/L)	N/A	410.8	18.2	4108
Sulfate (mg/L)	250.0	348.2	10.3	369.0
Uranium (mg/L)	5.0	0.046	0.037	5.0
Vanadium (mg/L)	0.2	<0.07	N/A	0.2
Zinc (mg/L)	5.0	<0.026	N/A	5.0
pH (Std. Units)	6.5 - 8.5	8.32	0.2	6.5 – 8.5
Calcium (mg/L)	N/A	13.4	2.4	134.0
Total Carbonate (mg/L)	N/A	366.9	13.3	585.0
Potassium (mg/L)	N/A	12.6	2.5	126.0
Magnesium (mg/L)	N/A	3.5	0.4	35.0
TDS (mg/L)	N/A	1170.4	41	1170.4

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-3 Baseline and Restoration Values for Mine Unit 3

Parameter	Groundwater Standard ²	MU-3 Baseline	MU-3 Standard Deviation	MU-3 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	<0.329	N/A	10.0
Arsenic (mg/L)	0.05	<0.001	N/A	0.05
Barium (mg/L)	1.0	<0.1	N/A	1.0
Cadmium (mg/L) ¹	0.005	<0.01	N/A	0.005
Chloride (mg/L)	250.0	197.6	16.7	250.0
Copper (mg/L)	1.0	<0.0108	N/A	1.0
Fluoride (mg/L)	4.0	0.719	0.05	4.0
Iron (mg/L)	0.3	<0.05	N/A	0.3
Mercury (mg/L)	0.002	<0.001	N/A	0.002
Manganese (mg/L)	0.05	<0.01	N/A	0.05
Molybdenum (mg/L)	1.0	<0.1	N/A	1.0
Nickel (mg/L)	0.15	<0.05	N/A	0.15
Nitrate (mg/L)	10.0	<0.0728	N/A	10.0
Lead (mg/L)	0.05	<0.05	N/A	0.05
Radium (pCi/L)	5.0	165	222.5	611.0
Selenium (mg/L)	0.05	<0.00115	N/A	0.05
Sodium (mg/L)	N/A	428	27.6	4280
Sulfate (mg/L)	250.0	377.0	13.4	404.0
Uranium (mg/L)	5.0	0.115	0.158	5.0
Vanadium (mg/L)	0.2	<0.1	N/A	0.2
Zinc (mg/L)	5.0	<0.0131	N/A	5.0
pH (Std. Units)	6.5 - 8.5	8.37	0.3	6.5 – 8.5
Calcium (mg/L)	N/A	13.3	3.1	133.0
Total Carbonate (mg/L)	N/A	358.7	24.8	592.0
Potassium (mg/L)	N/A	13.9	4.0	139.0
Magnesium (mg/L)	N/A	3.5	0.9	35.0
TDS (mg/L)	N/A	1183.0	47.4	1183.0

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-4 Baseline and Restoration Values for Mine Unit 4

Parameter	Groundwater Standard ²	MU-4 Baseline	MU-4 Standard Deviation	MU-4 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	0.288	0.08	10.0
Arsenic (mg/L)	0.05	<0.00209	N/A	0.05
Barium (mg/L)	1.0	<0.1	N/A	1.0
Cadmium (mg/L) ¹	0.005	<0.01	N/A	0.005
Chloride (mg/L)	250.0	217.5	34.9	250.0
Copper (mg/L)	1.0	<0.0114	N/A	1.0
Fluoride (mg/L)	4.0	0.745	0.05	4.0
Iron (mg/L)	0.3	<0.0504	N/A	0.3
Mercury (mg/L)	0.002	<0.001	N/A	0.002
Manganese (mg/L)	0.05	<0.01	N/A	0.05
Molybdenum (mg/L)	1.0	<0.1	N/A	1.0
Nickel (mg/L)	0.15	<0.05	N/A	0.15
Nitrate (mg/L)	10.0	<0.114	N/A	10.0
Lead (mg/L)	0.05	<0.05	N/A	0.05
Radium (pCi/L)	5.0	154.3	171.5	496.0
Selenium (mg/L)	0.05	<0.00244	N/A	0.05
Sodium (mg/L)	N/A	416.6	27.8	4166
Sulfate (mg/L)	250.0	337.2	19.3	375.0
Uranium (mg/L)	5.0	<0.122	N/A	5.0
Vanadium (mg/L)	0.2	<0.0984	N/A	0.2
Zinc (mg/L)	5.0	<0.0143	N/A	5.0
pH (Std. Units)	6.5 - 8.5	8.68	0.3	6.5 – 9.28
Calcium (mg/L)	N/A	11.2	2.9	112.0
Total Carbonate (mg/L)	N/A	374.4	28	610.0
Potassium (mg/L)	N/A	16.7	4.7	167.0
Magnesium (mg/L)	N/A	2.8	0.8	28.0
TDS (mg/L)	N/A	1221.1	73.5	1221.1

