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Mine Waste Technology Program

Remediation Technology Evaluation at the Gilt Edge Mine, South Dakota

by

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Notice

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Foreword

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The National Risk Management Research Laboratory (NRMRL) is the Agency's center for investigation of technological and management approaches for preventing and reducing risks from pollution that threaten human health and the environment. The focus of the Laboratory's research program is on methods and their cost effectiveness for prevention and control of pollution to air, land, water, and subsurface resources; protection of water quality in public water systems; remediation of contaminated sites, sediments, and groundwater; prevention and control of indoor air pollution; and restoration of ecosystems. The NRMRL collaborates with both public and private-sector partners to foster technologies that reduce the cost of compliance and to anticipate emerging problems. NRMRL's research provides solutions to environmental problems by developing and promoting technologies that protect and improve the environment; advancing scientific and engineering information to support regulatory and policy decisions; and providing the technical support and information transfer to ensure implementation of environmental regulations and strategies at the national, state, and community levels.

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Lawrence W. Reiter, Acting Director
National Risk Management Research Laboratory

Abstract

This document reports the findings of the Mine Waste Technology Program's Activity III, Project 29, The Remediation Technology Evaluation Project at the Gilt Edge Mine, South Dakota. This project consisted of evaluating three emerging acidic waste rock stabilization technologies and comparing those technologies to lime treatment of acidic waste rock. The three new technologies tested were the Silica Micro Encapsulation (SME) Technology from Klean Earth Environmental Company (KEECO), the Passivation Technology from the University of Nevada-Reno (UNR), and the Envirobond Technology from Metals Treatment Technologies (MT^2). Performance of the technologies was evaluated as a pilot-scale demonstration by placing treated waste rock into isolated cells at the Gilt Edge Mine and monitoring the leachate collected from the representative cells. The objective of the treatments was to reduce the contaminants of concern by at least 90% or to South Dakota water discharge limits. The three technology vendors also provided a cost estimate to treat a hypothetical 500,000-cubic yard waste rock pile at the Gilt Edge Mine using the pilot-scale data as a guideline.

The leachate results revealed that UNR's Passivation technology and the lime treatment reduced more contaminants of concern to the project objectives than the KEECO and MT^2 technologies.

Appendices A through D are available upon request from the MSE MWTP Program Manager. Please refer to document number MWTP-235. Email: mse-ta@mse-ta.com, Phone (406) 494-7100.

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Appendices are available upon request at Email: mse-ta@mse-ta.com or Phone (406)494-7100. Document # MWTP-235.

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Acronyms and Abbreviations

ABA	acid-base accounting
ARD	acid rock drainage
CaO	lime (dry)
$CACO_3$	calcium carbonate (limestone)
CDM	CDM Federal Inc.
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ft	foot
KEECO	Kleen Earth Environmental Company
L	liter
mg	milligram
MS	matrix spike
MSD	matrix spike duplicate
MSE	MSE Technology Applications, Inc.
MT^2	Metals Treatment Technologies
MWTP	Mine Waste Technology Program
PR	presumptive remedy
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
ROD	Record of Decision
SAP	sampling and analysis plan
SD AWQC	South Dakota Applicable Water Quality Criteria
SME	silica microencapsulation
TDS	total dissolved solids
µg	microgram
UNR	University of Nevada-Reno
yd^3	cubic yard

Acknowledgment

This document was prepared by MSE Technology Applications, Inc. (MSE) for the U.S. Environmental Protection Agency's (EPA) Mine Waste Technology Program (MWTP) and the U.S. Department of Energy's (DOE) National Energy Technology Laboratory. Ms. Diana Bless is EPA's MWTP Project Officer, while Mr. Gene Ashby is DOE's Technical Program Officer. Ms. Helen Joyce is MSE's MWTP Program Manager.

Executive Summary

The Mine Waste Technology Program (MWTP) Activity III, Project 29, Remediation Technology Evaluation Project was a collaboration between the U.S. Environmental Protection Agency (EPA) Office of Research and Development and EPA Region VIII. The Remediation Technology Evaluation Project consisted of evaluating three emerging acidic waste rock stabilization technologies and comparing those technologies to the presumptive remedy (PR) of lime treatment. The objective of EPA Region VIII was to conduct a treatability study as part of the remedial investigation/feasibility study process for the Gilt Edge Mine near Lead, South Dakota, providing data to help in the decision-making process supporting the Record of Decision for the site. The objective of the MWTP was to evaluate promising new technologies for preventing the oxidation of sulfide waste rock, which may be applicable to a large number of mine waste sites.

The three new technologies tested were the Silica Micro Encapsulation (SME) Technology from Klean Earth Environmental Company (KEECO), the Passivation Technology from the University of Nevada-Reno (UNR), and the Envirobond Technology from Metals Treatment Technologies (MT^2). Performance of the technologies was evaluated as a pilot-scale demonstration by placing treated waste rock into isolated cells at the Gilt Edge Mine and monitoring the leachate collected from the representative cells. The leachate was monitored from the spring of 2001 to the fall of 2002. The objective of the treatments was to reduce the contaminants of concern by at least 90% or to South Dakota water discharge limits.

The three technology vendors also provided a cost estimate to treat a hypothetical 500,000-cubic yard (yd^3) waste rock pile at the Gilt Edge Mine using the pilot-scale data as a guideline.

By evaluating the leachate parameters of pH, total dissolved solids (TDS), dissolved arsenic, aluminum, iron, zinc, and sulfate, it was possible to ascertain if the technologies were able to achieve a 90% reduction or the South Dakota discharge limits. Table ES-1 summarizes the results.

Table ES-1. Technology Performance Summary

Technology	Achieve 90% reduction?			Achieve SD Discharge Limits?				Cost to treat 500,000 yd^3 of Waste Rock	Comments
	Al	Fe	Sulfate	pH	TDS	As	Zn		
PR	Yes	Yes	Yes	No	Yes	Yes	Yes	$4,774,438	Effective, but pH was elevated above 8.8 and will fail once lime is exhausted
MT^2	Yes	Yes	No	Yes	No	No	Yes	$4,034,750	Actually increased TDS, sulfate, and arsenic concentrations
UNR	Yes	Yes	No	Yes	Yes	Yes	Yes	$3,241,408	Effective and has longer life than lime treatment
KEECO	No	Yes	No	No	No	No	No	$12,682,998	Expensive and failed during second field season

By looking at the summary, it is evident that for this technology demonstration the UNR and PR technologies were able to achieve seven of the eight objectives. However, the PR of lime treatment will be exhausted over time because the lime is soluble and will eventually dissolve.

The KEECO and MT^2 technologies may be able to produce favorable results by making dosage adjustments and/or using different treatments; however, additional treatment past the second field season was beyond the scope of this technology demonstration. To confirm if the modified KEECO and MT^2 treatments would be effective, another technology demonstration would need to be performed.

1. Introduction

This document is the final report for the Mine Waste Technology Program (MWTP), Activity III, Project 29, *Remediation Technology Evaluation (Gilt Edge Mine)*. This project was funded by the U.S. Environmental Protection Agency (EPA) and jointly administered by the EPA and the U.S. Department of Energy (DOE) through an Interagency Agreement. This project was selected from several potential projects presented by MSE Technology Applications, Inc. (MSE), private industry, various government entities, and EPA regional offices to the Technical Integration Committee for the MWTP in April 2000.

This project was a collaboration between EPA Region VIII and the MWTP. EPA Region VIII's project objective was to conduct a treatability study (Ref. 1) as part of the remedial investigation/ feasibility study process for the Gilt Edge Mine near Lead, South Dakota, to provide data to help in the decision-making process supporting the Record of Decision (ROD) for the site. The objective of the MWTP was to evaluate promising new technologies for preventing the oxidation of sulfide waste rock, which may be applicable to a large number of mine waste sites. The new technologies were compared to the presumptive remedy of lime treatment as well as to controls in which no treatment was performed. The technical and economic information from the technology evaluation are summarized in this final report, which represents the end product of the project.

1.1 Project Description

The Remediation Technology Evaluation project was conducted at the Gilt Edge Mine, which is a 270-acre open-pit cyanide heap leach gold mine located approximately 5 miles southeast of Lead, South Dakota. The immediate area was the site of sporadic mining activity for over 100 years. The Gilt Edge Mine was operated by Brohm Mining Corporation, a wholly owned subsidiary of Dakota Mining Cooperation from February 1986 until July 1999. Brohm's activities included developing several open pits, crushing and placing of the ore on a heap leach pad for gold leaching by cyanidation, and conducting Merrill-Crowe gold recovery in an on-site mill. In July 1999, the Dakota Mining Corporation declared bankruptcy, resulting in the Gilt Edge site being returned to the State of South Dakota for management. After incurring significant costs for water treatment to ensure no discharge of acidic mine water to the environment occurred, the State of South Dakota requested that EPA Region VIII take over the site and list it on the National Priorities List as a Superfund site. As a result, the Gilt Edge Mine is now a Superfund site and is managed by CDM Federal Inc. (CDM) under contract to EPA Region VIII. The collaboration between the MWTP and EPA Region VIII presented an opportunity to evaluate emerging acid rock drainage (ARD) treatment technologies while gathering data leading to an ROD for the site. As the MWTP administrator, MSE managed the project for the EPA National Risk Management Research Laboratory. As EPA Region VIII's Remedial Action contractor, CDM managed the project for EPA Region VIII.

MSE's responsibilities for the project included:

- providing technology vendor subcontracts;
- supporting test cell loading and treatment;
- sampling the test cells with and without CDM personnel being present;
- providing health and safety oversight;
- supporting data evaluation; and
- writing a final report.

CDM's responsibilities as EPA Region VIII's remedial action contractor included:

- writing a sampling and analysis plan (SAP) that included a quality assurance/quality control (QA/QC) plan;
- constructing and loading the test cells;
- monitoring the test cells;
- sampling the test cells with and without MSE personnel being present;

- analyzing all samples;
- collecting and validating all the monitoring data;
- provide data evaluation and interpretation; and
- writing an interim status report after the first year of operation.

1.2 Technology Descriptions

The companies that provided new emerging ARD waste stabilization technologies to be evaluated for this project were:

- Klean Earth Environmental Company (KEECO)

- Metals Treatment Technologies (MT^2)

- Mackay School of Mines, University of Nevada-Reno (UNR)

KEECO has developed a technology for the treatment and prevention of metals-contaminated waters, soils, and possibly sulfidic waste rock called silica microencapsulation (SME). This technology encapsulates metals in an impervious microscopic silica matrix, which essentially locks them up in very small sand-like particles and prevents the metals from leaching and migrating.

MT^2 developed an ARD waste stabilization technology called Envirobond that stabilizes sulfidic waste rock using phosphate stabilization chemistry. This technology has been applied at mining sites, firing ranges, sediment removal sites, and others to produce a solid treatment material meeting EPA's Toxicity Characteristic Leaching Procedure criteria.

UNR provided a technology known as Permanganate Passivation. This process essentially creates an inert layer on the sulfide phase that prevents contact with atmospheric oxygen during weathering of the sulfide rock, thus preventing sulfuric acid generation.

Each treatment technology was compared to the presumptive remedy (PR), which was adding lime (CaO) to the sulfidic waste rock. Lime addition buffers the ARD produced by the sulfidic waste rock and ties up the sulfate as gypsum, which prevents the further production of acid and leaching of metals. However, the disadvantage of lime is that it is soluble and will be dissolved and leached from the waste rock over time whether or not acid is produced.

The advantage of the Permanganate Passivation, SME, and Envirobond technologies is that they all treat the ARD-producing waste rock by sulfide or metals stabilization, which requires only one treatment and should last indefinitely.

2. Technology Evaluation

2.1 Technology Evaluation Process

The technology evaluation process involved loading waste rock from the Gilt Edge site into cells built on the mine property, treating the waste rock, and then testing leachate infiltrating through the waste rock in the cells. A total of 12 cells were constructed and loaded during September and October 2000. Each cell was 40 feet (ft) long, 10 ft wide, and 5 ft high at the front and 20 ft high at the back; constructed of wood framing and plywood sheeting; and lined with a polyvinyl chloride (PVC) liner (see Figure 2-1). A leachate collection system consisting of screened PVC covered with sand was installed in the bottom of each cell to facilitate sampling of ambient water infiltrating through the waste rock. Only ambient water was used for this demonstration. KEECO, UNR, and MT^2 were each assigned two cells to treat, while the PR and control cells each had three cells. The cells were loaded in a series of 1-ft-thick lifts for a total of 125 cubic yards (yd^3) of waste rock. After each lift was placed, the technology provider would treat the waste rock of their assigned cell. Table 2-1 is a plan view of the project test cells.

Effluent from the leachate collection system was collected and sampled on a regular basis for metals, total dissolved solids (TDS), pH, and several other parameters (see Appendices A and B). The cells were monitored from March 2001 to October 2002 with the cells not being sampled during the winter months due to the cells being frozen. Additionally, not all cells were sampled every sampling event because of the lack of effluent in the leachate collection system at certain times.

According to the project SAP (Ref. 1), the primary objective of the project was to ascertain if the treatment technologies could:

- reduce the contaminants of concern by 90% when compared to the control cells; or
- reduce the contaminants of concern to or below the South Dakota Applicable Water Quality Criteria (SD AWQC).

Many different parameters were analyzed for and used to evaluate the treatment performances. However, to illustrate the performance of the treatment technologies for this report, values of dissolved arsenic, dissolved zinc, TDS, and pH from the treatment technologies were compared to the control cells and the SD AWQC over time. Table 2-2 outlines the SD AWQC limits applicable to this report. The SD AWQC limits are presented in Appendix C. In addition, the unregulated parameters of dissolved iron, dissolved aluminum, and sulfate were also compared to the control cells by calculating the percent reduction of contaminants for each sampling event. The percent reduction was calculated for each sampling event by comparing the average of the respective treatment technology's cells against the average of the control cells. A statistical evaluation was conducted for the percent reduction values to determine if the overall mean of each treatment technology was at least 90%. All the values that were flagged with a qualifier in the raw data set (Appendix A) were used as reported. In some cases, samples were not submitted to the laboratory due to the lack of effluent from the cells; therefore, some percent reductions were impossible to calculate.

Figure 2-1. Project test cells 7-12 – view from the North (Gilt Edge Mine).

Table 2-1. Cell Assignment of the Project Test Cells

Cell 1 - KEECO	Cell 7 - PR
Cell 2 - Control	Cell 8 - UNR
Cell 3 - UNR	Cell 9 KEECO
Cell 4 - PR	Cell 10 - Control
Cell 5 – MT^2	Cell 11 – MT^2
Cell 6 - Control	Cell 12 - PR

Table 2-2. SD AWQC for the Gilt Edge Site

Parameter	SD AWQC Discharge Limit
PH	Between 6.5 and 8.8
Dissolved Arsenic	190 micrograms per liter (μg/L) (chronic)
Dissolved Zinc	338 μg/L (chronic)
TDS	2,500 milligrams per liter (mg/L) (30-day average)

3. Waste Rock Results

Multiple waste-rock samples were collected from each cell (two to four samples per cell) while the cells were being filled and analyzed for acid-base accounting (ABA) parameters (Appendix D). Five field duplicates were collected from the waste rock as well. The ABA results show that the acid/base potential (tons calcium carbonate (limestone)/ 1,000 tons of waste rock) ranges from -21 to -130 with an average of -48, and the paste pH of all the waste rock samples ranged from 2.1 to 5.3 with an average of 2.75. Waste rock with an acid/base potential of less than -20 is considered to be acid producing; therefore, the waste rock used for this technology demonstration is considered acid producing.

4. Presumptive Remedy Performance

The waste rock in the PR cells was treated with CaO. Prior to loading the waste rock in the cells, it was piled and mixed with CaO by a front-end loader according to the dosage rates in Table 4-1. The dosage rates were determine by CDM engineers and were based on the ABA results of the waste rock. Once the waste rock and CaO were mixed, the material was loaded into the cells with an excavator as nine separate, 1-ft-thick lifts for a total of 125 yd^3.

Tables 4-2 to 4-4 illustrate the performance of the PR with dissolved aluminum, dissolved iron, and sulfate. When compared to the control cells, the PR did achieve at least a 90% reduction for dissolved aluminum and iron for all the sampling events. The mean percent reduction for dissolved aluminum and iron was 99.96% and 100.00% respectively. The PR did achieve at least a 90% sulfate reduction for all the sampling events except the April 25, 2001, event, which was 74.14%. The mean percent reduction for sulfate was 95.32%.

Figures 4-1 to 4-4 compare the PR values of pH, TDS, dissolved arsenic, and dissolved zinc to the control cells and the SD AWQC over time. Figure 4-1 shows the PR pH ranged from 3.40 to 12.74 and the control cells ranged from 1.81 to 6.65. This shows the PR did generally increase the pH; however, the pH was above the upper discharge limit of 8.8 for most cases. This may be due to an overdose of the CaO.

Figures 4-2 to 4-4 show that the PR did achieve a reduction for TDS, dissolved arsenic, and dissolved zinc to below the discharge limits of 2,500 mg/L, 190 μg/L, and 338 μg/L respectively for the whole duration of the demonstration.

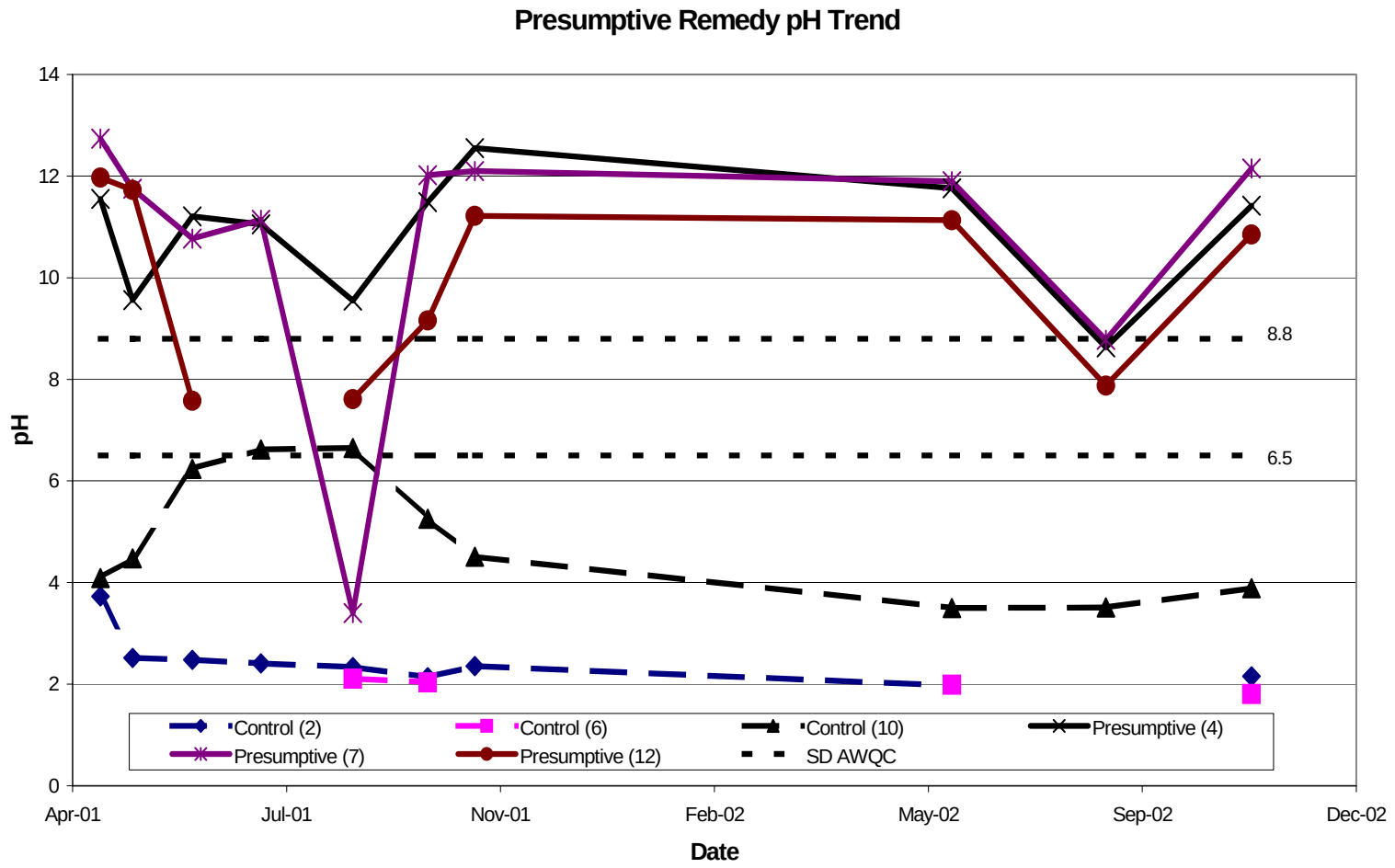

Figure 4-1. PR pH trend.

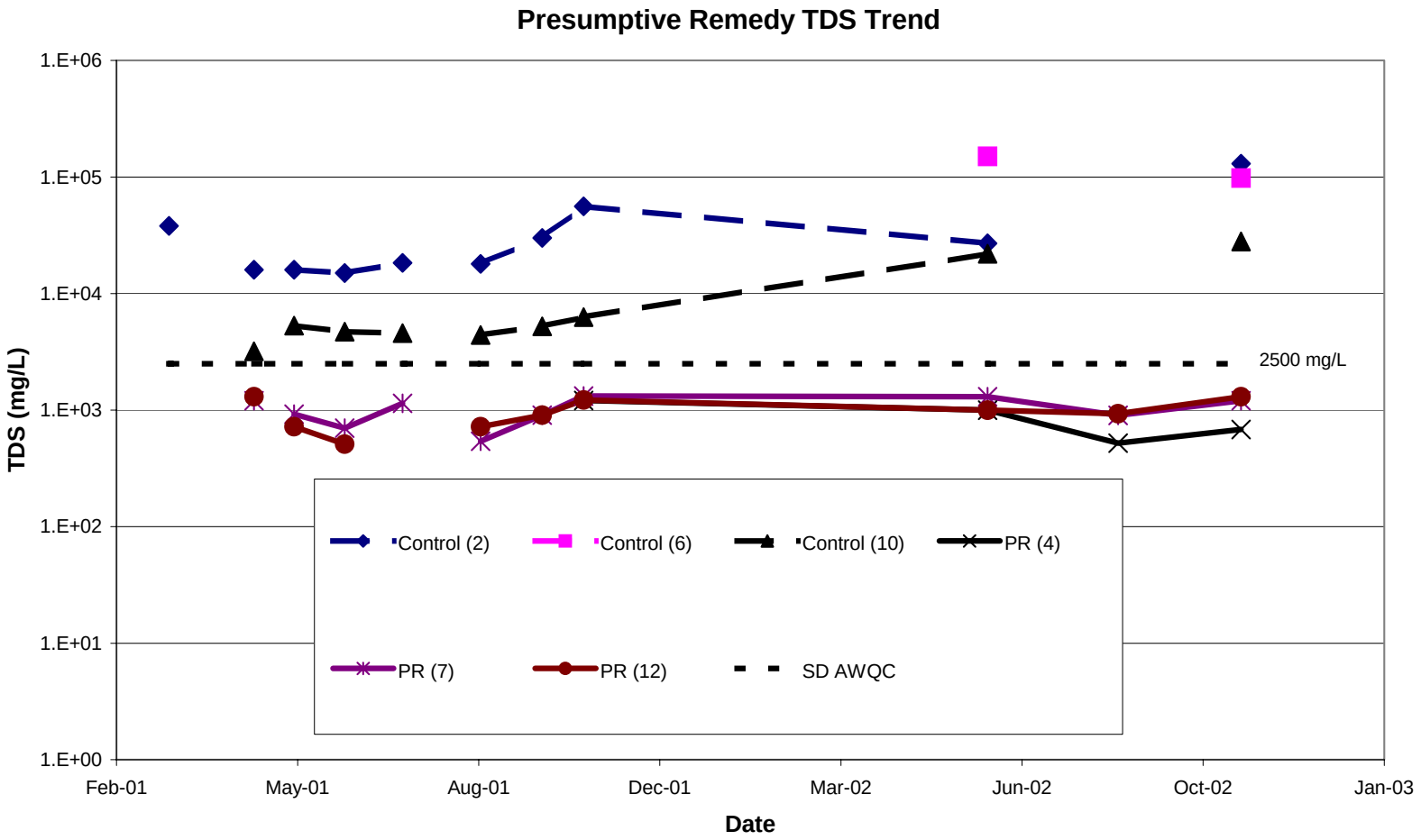

Figure 4-2. PR TDS trend.