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-5 Baseline and Restoration Values for Mine Unit 5

Parameter	Groundwater Standard ²	MU-5 Baseline	MU-5 Standard Deviation	MU-5 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	0.28	0.05	10.0
Arsenic (mg/L)	0.05	<0.001	N/A	0.05
Barium (mg/L)	1.0	<0.10	N/A	1.0
Cadmium (mg/L) ¹	0.005	<0.01	N/A	0.005
Chloride (mg/L)	250.0	191.9	7.9	250.0
Copper (mg/L)	1.0	<0.01	N/A	1.0
Fluoride (mg/L)	4.0	0.64	0.07	4.0
Iron (mg/L)	0.3	<0.05	N/A	0.3
Mercury (mg/L)	0.002	<0.001	N/A	0.002
Manganese (mg/L)	0.05	<0.01	N/A	0.05
Molybdenum (mg/L)	1.0	<0.10	N/A	1.0
Nickel (mg/L)	0.15	<0.05	N/A	0.15
Nitrate (mg/L)	10.0	<0.1	N/A	10.0
Lead (mg/L)	0.05	<0.05	N/A	0.05
Radium (pCi/L)	5.0	166.0	184.6	535.0
Selenium (mg/L)	0.05	<0.002	N/A	0.05
Sodium (mg/L)	N/A	397.6	14.4	3976
Sulfate (mg/L)	250.0	364.5	10.5	385.0
Uranium (mg/L)	5.0	0.072	0.056	5.0
Vanadium (mg/L)	0.2	<0.10	N/A	0.2
Zinc (mg/L)	5.0	<0.02	N/A	5.0
pH (Std. Units)	6.5 - 8.5	8.5	0.1	6.5 – 8.5
Calcium (mg/L)	N/A	12.6	1.8	126.0
Total Carbonate (mg/L)	N/A	372	13.0	590.0
Potassium (mg/L)	N/A	11.5	1.2	115.0
Magnesium (mg/L)	N/A	3.4	0.4	34.0
TDS (mg/L)	N/A	1179.5	22.5	1202.0

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-6 Baseline and Restoration Values for Mine Unit 6

Parameter	Groundwater Standard ²	MU-6 Baseline	MU-6 Standard Deviation	MU-6 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	0.32	0.05	10.0
Arsenic (mg/L)	0.05	0.002	N/A	0.05
Barium (mg/L)	1.0	0.100	N/A	1.0
Cadmium (mg/L) ¹	0.005	0.009	N/A	0.005
Chloride (mg/L)	250.0	206	15.4	250.0
Copper (mg/L)	1.0	0.012	N/A	1.0
Fluoride (mg/L)	4.0	0.65	0.03	4.0
Iron (mg/L)	0.3	0.050	N/A	0.3
Mercury (mg/L)	0.002	0.001	N/A	0.002
Manganese (mg/L)	0.05	0.010	N/A	0.05
Molybdenum (mg/L)	1.0	0.102	N/A	1.0
Nickel (mg/L)	0.15	0.050	N/A	0.15
Nitrate (mg/L)	10.0	0.1	N/A	10.0
Lead (mg/L)	0.05	0.050	N/A	0.05
Radium (pCi/L)	5.0	80.6	121.9	325
Selenium (mg/L)	0.05	0.001	N/A	0.05
Sodium (mg/L)	N/A	400	12.8	4000
Sulfate (mg/L)	250.0	361	14.6	390
Uranium (mg/L)	5.0	0.133	0.212	5.0
Vanadium (mg/L)	0.2	0.098	N/A	0.2
Zinc (mg/L)	5.0	0.011	N/A	5.0
pH (Std. Units)	6.5 - 8.5	8.6	0.2	6.5 - 9.0
Calcium (mg/L)	N/A	12.8	2.3	128
Total Carbonate (mg/L)	N/A	367.1	22.9	596
Potassium (mg/L)	N/A	11.9	1.7	119
Magnesium (mg/L)	N/A	3.2	0.7	32
TDS (mg/L)	N/A	1192	28.1	1220