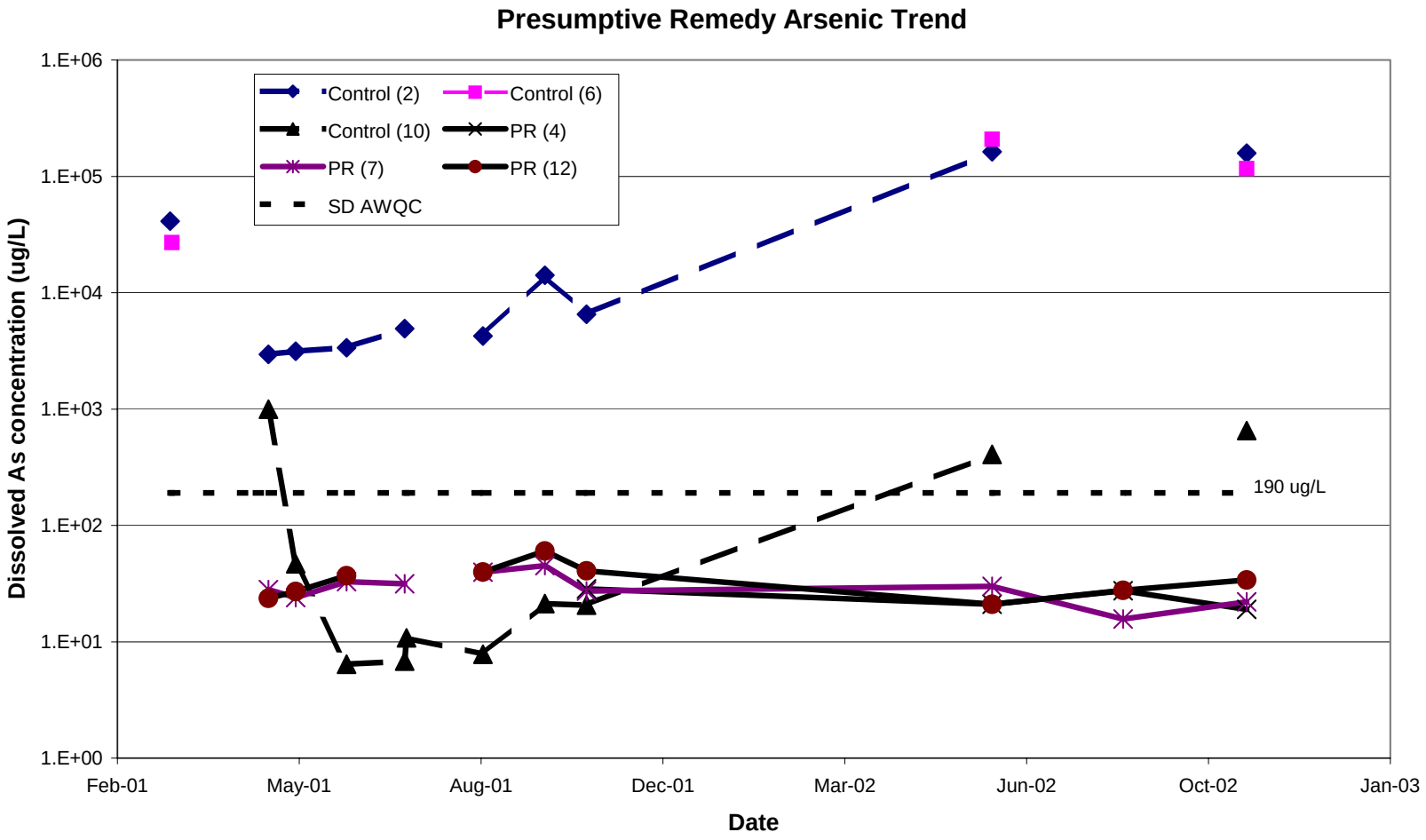

Figure 4-3. PR arsenic trend.

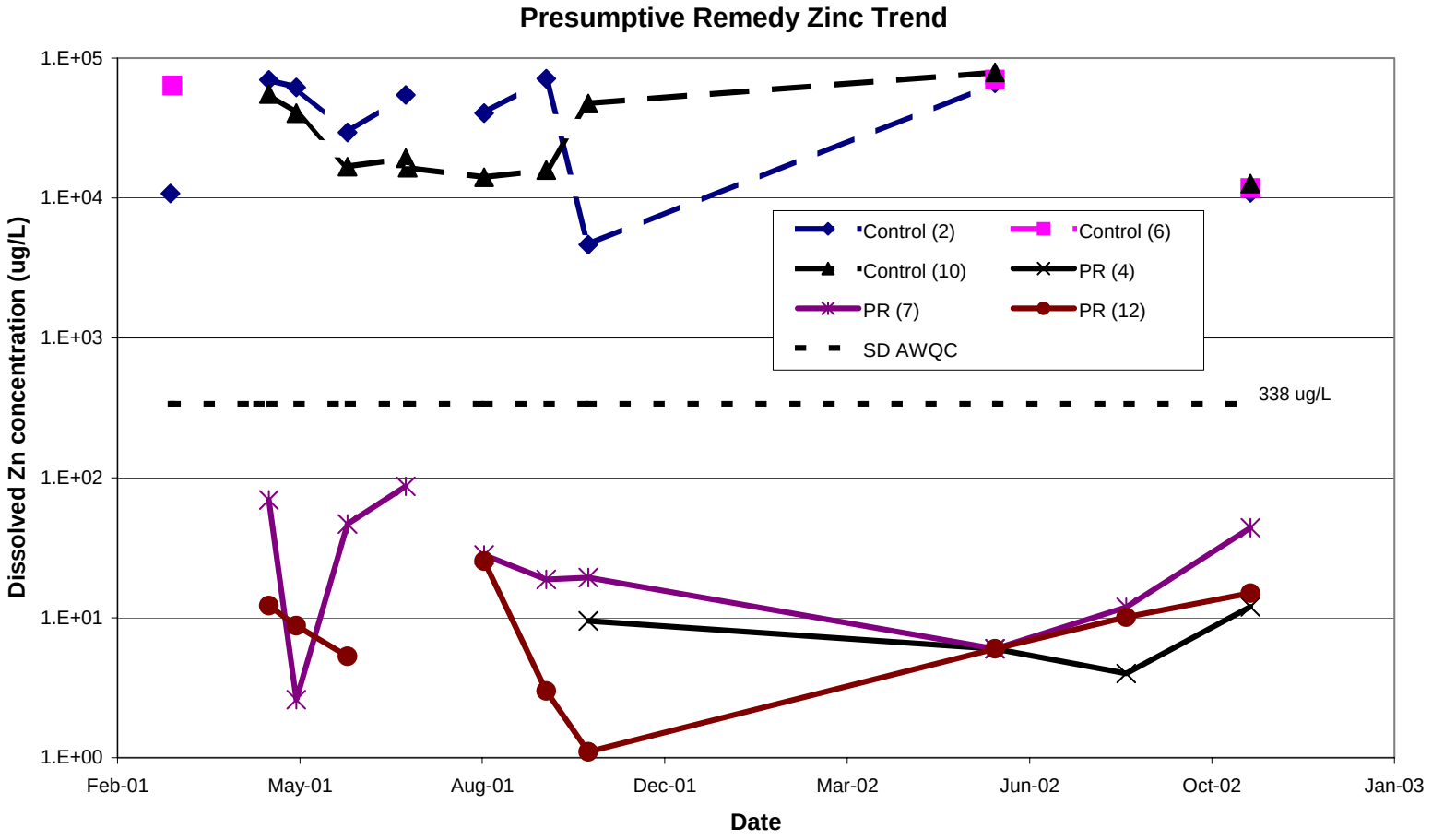

Figure 4-4. PR zinc trend.

Table 4-1. PR Dosage Rates

	Cell 4	Cell 7	Cell 12
Waste rock (yd^3)	125	125	125
CaO (lb)	7,050	6,700	7,000
CaO (lb) per ton of waste rock based on a waste rock bulk density of 1.5 tons/yd^3	37.6	35.7	37.3

Table 4-2. PR Aluminum Percent Reduction

	Presumptive Remedy Percent Reduction of Dissolved Al (µg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**PR (4)**	**PR (7)**	**PR (12)**	**PR Average**	**PR % reduction**	**Statistical Evaluation of PR % reduction**	
03/09/01	162,000	NS	NS	162,000	NS	NS	NS	NC	NC	Mean	99.96%
03/10/01	NS	891,000	NS	891,000	NS	NS	NS	NC	NC	Standard Error	0.02%
04/25/01	NS	NS	NS	NC	NS	NS	NS	NC	NC	Median	99.99%
05/02/01	750,000	NS	698,000	724,000	NS	53	69	61	99.99%	Standard Deviation	0.06%
05/17/01	753,000	NS	189,000	471,000	NS	53	53	53	99.99%	Sample Variance	0.00%
06/14/01	386,000	NS	37,800	211,900	NS	31	14	22	99.99%	Range	0.20%
07/16/01	480,000	NS	18,600	249,300	NS	212	NS	212	99.91%	Minimum	99.80%
07/17/01	NS	NS	36,300	36,300	NS	NS	NS	NC	NC	Maximum	99.99%
08/28/01	396,000	NS	1,090	198,545	NS	756	46	401	99.80%		
10/01/01	1,070,000	NS	57,100	563,550	NS	116	11	64	99.99%		
10/24/01	322,000	NS	138,000	230,000	71	55	55	60	99.97%		
06/04/02	3,120,000	3,170,000	2,100,000	2,796,667	139	586	540	422	99.98%		
08/15/02	NS	NS	NS	NC	263	356	252	290	NC		
10/22/02	2,950,000	1,870,000	338,000	1,719,333	115	161	42	106	99.99%		

NS – Sampled not submitted to laboratory due to lack of effluent
NC – Percent not calculated due to lack of data

Table 4-3. PR Iron Percent Reduction

Presumptive Remedy Percent Reduction of Dissolved Fe (µg/L)											
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**PR (4)**	**PR (7)**	**PR (12)**	**PR Average**	**PR % reduction**	**Statistical Evaluation of PR % reduction**	
03/09/01	644,000	NS	NS	644,000	NS	NS	NS	NC	NC	Mean	100.00%
03/10/01	NS	554,000	NS	554,000	NS	NS	NS	NC	NC	Standard Error	0.00%
04/25/01	NS	NS	NS	NC	NS	NS	NS	NC	NC	Median	100.00%
05/02/01	1,150,000	NS	488,000	819,000	NS	17	27	22	100.00%	Standard Deviation	0.00%
05/17/01	1,280,000	NS	8,860	644,430	NS	17	20	18	100.00%	Sample Variance	0.00%
06/14/01	1,250,000	NS	2,550	626,275	NS	26	19	23	100.00%	Range	0.01%
07/16/01	2,130,000	NS	6,600	1,068,300	NS	131	NS	131	99.99%	Minimum	99.99%
07/17/01	NS	NS	4,320	4,320	NS	NS	NS	NC	NC	Maximum	100.00%
08/28/01	1,070,000	NS	219	535,110	NS	102	35	68	99.99%		
10/01/01	5,680,000	NS	5,040	2,842,520	NS	8	8	8	100.00%		
10/24/01	9,910,000	NS	12,800	4,961,400	23	23	23	23	100.00%		
06/04/02	28,300,000	35,300,000	14,700	21,204,900	145	901	145	397	100.00%		
08/15/02	NS	NS	NS	NC	86	19	19	41	NC		
10/22/02	29,400,000	21,400,000	53,300	16,951,100	113	49	22	61	100.00%		

NS – Sampled not submitted to laboratory due to lack of effluent
NC – Not calculated due to lack of data

Table 4-4. PR Sulfate Percent Reduction

Presumptive Remedy Percent Reduction of SO_4 (mg/L)											
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**PR (4)**	**PR (7)**	**PR (12)**	**PR Average**	**PR % reduction**	**Statistical Evaluation of % reduction**	
03/09/01	27,100	NS	NS	27,100	NS	NS	321	321	98.82%	Mean	95.32%
03/10/01	NS	NS	NS	NC	NS	NS	NS	NC	NC	Standard Error	2.37%
04/25/01	12	NS	2,200	1,106	NS	286	NS	286	74.14%	Median	97.41%
05/02/01	NS	NS	NS	NC	NS	NS	NS	NC	NC	Standard Deviation	7.49%
05/17/01	11,700	NS	4,530	8,115	NS	271	238	255	96.86%	Sample Variance	0.56%
06/14/01	12,300	NS	3,490	7,895	NS	173	234	204	97.42%	Range	25.37%
07/16/01	16,590	NS	3,618	10,104	NS	221	NS	221	97.81%	Minimum	74.14%
07/17/01	NS	NS	NS	NC	NS	NS	NS	NC	NC	Maximum	99.52%
08/28/01	14,000	NS	3,200	8,600	NS	210	390	300	96.51%		
10/01/01	22,600	NS	3,850	13,225	NS	208	530	369	97.21%		
10/24/01	38,000	NS	4,500	21,250	540	360	710	537	97.47%		
06/04/02	91,000	110,000	17,000	72,667	210	350	490	350	99.52%		
08/15/02	NS	NS	NS	NC	190	330	560	360	NC		
10/22/02	77,000	66,000	19,000	54,000	280	430	3,500	1,403	97.40%		

NS – Sampled not submitted to lab due to lack of effluent
NC – Not calculated due to lack of data

5. MT^2 Envirobond Technology Performance

MT^2 treated each lift of waste rock by spraying a solution onto the waste rock that covered the surface area of each lift. The solution was mixed in a tank by recirculation. Table 5-1 shows the dosage rates for the MT^2 Envirobond treatment.

Tables 5-2 to 5-4 illustrate the percent reduction by the Envirobond treatment for dissolved aluminum, dissolved iron, and sulfate. The Envirobond treatment did achieve a 90% reduction or greater for aluminum and iron for the duration of the demonstration. The percent reduction mean was 99.98% and 99.99% for aluminum and iron respectively.

The Envirobond treatment did not achieve at least a 90% reduction for sulfate. The Envirobond sulfate values ranged from -2,313.89% to 88.37%, and the Envirobond treatment did not show a positive sulfate reduction until October 24, 2002. The negative percent reduction indicates an actual increase of sulfate when compared to the control cells, which may be due to an acceleration of sulfide oxidation from the hydrogen peroxide. The overall sulfate reduction mean was -275.04%.

Figure 5-1 shows the pH trend from the Envirobond treatment. The Envirobond treatment did increase the pH to within the discharge limits of the 6.5 and 8.8.

Figure 5-2 shows the TDS trend actually increased when compared to the control cells for the 2001 field season, and during the 2002 field season; the TDS declined but still did not make the discharge limit of 2,500 mg/L. The increase of the TDS values from the Envirobond treatment is due to the fact that the treatment increased concentrations of sulfate, potassium, and arsenic during the demonstration. This may be an initial affect that will change over time; however, it was not evident during this demonstration.

Figure 5-3 shows a similar trend for arsenic. The Envirobond treatment effluent had higher concentrations of arsenic during the 2001 field season when compared to the control cells and then decreased during the 2002 field season. The arsenic trend for the Envirobond treatment did not achieve the discharge limit of 190 μg/L during the demonstration. The arsenic increase from the Envirobond treatment may be caused from the liberation of arsenic that was originally tied with the iron in the waste rock.

Figure 5-4 illustrates the zinc trend for the Envirobond treatment, which was successful in meeting the 338 μg/L discharge limit with the exception of the October 1 and March 10, 2001, sampling events.

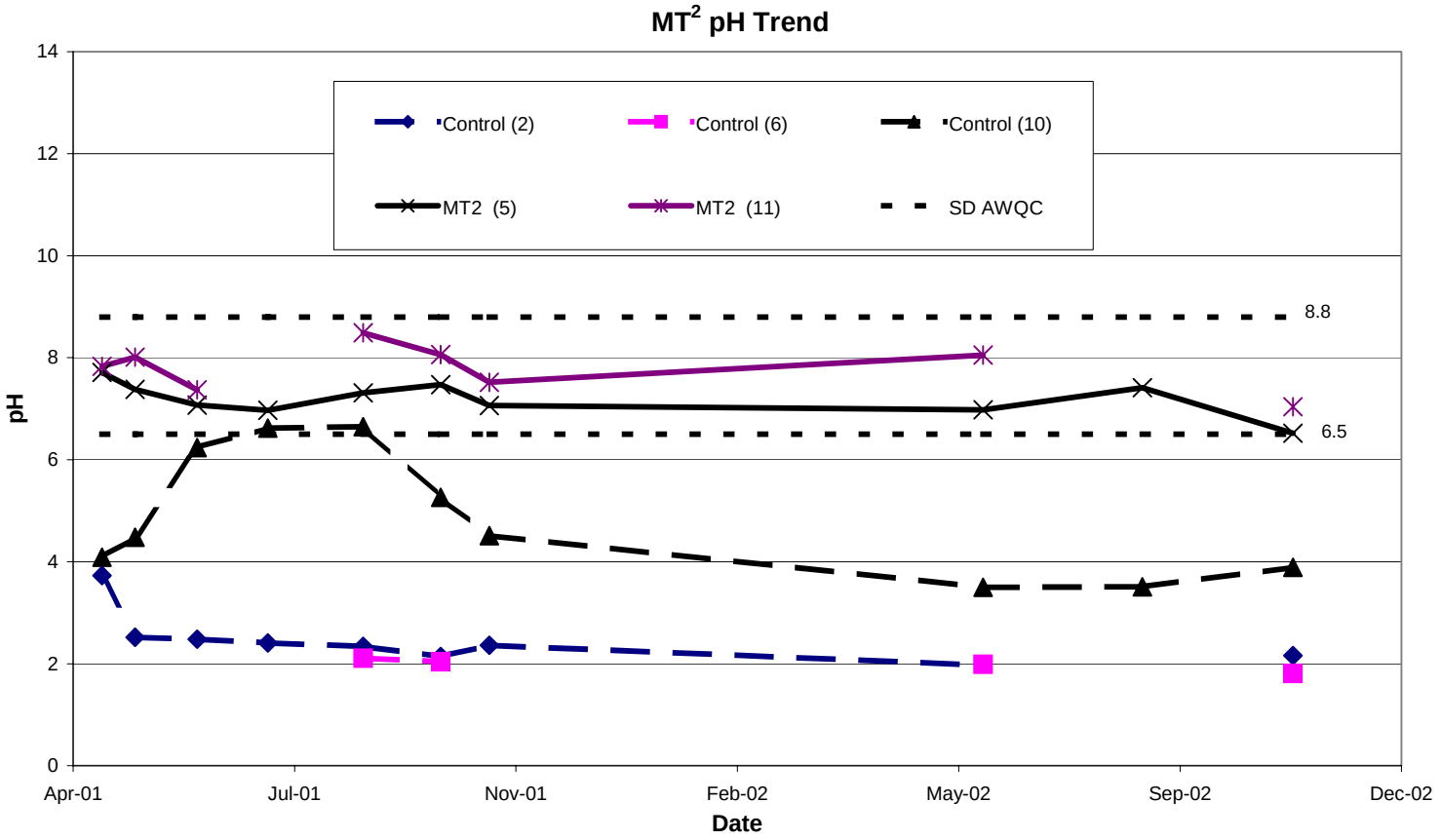

Figure 5-1. MT^2 pH trend.

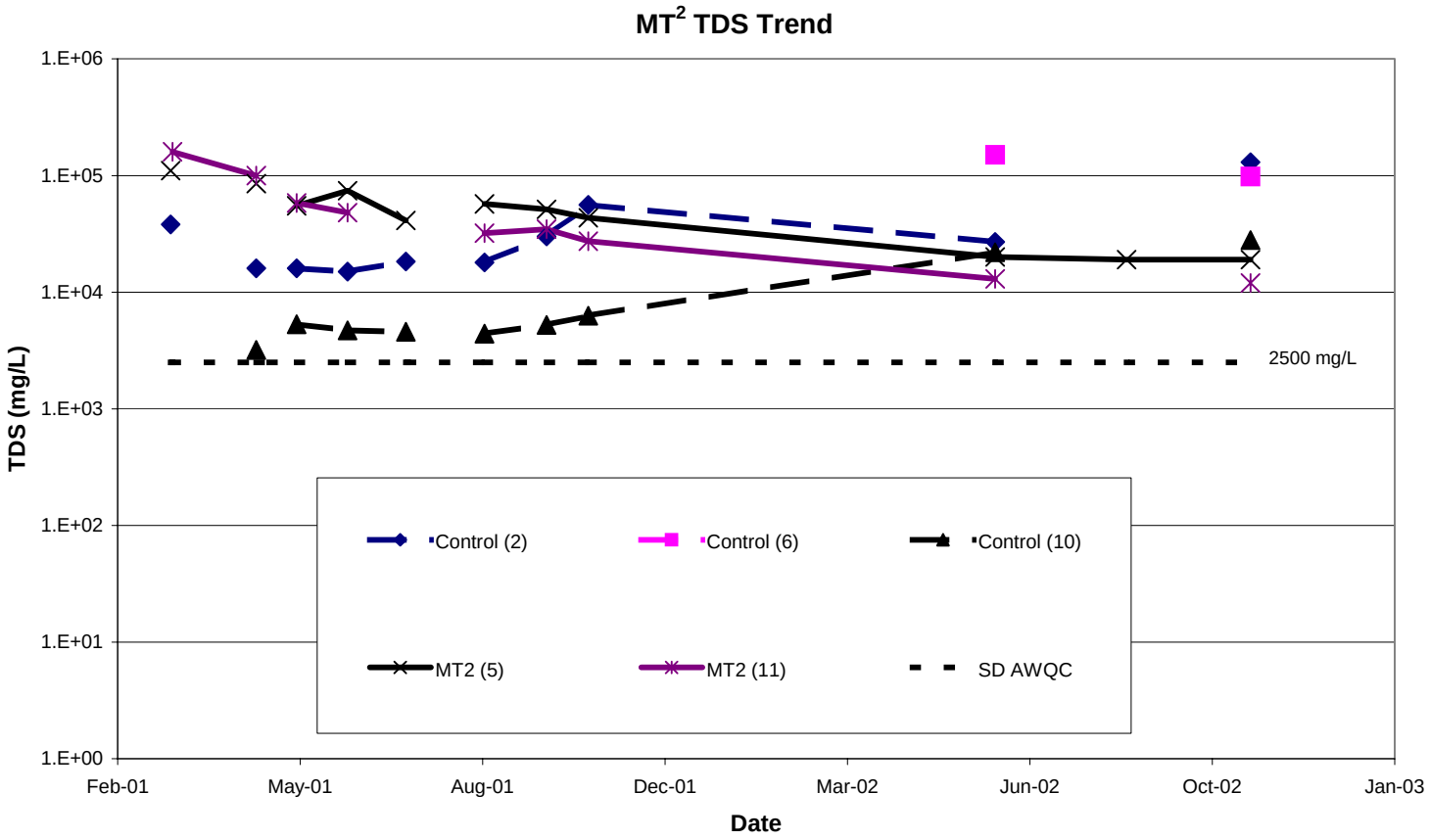

Figure 5-2. MT^2 TDS trend.

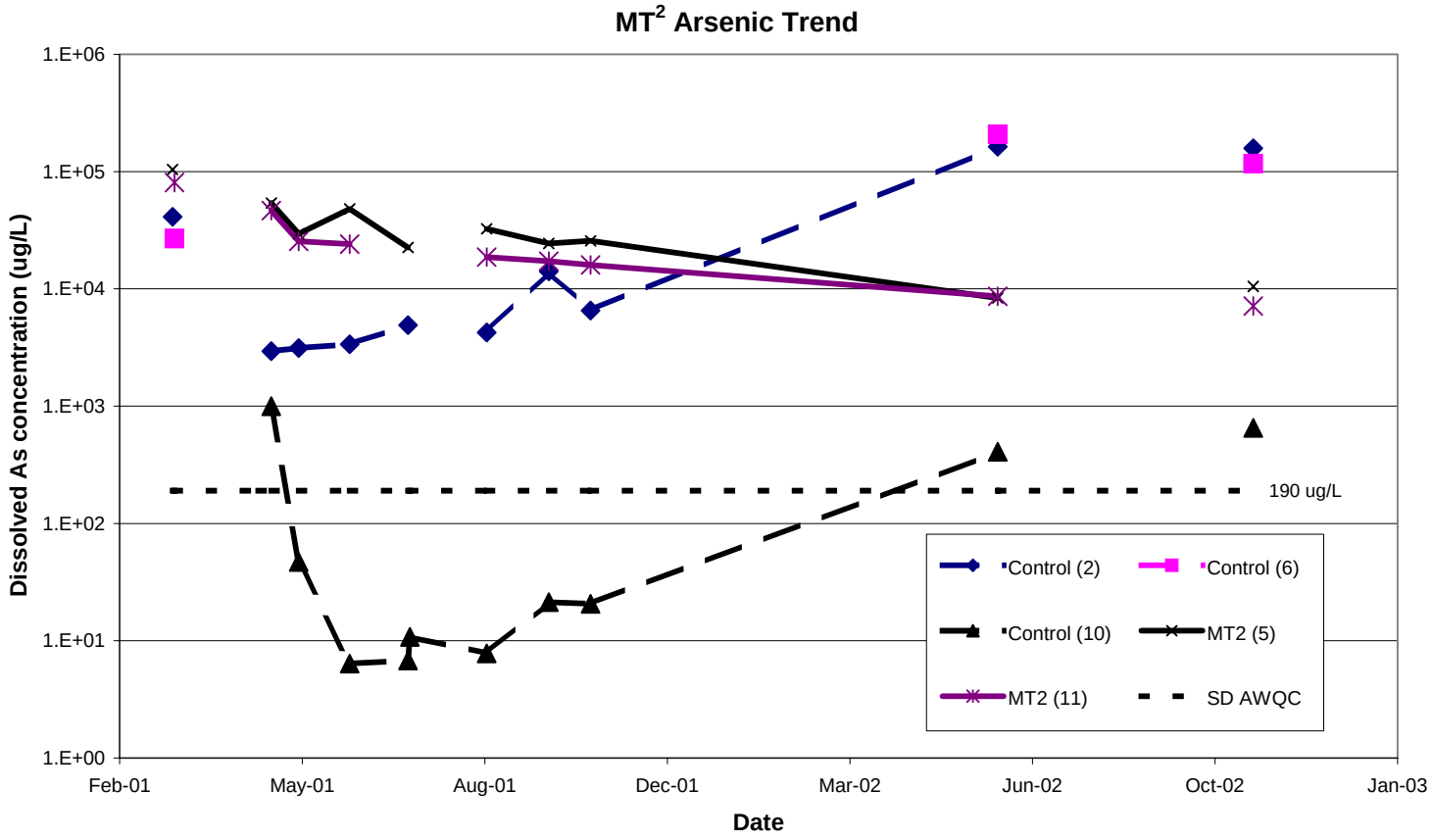

Figure 5-3. MT^2 arsenic trend.