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-7 Baseline and Restoration Values for Mine Unit 7

Parameter	Groundwater Standard ²	MU-7 Baseline	MU-7 Standard Deviation	MU-7 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	0.42	0.08	10.0
Arsenic (mg/L)	0.05	0.001	N/A	0.05
Barium (mg/L)	1.0	0.10	N/A	1.0
Cadmium (mg/L) ¹	0.005	0.007	N/A	0.005
Chloride (mg/L)	250.0	198	22.6	250.0
Copper (mg/L)	1.0	0.01	N/A	1.0
Fluoride (mg/L)	4.0	0.70	0.05	4.0
Iron (mg/L)	0.30	0.05	N/A	0.30
Mercury (mg/L)	0.002	0.001	N/A	0.002
Manganese (mg/L)	0.05	0.01	N/A	0.05
Molybdenum (mg/L)	1.00	0.10	N/A	1.00
Nickel (mg/L)	0.15	0.05	N/A	0.15
Nitrate (mg/L)	10.0	0.1	N/A	10.0
Lead (mg/L)	0.05	0.05	N/A	0.05
Radium (pCi/L)	5.0	142	148.0	438
Selenium (mg/L)	0.05	0.004	N/A	0.05
Sodium (mg/L)	N/A	387	21.6	3,870
Sulfate (mg/L)	250.0	346	20.1	386
Uranium (mg/L)	5.0	0.110	0.138	5.0
Vanadium (mg/L)	0.2	0.10	N/A	0.2
Zinc (mg/L)	5.0	0.01	N/A	5.0
pH (Std. Units)	6.5 - 8.5	8.6	0.3	6.5 – 9.2
Calcium (mg/L)	N/A	12.2	2.6	122
Total Carbonate (mg/L)	N/A	356	N/A	588
Potassium (mg/L)	N/A	12.9	3.0	129
Magnesium (mg/L)	N/A	3.2	0.7	32
TDS (mg/L)	N/A	1,176	40.7	1,217

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-8 Baseline and Restoration Values for Mine Unit 8

Parameter	Groundwater Standard ²	MU-8 Baseline	MU-8 Standard Deviation	MU-8 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	0.682	0.222	10.0
Arsenic (mg/L)	0.05	0.002	0.001	0.05
Barium (mg/L)	1.0	0.099	0.005	1.0
Cadmium (mg/L) ¹	0.005	0.005	N/A	0.005
Chloride (mg/L)	250	196	53.8	250
Copper (mg/L)	1.0	0.01	N/A	1.0
Fluoride (mg/L)	4.0	0.638	0.048	4.0
Iron (mg/L)	0.30	0.135	0.086	0.30
Mercury (mg/L)	0.002	0.001	N/A	0.002
Manganese (mg/L)	0.05	0.01	N/A	0.05
Molybdenum (mg/L)	1.0	0.093	0.023	1.00
Nickel (mg/L)	0.15	0.049	0.003	0.15
Nitrate (mg/L)	10.0	0.2	N/A	10.0
Lead (mg/L)	0.05	0.049	0.003	0.05
Radium (pCi/L)	5.0	124.4	151.8	428
Selenium (mg/L)	0.05	0.004	N/A	0.05
Sodium (mg/L)	N/A	416.8	41.8	4,168
Sulfate (mg/L)	250	312	33	378
Uranium (mg/L)	5.0	0.188	0.140	5.0
Vanadium (mg/L)	0.2	0.127	0.122	0.2
Zinc (mg/L)	5.0	0.013	0.008	5.0
pH (Std. Units)	6.5 - 8.5	8.67	0.37	6.5 – 9.41
Calcium (mg/L)	N/A	12.3	3.5	123
Total Carbonate (mg/L)	N/A	377	15.6	569
Potassium (mg/L)	N/A	11.8	3.2	117.8
Magnesium (mg/L)	N/A	2.7	0.92	27.1
TDS (mg/L)	N/A	1,137	97.4	1,234