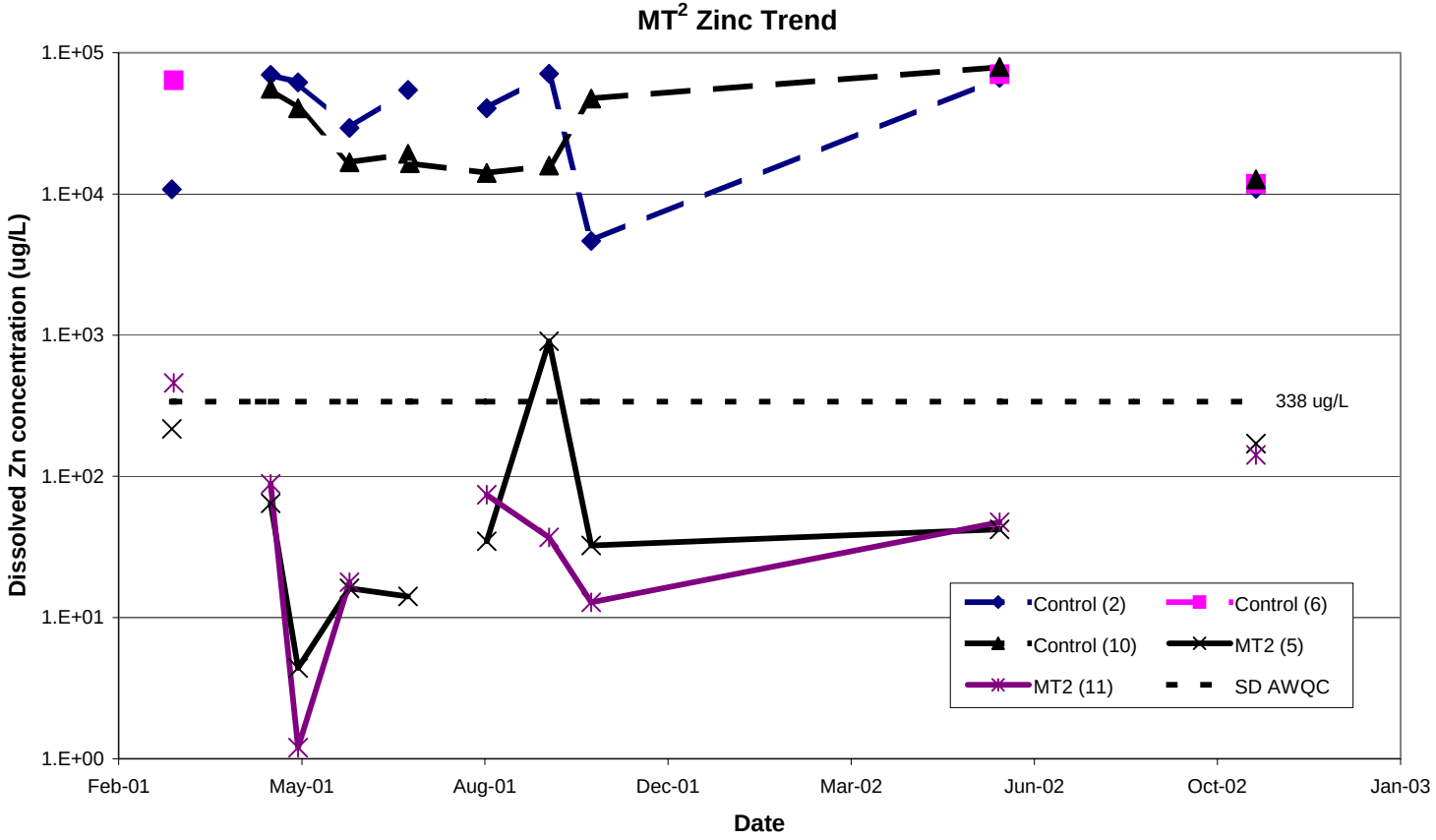

Figure 5-4. MT^2 zinc trend.

Table 5-1. MT^2 Envirobond Treatment Dosage Rates

Treatment Material	Cell 5	Cell 11	Dosage Rate per Ton of Waste Rock Based on a 1.5 tons/yd^3 Bulk Density
Waste rock	125 yd^3	125 yd^3	
Envirobond material	11,000 lb	11,000 lb	58.7 lb/ton
Hydrogen peroxide (50%)	88 gal	88 gal	0.47 gal/ton
Water	3,731	3,525	19.3 gal/ton (avg)

Table 5.2. MT^2 Aluminum Percent Reduction

MT^2 Percent Reduction of Dissolved Al (µg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**MT^2 (5)**	**MT^2 (11)**	**MT^2 Average**	**MT^2 % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	162,000	NS	NS	162,000	124	NS	124	99.92%	Mean	99.98%
03/10/01	NS	891,000	NS	891,000	NS	766	766	99.91%	Standard Error	0.01%
04/25/01	NS	NS	NS	NC	NS	NS	NC	NC	Median	99.99%
05/02/01	750,000	NS	698,000	724,000	100	187	143	99.98%	Standard Deviation	0.03%
05/17/01	753,000	NS	189,000	471,000	53	103	78	99.98%	Sample Variance	0.00%
06/14/01	386,000	NS	37,800	211,900	5	5	5	100.00%	Range	0.08%
07/16/01	480,000	NS	18,600	249,300	7	NS	7	100.00%	Minimum	99.91%
07/17/01	NS	NS	36,300	36,300	NS	NS	NS	NS	Maximum	100.00%
08/28/01	396,000	NS	1,090	198,545	7	7	7	100.00%		
10/01/01	1,070,000	NS	57,100	563,550	11	11	11	100.00%		
10/24/01	322,000	NS	138,000	230,000	55	55	55	99.98%		
06/04/02	3,120,000	3,170,000	2,100,000	2,796,667	139	388	264	99.99%		
08/15/02	NS	NS	NS	NC	NS	NS	NC	NC		
10/22/02	2,950,000	1,870,000	338,000	1,719,333	28	31	30	100.00%		

NS – Sampled not submitted to lab due to lack of effluent
NC – Not calculated due to lack of data

Table 5-3. MT^2 Iron Percent Reduction

MT^2 Percent Reduction of Dissolved Iron (µg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**MT^2 (5)**	**MT^2 (11)**	**MT^2 Average**	**MT^2 % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	644,000	NS	NS	644,000	103	NS	103	99.98%	Mean	99.99%
03/10/01	NS	554,000	NS	554,000	NS	299	299	99.95%	Standard Error	0.00%
04/25/01	NS	NS	NS	NC	NS	NS	NC	NC	Median	100.00%
05/02/01	1,150,000	NS	488,000	819,000	92	118	105	99.99%	Standard Deviation	0.02%
05/17/01	1,280,000	NS	8,860	644,430	54	39	47	99.99%	Sample Variance	0.00%
06/14/01	1,250,000	NS	2,550	626,275	19	19	19	100.00%	Range	0.05%
07/16/01	2,130,000	NS	6,600	1,068,300	22	NS	22	100.00%	Minimum	99.95%
07/17/01	NS	NS	4,320	4,320	NS	NS	NC	NC	Maximum	100.00%
08/28/01	1,070,000	NS	219	535,110	19	62	41	99.99%		
10/01/01	5,680,000	NS	5,040	2,842,520	8	8	8	100.00%		
10/24/01	9,910,000	NS	12,800	4,961,400	23	23	23	100.00%		
06/04/02	28,300,000	35,300,000	14,700	21,204,900	145	145	145	100.00%		
08/15/02	NS	NS	NS	NC	NS	NS	NC	NC		
10/22/02	29,400,000	21,400,000	53,300	16,951,100	18	18	18	100.00%		

NS – Sampled not submitted to lab due to lack of effluent
NC – Not calculated due to lack of data

Table 5-4. MT^2 Sulfate Percent Reduction

MT^2 Percent Reduction of Sulfate (mg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**MT^2 (5)**	**MT^2 (11)**	**MT^2 Average**	**MT^2 % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	27,100	NS	NS	27,100	34,200	NS	34,200	-26.20%	Mean	-275.04%
03/10/01	NS	NS	NS	NC	NS	26,400	26,400	NC	Standard Error	228.75%
04/25/01	12	NS	2,200	1,106	27,300	26,100	26,700	-2313.89%	Median	-63.39%
05/02/01	NS	NS	NS	NC	NS	NS	NC	NC	Standard Deviation	723.36%
05/17/01	11,700	NS	4,530	8,115	NS	19,100	20,550	-153.23%	Sample Variance	5232.56%
06/14/01	12,300	NS	3,490	7,895	35,200	17,000	26,100	-230.59%	Range	2402.26%
07/16/01	16,590	NS	3,618	10,104	18,921	NS	18,921	-87.26%	Minimum	-2313.89%
07/17/01	NS	NS	NS	NC	NS	NS	NC	NC	Maximum	88.37%
08/28/01	14,000	NS	3,200	8,600	22,000	12,000	17,000	-97.67%		
10/01/01	22,600	NS	3,850	13,225	22,300	14,600	18,450	-39.51%		
10/24/01	38,000	NS	4,500	21,250	20,000	12,000	16,000	24.71%		
06/04/02	91,000	110,000	17,000	72,667	11,000	5,900	8,450	88.37%		
08/15/02	NS	NS	NS	NC	180	NS	180	NC		
10/22/02	77,000	66,000	19,000	54,000	11,000	5,300	8,150	84.91%		

NS – Sampled not submitted to lab due to lack of effluent
NC – Not calculated due to lack of data

6. UNR Technology Performance

The UNR Permanganate Passivation technology was applied to the waste rock in two phases. The first phase involved mixing magnesium oxide and CaO with the waste rock with a front-end loader. During the second phase, a mixture of water, caustic soda, and potassium permanganate was sprayed on the waste rock after each lift was loaded into the cells.

Table 6-1 shows the dosage rates used by UNR.

Tables 6-1 and 6-2 show the aluminum and iron trends for UNR's Permanganate Passivation treatment technology. Both the aluminum and iron trends achieved at least a 90% reduction when compared to the control cells. The aluminum and iron reduction means were 99.97% and 99.99% respectively.

Table 6-3 shows that the sulfate trend for the Permanganate Passivation technology did not achieve 90% reduction with the exception of the October 24, 2001, and October 22, 2002, sampling events. The mean sulfate reduction was 73.43% when compared to the control cells.

Figures 6-1 to 6-4 illustrate the UNR Permanganate Passivation trends for pH, TDS, dissolved aluminum, and dissolved iron. The UNR Permanganate Passivation pH trend ranges from 3.81 to 10.05 and shows a general increase of pH when compared to the control cells with 9 of 14 sample values within the discharge limits of 6.5 and 8.8.

Figure 6-2 shows a general decrease in the TDS concentration when compared to the control cells and trends very close to the discharge limit of 2,500 mg/L.

The arsenic trend (Figure 6-3) shows that with the exception of the August 15, 2002, sampling event, the Permanganate Passivation technology did reduce the arsenic concentrations to below the discharge limit of 190 μg/L.

The Permanganate Passivation technology was successful in reducing the zinc concentration (Figure 6-4) to below the discharge limit of 338 μg/L for the duration of the demonstration.