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-9 Baseline and Restoration Values for Mine Unit 9

Parameter	Groundwater Standard ²	MU-9 Baseline	MU-9 Standard Deviation	MU-9 NDEQ Restoration Value ³
Ammonium (mg/L)	10.0	0.40	0.05	10.0
Arsenic (mg/L)	0.05	0.001	0.000	0.05
Barium (mg/L)	1.0	0.1	0.0	1.0
Cadmium (mg/L) ¹	0.005	0.005	0.000	0.005
Chloride (mg/L)	250	203	13	250
Copper (mg/L)	1.0	0.01	0.00	1.0
Fluoride (mg/L)	4.0	0.8	0.0	4.0
Iron (mg/L)	0.3	0.04	0.01	0.3
Mercury (mg/L)	0.002	0.001	0.000	0.002
Manganese (mg/L)	0.05	0.01	0.00	0.05
Molybdenum (mg/L)	1.0	0.1	0.0	1.0
Nickel (mg/L)	0.15	0.05	0.00	0.15
Nitrate (mg/L)	10.0	0.06	0.01	10.0
Lead (mg/L)	0.05	0.05	0.00	0.05
Radium (pCi/L)	5.0	164	238	640
Selenium (mg/L)	0.05	0.003	0.001	0.05
Sodium (mg/L)	N/A	380	11	3,800
Sulfate (mg/L)	250	320	15	350
Uranium (mg/L)	5.0	0.1	0.24	5.0
Vanadium (mg/L)	0.2	0.1	0.0	0.2
Zinc (mg/L)	5.0	0.01	0.00	5.0
pH (Std. Units)	6.5 - 8.5	8.35	0.30	6.5 – 9.41
Calcium (mg/L)	N/A	13.6	4.6	136
Total Carbonate (mg/L)	N/A	383	14	595
Potassium (mg/L)	N/A	13.9	3.0	139
Magnesium (mg/L)	N/A	3.5	1.2	35.0
TDS (mg/L)	N/A	1,152	38	1,190

¹ Standard for Cadmium lowered in modification to UIC permit dated March 9, 2001 following NDEQ approval of Mine Unit 1 restoration.

² Title 118 numerical standards in effect at the time the Notice of Intent was filed with the NDEQ.

³ Restoration values based on Title 118 numerical standards and well field averages at the time the Notice of Intent was submitted to the NDEQ.

N/A = Not Applicable



Appendix 10-10 Baseline Well Restoration Table Mine Unit 10

Parameter	Units	Groundwater Standard	Wellfield Average	Standard Deviation	NDEQ Restoration Value
Ammonia (NH ₄ as N)	mg/L	10.0	0.34	0.07	10.0
Arsenic (As)	mg/L	0.010	0.001	0.001	0.010
Barium (Ba)	mg/L	2.0	0.1	0.0	2.0
Cadmium (Cd)	mg/L	0.005	0.005	0.000	0.005
Calcium (Ca)	mg/L	---	11.8	2.6	118.0
Chloride (Cl)	mg/L	250	185	14	250
Copper (Cu)	mg/L	1.3	0.01	0.01	1.3
Fluoride (F)	mg/L	4.0	0.72	0.10	4.0
Iron (Fe)	mg/L	0.3	0.03	0.01	0.3
Lead (Pb)	mg/L	0.015	0.001	0.0	0.015
Magnesium (Mg)	mg/L	---	3.4	0.7	34.0
Managanese (Mn)	mg/L	0.05	0.01	0.0	0.05
Mercury (Hg)	mg/L	0.002	0.001	0.0	0.002
Molybdenum (Mo)	mg/L	1.0	0.1	0.0	1.0
Nickel (Ni)	mg/L	0.15	0.05	0.0	0.15
Nitrite + Nitrate as N (NO ₃ + NO ₂) ¹	mg/L	10.0	0.1	0.0	10.0
pH	Std. Units	6.5 - 8.5	8.51	0.19	6.5 - 8.89
Potassium (K)	mg/L	---	10.1	1.6	101
Radium-226	pCi/L	5.0	87.3	161.0	409.3
Selenium (Se)	mg/L	0.05	0.003	0.002	0.05
Sodium (Na)	mg/L	---	388	12	3880
Sulfate (SO ₄)	mg/L	250.0	329	25	379
Total Carbonate (CO ₃ + HCO ₃) ²	mg/L	---	394	15	550.5
Total Dissolved Solids	mg/L	---	1101	26	1127
Uranium (U)	mg/L	0.03	0.0378	0.0351	0.108
Vanadium (V)	mg/L	0.2	0.1	0.0	0.2
Zinc (Zn)	mg/L	5.0	0.01	0.01	5.0