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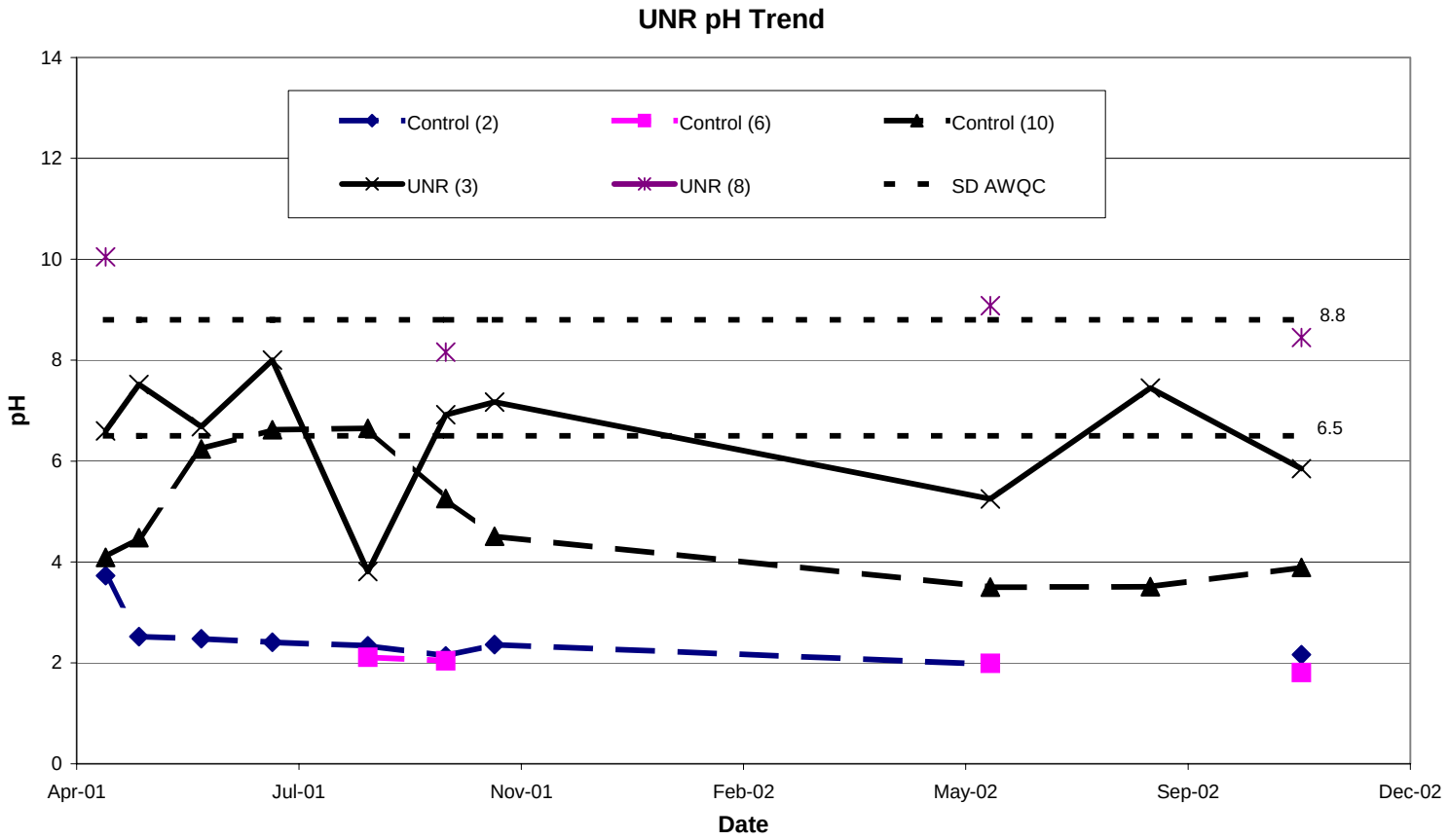

Figure 6-1. UNR pH trend.

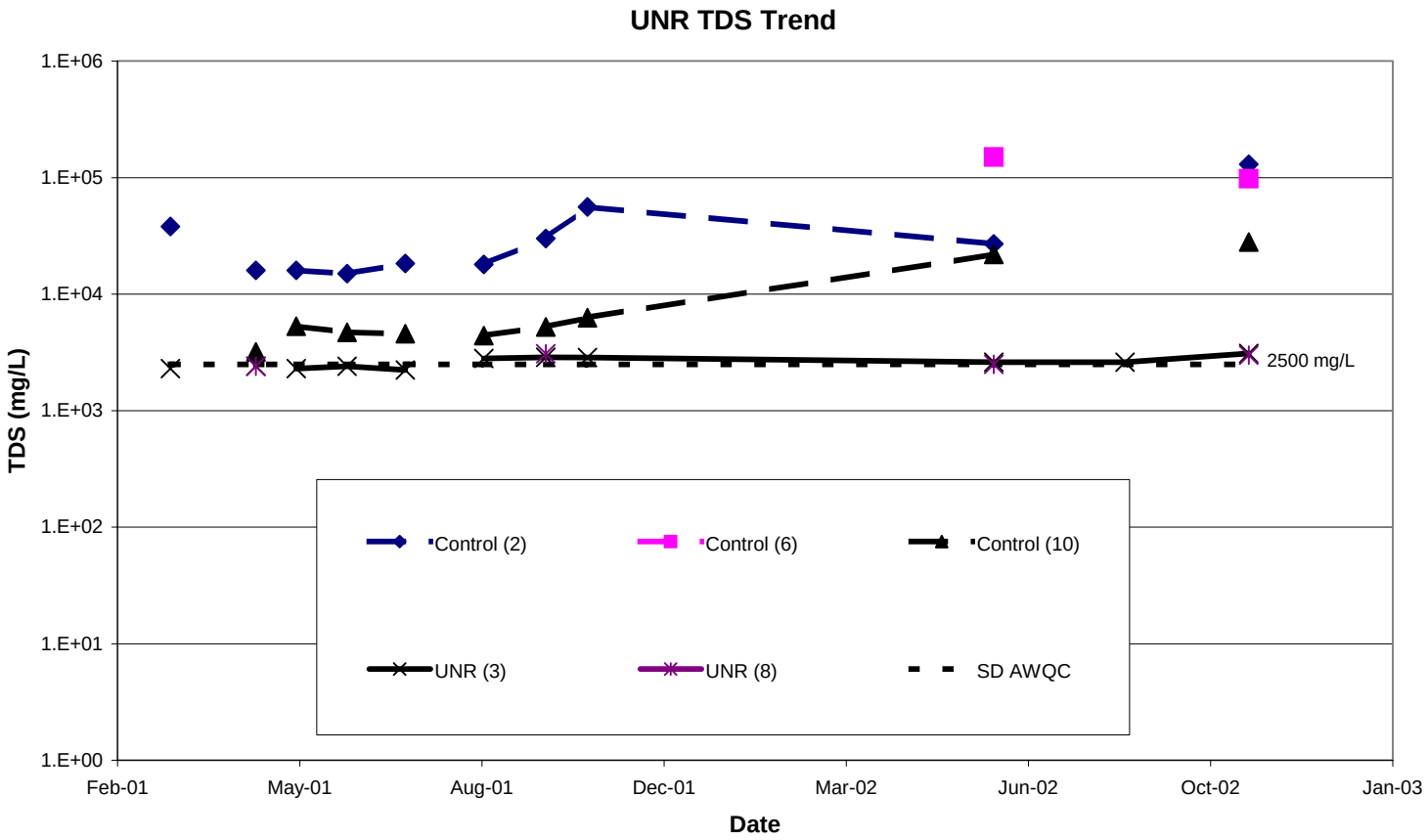

Figure 6-2. UNR TDS trend

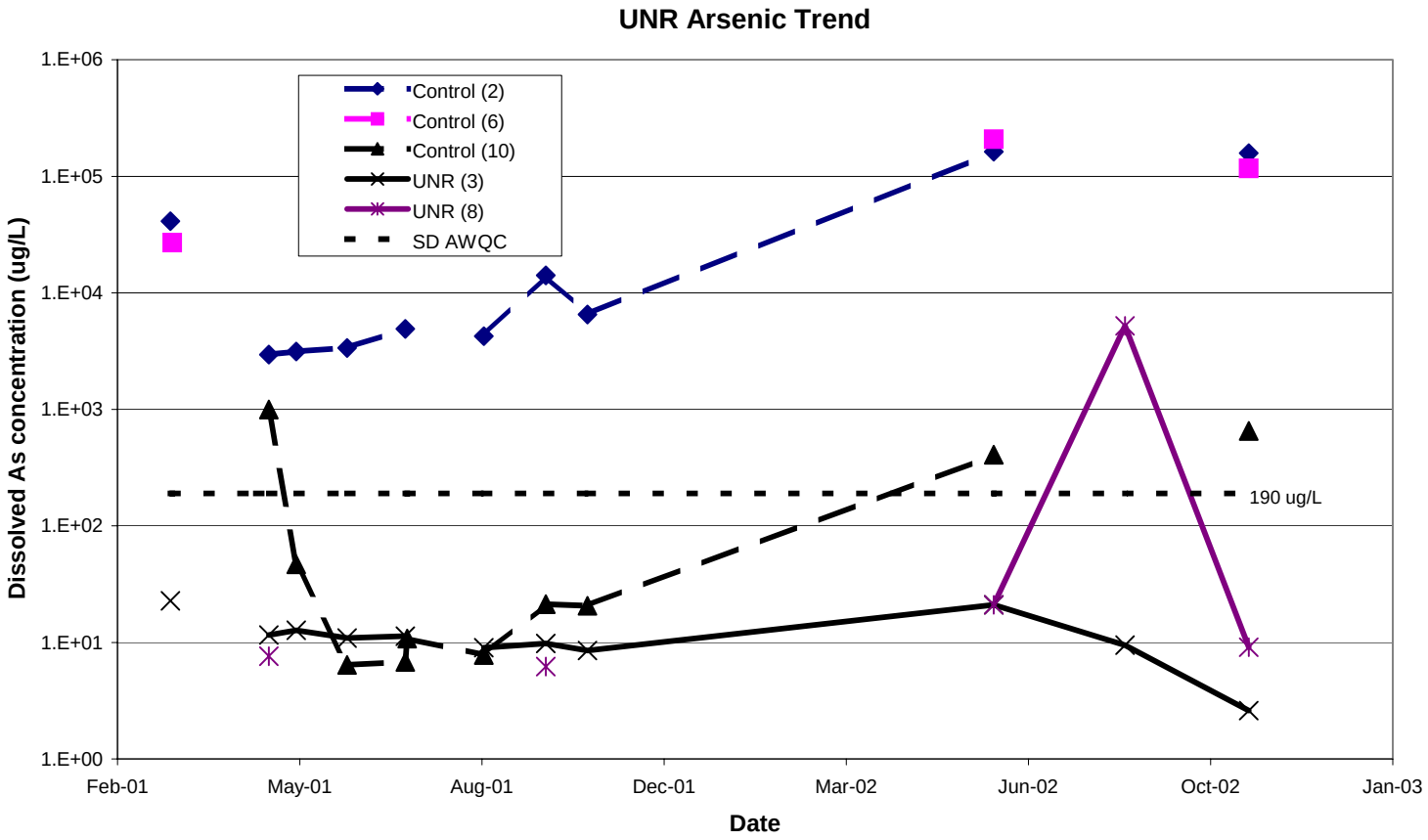

Figure 6-3. UNR arsenic trend.

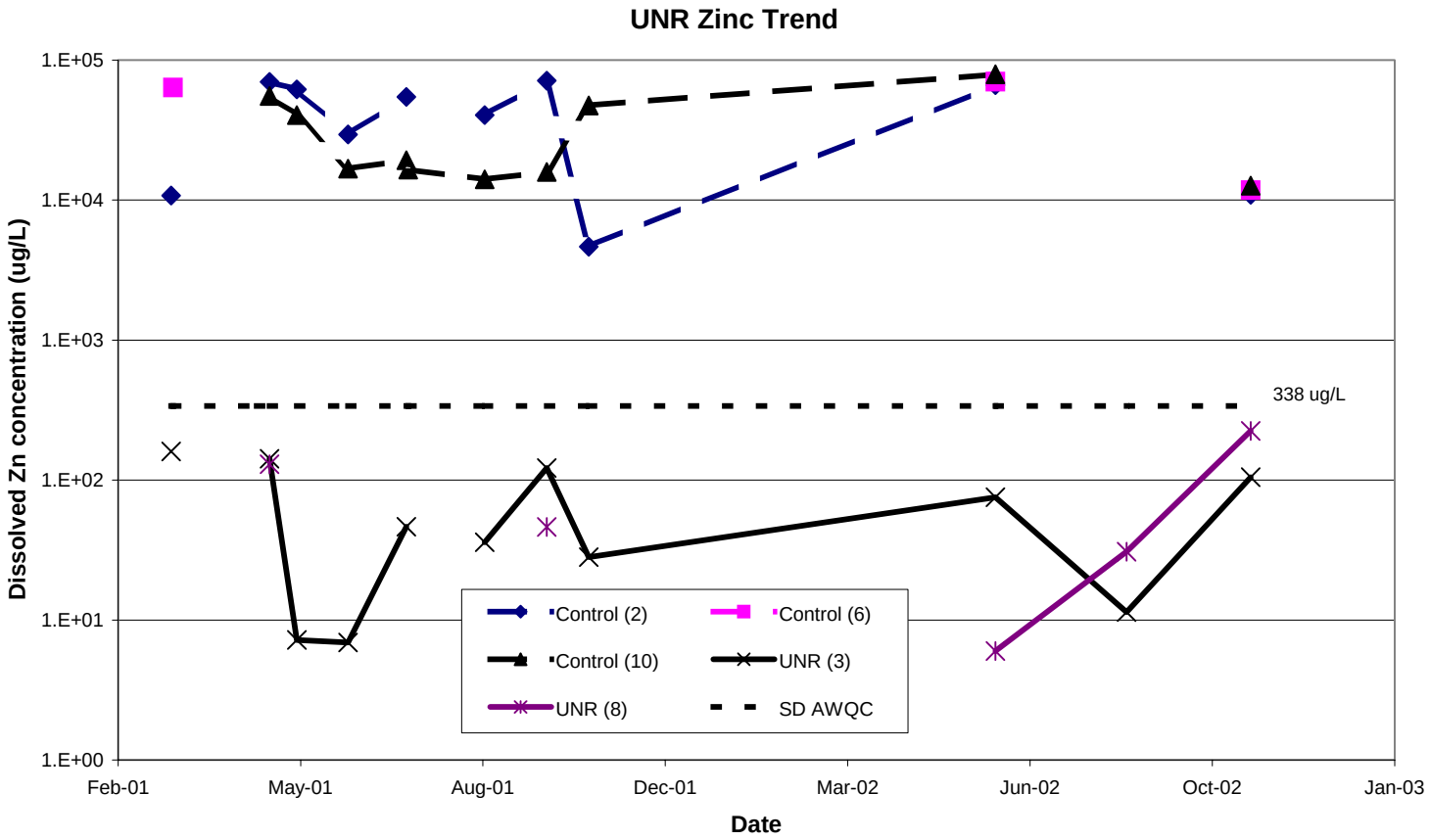

Figure 6-4. UNR zinc trend.

Table 6-1. UNR Passivation Technology Dosage Rates

Treatment Material	Cell 3	Cell 8	Per Ton Basis Based on a 1.5 tons/yd^3 Bulk Density
Waste rock	125 yd^3	125 yd^3	
Water	450 gal	450 gal	2.4 gal/ton
Potassium Permanganate	144 lb	144 lb	0.77 lb/ton
Caustic Soda	54 lb	54 lb	0.29 lb/ton
Magnesium Oxide	764 lb	764 lb	4.1 lb/ton
CaO	1,908 lb	1,908 lb	10.2 lb/ton

Table 6-2. UNR Aluminum Percent Reduction

	UNR Percent Reduction of Dissolved Aluminum (µg/L)									
Date	Control (2)	Control (6)	Control (10)	Control Average	UNR (3)	UNR (8)	UNR Average	UNR % Reduction	Statistical Evaluation of % reduction	
03/09/01	162,000	NS	NS	162,000	144	NS	144	99.91%	Mean	99.97%
03/10/01	NS	891,000	NS	891,000	NS	NS	NC	NC	Standard Error	0.01%
04/25/01	NS	NS	NS	NC	NS	NS	NC	NC	Median	99.98%
05/02/01	750,000	NS	698,000	724,000	53	53	53	99.99%	Standard Deviation	0.03%
05/17/01	753,000	NS	189,000	471,000	53	NS	53	99.99%	Sample Variance	0.00%
06/14/01	386,000	NS	37,800	211,900	43	NS	43	99.98%	Range	0.09%
07/16/01	480,000	NS	18,600	249,300	179	NS	179	99.93%	Minimum	99.91%
07/17/01	NS	NS	36,300	36,300	NS	NS	NC	NC	Maximum	100.00%
08/28/01	396,000	NS	1,090	198,545	54	NS	54	99.97%		
10/01/01	1,070,000	NS	57,100	563,550	11	11	11	100.00%		
10/24/01	322,000	NS	138,000	230,000	55	NS	55	99.98%		
06/04/02	3,120,000	3,170,000	2,100,000	2,796,667	139	512	326	99.99%		
08/15/02	NS	NS	NS	NC	268	170	219	NC		
10/22/02	2,950,000	1,870,000	338,000	1,719,333	48	28	38	100.00%		

NS – Sampled not submitted to laboratory due to lack of effluent
NC – Not calculated due to lack of data

Table 6-3. UNR Iron Percent Reduction

UNR Percent Reduction of Dissolved Iron (µg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**UNR (3)**	**UNR (8)**	**UNR Average**	**UNR % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	644,000	NS	NS	644,000	559	NS	559	99.91%	Mean	99.99%
03/10/01	NS	554,000	NS	554,000	NS	NS	NC	NC	Standard Error	0.01%
04/25/01	NS	NS	NS	NC	NS	NS	NC	NC	Median	100.00%
05/02/01	1,150,000	NS	488,000	819,000	17	17	17	100.00%	Standard Deviation	0.03%
05/17/01	1,280,000	NS	8,860	644,430	17	NS	17	100.00%	Sample Variance	0.00%
06/14/01	1,250,000	NS	2,550	626,275	19	NS	19	100.00%	Range	0.09%
07/16/01	2,130,000	NS	6,600	1,068,300	189	NS	189	99.98%	Minimum	99.91%
07/17/01	NS	NS	4,320	4,320	NS	NS	NC	NC	Maximum	100.00%
08/28/01	1,070,000	NS	219	535,110	20	NS	20	100.00%		
10/01/01	5,680,000	NS	5,040	2,842,520	28	8	18	100.00%		
10/24/01	9,910,000	NS	12,800	4,961,400	23	NS	23	100.00%		
06/04/02	28,300,000	35,300,000	14,700	21,204,900	940	538	739	100.00%		
08/15/02	NS	NS	NS	NC	19	66	43	NC		
10/22/02	29,400,000	21,400,000	53,300	16,951,100	18	18	18	100.00%		

NS – Sampled not submitted to laboratory due to lack of effluent
NC – Not calculated due to lack of data

Table 6-4. UNR Sulfate Percent Reduction

UNR Percent Reduction of Dissolved Sulfate (µg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**UNR (3)**	**UNR (8)**	**UNR Average**	**UNR % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	27,100	NS	NS	27,100	1,710	NS	1,710	93.69%	Mean	73.43%
03/10/01	NS	NS	NS	NC	NS	NS	NC	NC	Standard Error	12.20%
04/25/01	12	NS	2,200	1,106	1,330	1,650	1,490	-34.71%	Median	83.42%
05/02/01	NS	NS	NS	NC	NS	NS	NC	NC	Standard Deviation	38.58%
05/17/01	11,700	NS	4,530	8,115	1,660	NS	1,660	79.54%	Sample Variance	14.88%
06/14/01	12,300	NS	3,490	7,895	1,790	NS	1,790	77.33%	Range	130.91%
07/16/01	16,590	NS	3,618	10,104	1,826	NS	1,826	81.93%	Minimum	-34.71%
07/17/01	NS	NS	NS	NC	NS	NS	NC	NC	Maximum	96.20%
08/28/01	14,000	NS	3,200	8,600	2,000	NS	2,000	76.74%		
10/01/01	22,600	NS	3,850	13,225	1,920	2,070	1,995	84.91%		
10/24/01	38,000	NS	4,500	21,250	2,100	NS	2,100	90.12%		
06/04/02	91,000	110,000	17,000	72,667	15,000	1,700	8,350	88.51%		
08/15/02	NS	NS	NS	NC	1,900	NS	1,900	NC		
10/22/02	77,000	66,000	19,000	54,000	2,100	2,000	2,050	96.20%		

NS – Sampled not submitted to laboratory due to lack of effluent
NC – Not calculated due to lack of data

7. KEECO SME Technology Performance

KEECO applied its SME treatment as a liquid spray similar to the MT^2 treatment (i.e., mixed the treatment material with water in a tank by recirculation). Once each lift was placed, KEECO personnel would spray the treatment solution on the surface area of the waste rock. Table 7-1 shows the dosage rates for the KEECO SME treatment.

Tables 7-2 to 7-4 outline the KEECO SME treatment percent reduction of dissolved aluminum, dissolved iron, and sulfate.

The SME treatment did reduce the aluminum concentration (Table 7-2) by at least 90% during the 2001 field season; however, it failed to do so during the 2002 season. The SME aluminum reduction mean is 88.14%.

The SME iron reduction (Table 7-3) had a similar trend in that the treatment achieved at least a 90% reduction until the last sampling event on October 22, 2002. The mean iron reduction of the SME treatment is 94.82%.

Table 7-4 shows the sulfate trend for the SME treatment achieved 90% reduction only once on June 4, 2002. The SME sulfate reduction mean is 33.18%.

Figures 7-1 to 7-4 show the KEECO SME treatment trends for pH, TDS, dissolved arsenic, and dissolved zinc compared to the site discharge standards and the control cells.

The SME pH trend (Figure 7-1) ranges from 7.92 to 1.99 and starts near the lower discharge limit of 6.5 but then falls below the limit during the 2002 season.

The SME TDS concentrations (Figure 7-2) stay near the discharge limit of 2,500 mg/L during the 2001 field season but increase during the 2002 field season to above the discharge limit.

The SME arsenic trend (Figure 7-3) starts below the discharge limit of 190 μg/L but then increases to above the limit during the 2002 season.

Figure 7-4 shows the SME zinc trend is above the discharge limit of 338 μg/L, with the exception of the August 28, 2001, sampling event.

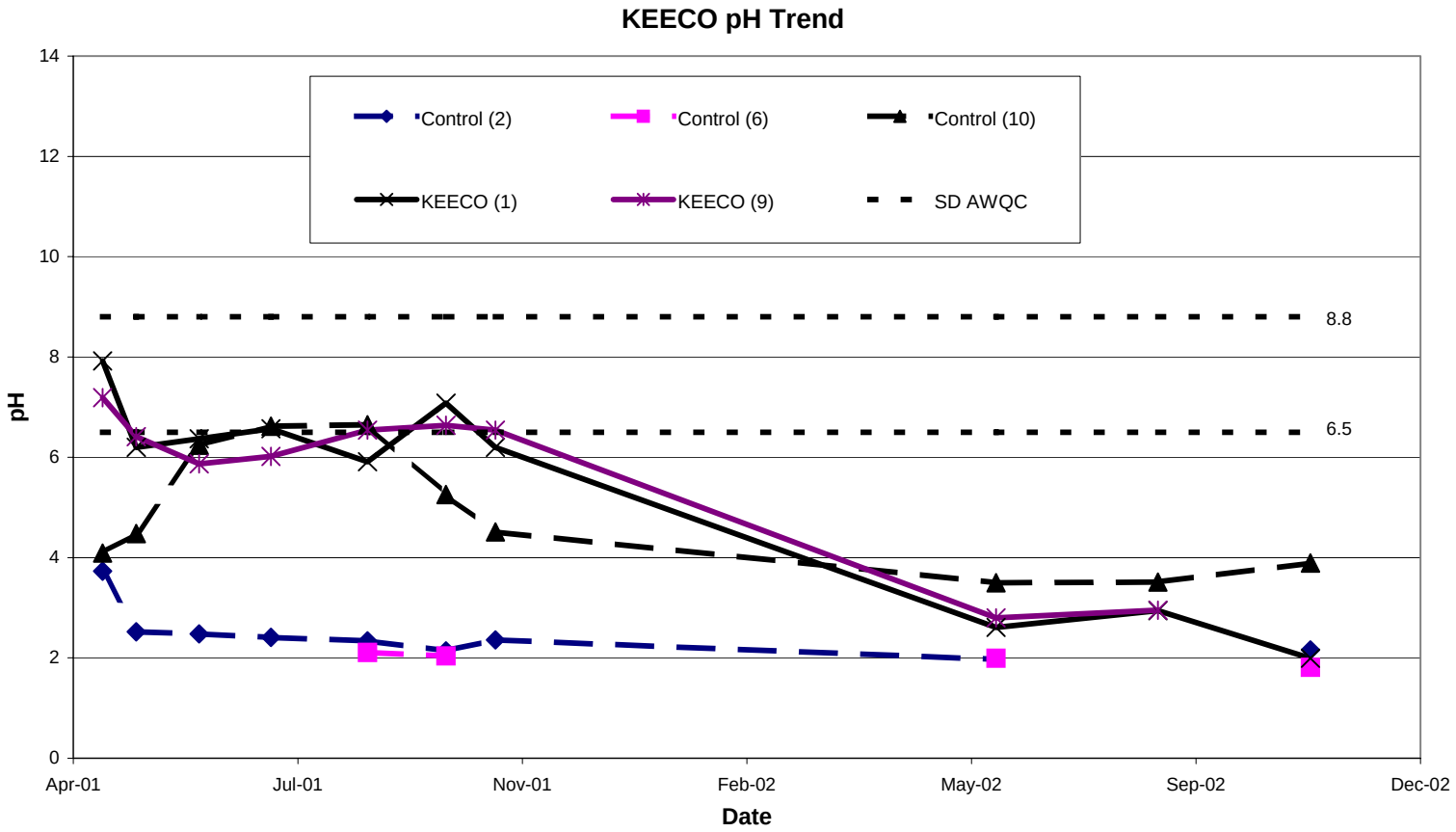

Figure 7-1. KEECO pH trend.