¹ Nitrate was reported by the lab as NO₃ + NO₂ instead of NO₃ as required in the permit. However, only two samples, well 4024 collected 6/09/06 and well CM8-6 collected 5/02/02, were above the detection limits. The restoration value is 10.0 mg/L while the average is 0.1 mg/L. Therefore, including NO₂ has no bearing on determining the restoration value. Nitrite, NO₂, was also analyzed for and all samples were below the detection limit of 0.10 mg/L.

² Total carbonate = alkalinity as CaCO₃ x 1.2

Standard formulas were used to calculate the average and standard deviation but the true values, especially for the standard deviation, are most likely significantly smaller than shown. This results in a conservative estimate of the standard deviation.

--- = no NDEQ standard



**UIC Permit Application
Marsland Expansion Area**

Appendix 10-11 Baseline Well Restoration Table Mine Unit 11

Parameter	Units	Groundwater Standard	Wellfield Average	Standard Deviation	Restoration Value
Ammonia (NH ₄ as N)	mg/L	10.0	0.33	0.05	10.0
Arsenic (As)	mg/L	0.010	0.001	0.000	0.010
Barium (Ba)	mg/L	2.0	<0.1	0.0	2.0
Cadmium (Cd)	mg/L	0.005	<0.005	0.000	0.005
Calcium (Ca)	mg/L	---	14.9	4.0	149
Chloride (Cl)	mg/L	250	186	16	250
Copper (Cu)	mg/L	1.3	<0.01	0.00	1.3
Fluoride (F)	mg/L	4.0	0.69	0.05	4.0
Iron (Fe)	mg/L	0.3	0.04	0.01	0.3
Lead (Pb)	mg/L	0.015	0.001	0.001	0.015
Magnesium (Mg)	mg/L	---	3.4	0.9	34
Manganese (Mn)	mg/L	0.05	0.01	0.00	0.05
Mercury (Hg)	mg/L	0.002	0.001	0.000	0.002
Molybdenum (Mo)	mg/L	1.0	<0.1	0.0	1.0
Nickel (Ni)	mg/L	0.15	<0.05	0.00	0.15
Nitrite + Nitrate as N (NO ₃ + NO ₂) ¹	mg/L	10.0	0.09	0.00	10.0
pH	Std. Units	6.5 - 8.5	8.27	0.21	6.5-8.5
Potassium (K)	mg/L	---	13.1	2.9	131
Radium-226	pCi/L	5.0	90.3	107.2	304.7
Selenium (Se)	mg/L	0.05	0.003	0.001	0.05
Sodium (Na)	mg/L	---	407.5	18	4075
Sulfate (SO ₄)	mg/L	250.0	320	11	342
Total Carbonate (CO ₃ + HCO ₃) ²	mg/L	---	304	11	565
Total Dissolved Solids	mg/L	---	1130	37	1167
Uranium (U)	mg/L	0.030	0.035	0.037	0.109
Vanadium (V)	mg/L	0.2	<0.1	0.0	0.2
Zinc (Zn)	mg/L	5.0	0.02	0.01	5.0

1.) Nitrate was reported by the lab as NO₃ + NO₂ instead of NO₃ as required in the permit. However, only two samples, well 5003 collected 12/03/08 and well CM9-7 collected 9/05/08, were above the detection limits. The restoration value is 10.0 mg/l while the average is 0.1 mg/l. Therefore, including NO₂ has no bearing on determining the restoration value. Nitrite, NO₂, was also analyzed for and all samples were below the detection limit of 0.10 mg/l.

2.) Total carbonate = alkalinity as CaCO₃ x 1.2

Standard formulas were used to calculate the average and standard deviation but the true values, especially for the standard deviation, are most likely significantly smaller than shown. This results in a conservative estimate of the standard deviation.