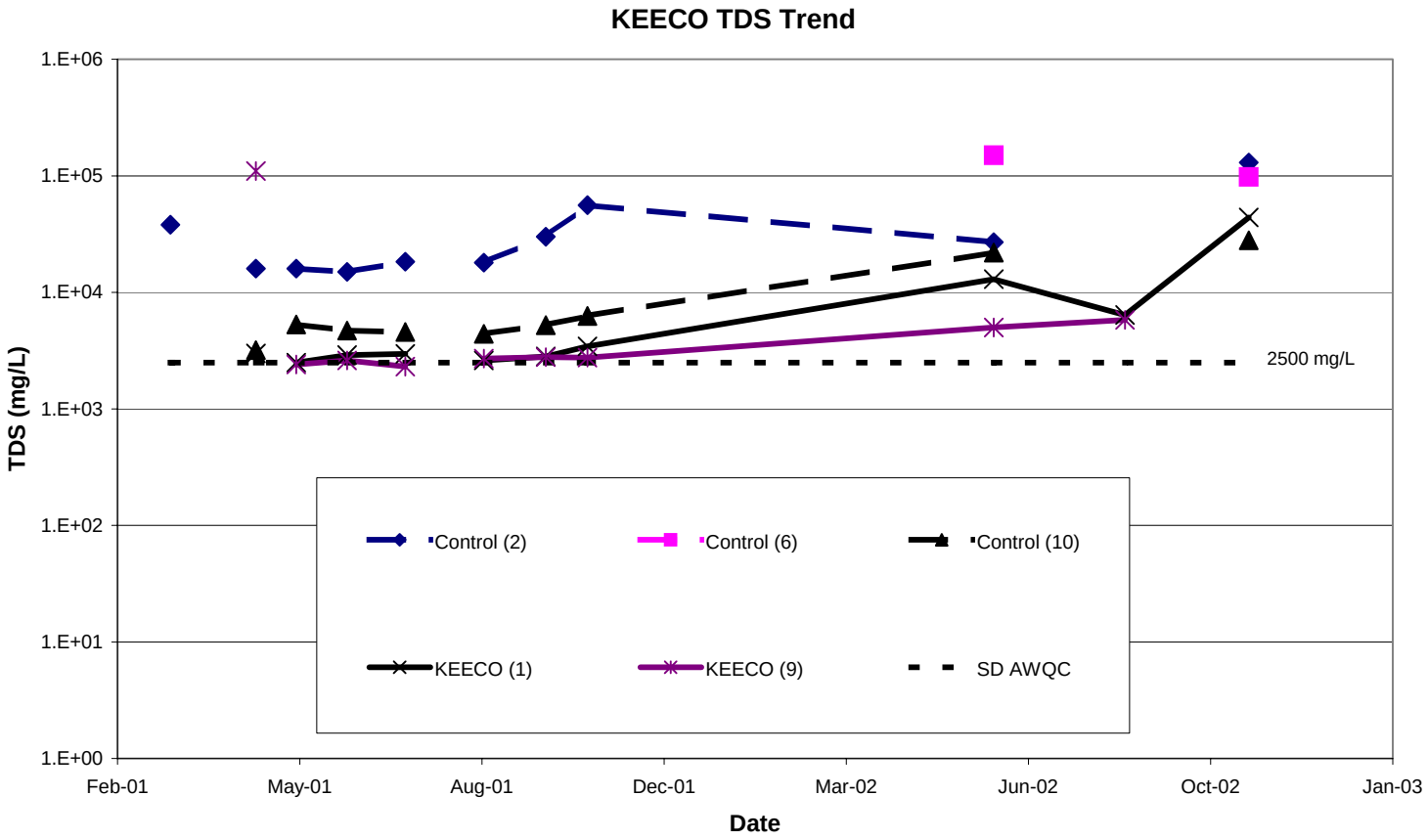

Figure 7-2. KEECO TDS trend.

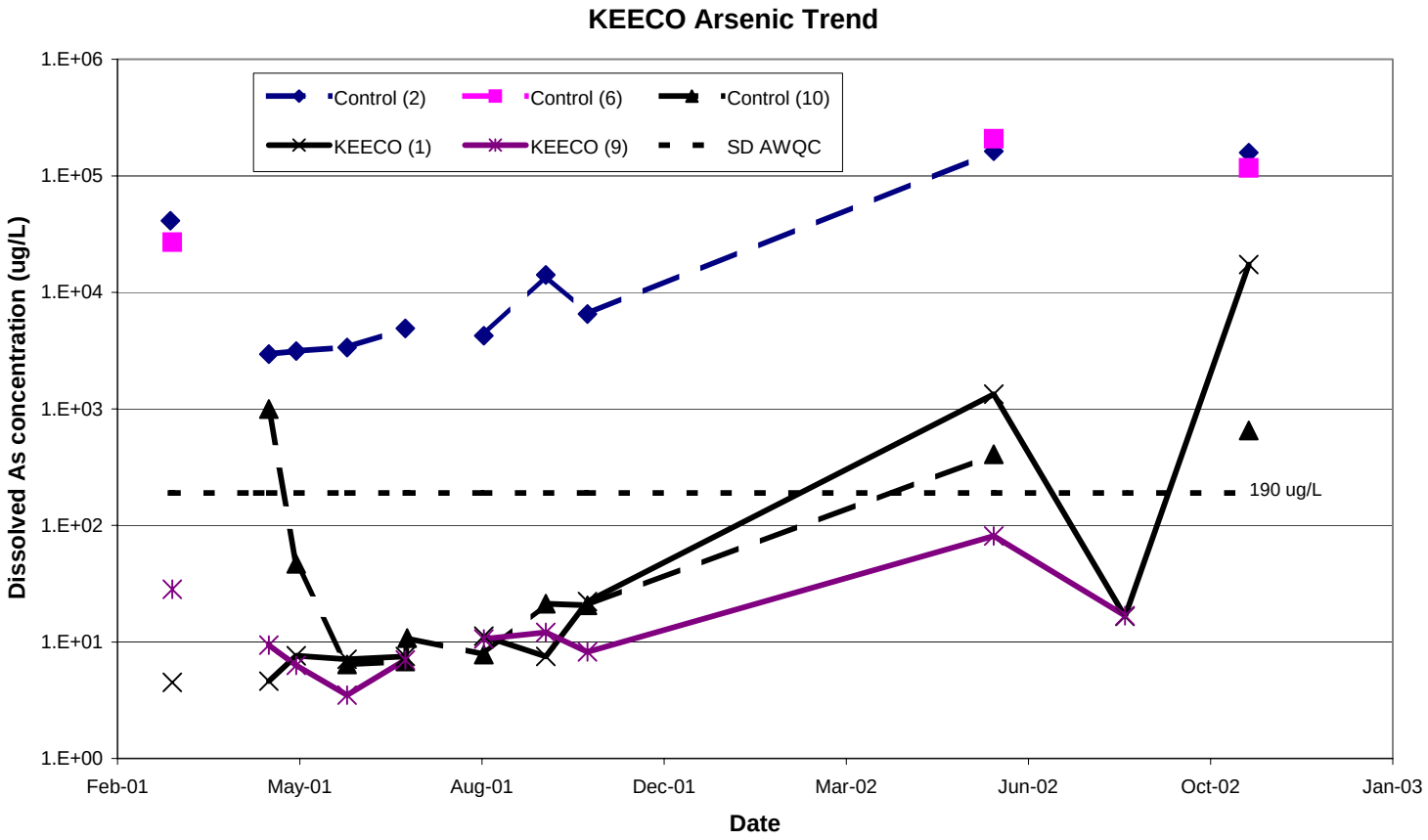

Figure 7-3. KEECO arsenic trend.

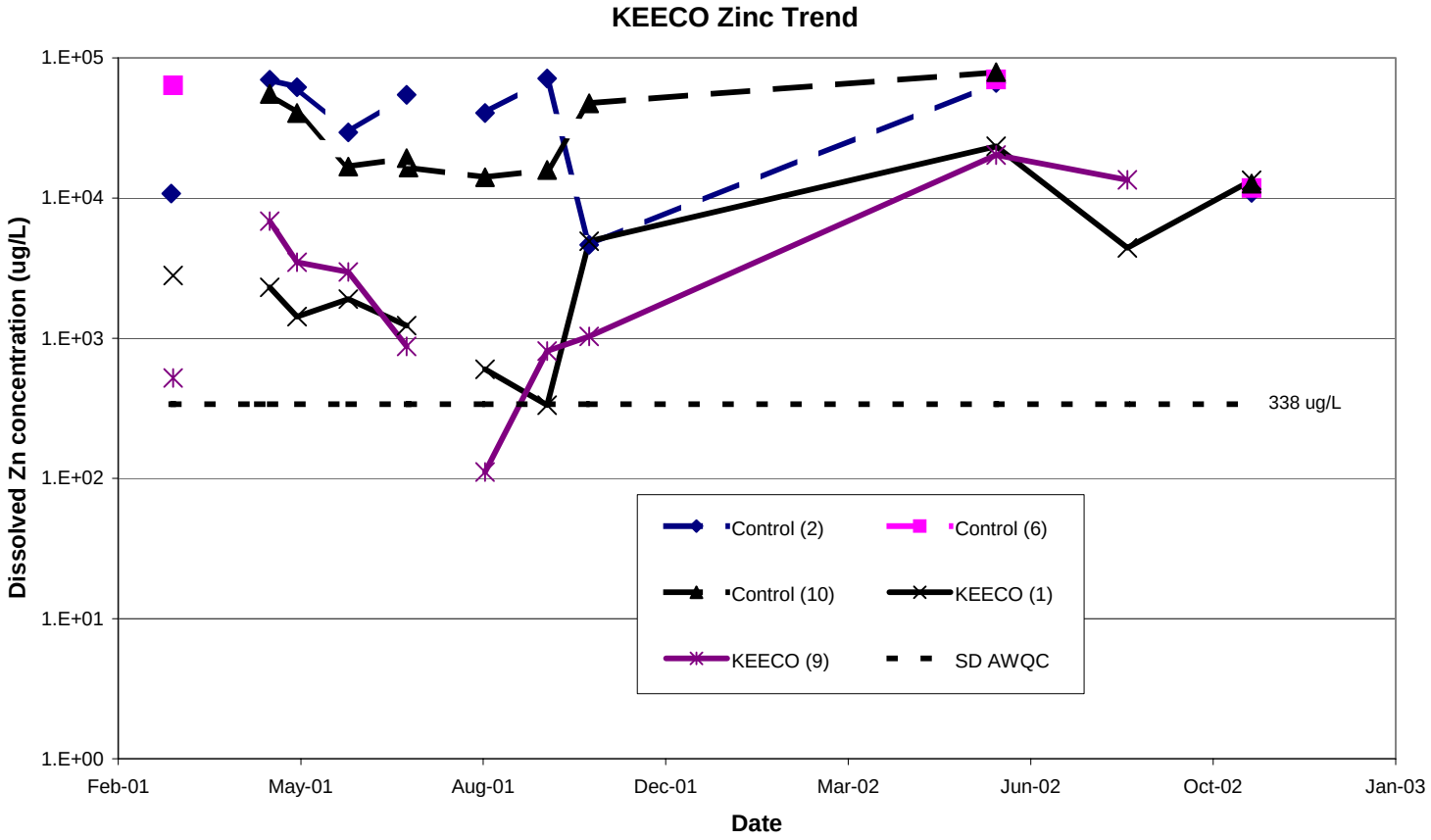

Figure 7-4. KEECO zinc trend.

Table 7-1. KEECO SME Technology Dosage Rates

Treatment Material	Cell 1	Cell 9	Per Ton Dosage Rates Based on a 1.5
Waste rock	125 yd^3	125 yd^3	
KEECO Material	2,250 lb	2,250 lb	12 lb/ton
Water	1,800 gal	1,800 gal	9.6 gal/ton

Table 7-2. KEECO Aluminum Percent Reduction

KEECO Percent Reduction of Dissolved Aluminum (µg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**KEECO (1)**	**KEECO (9)**	**KEECO Average**	**KEECO % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	162,000	NS	NS	162,000	NS	NS	NC	NC	Mean	88.14%
03/10/01	NS	891,000	NS	891,000	2,040	218	1,129	99.87%	Standard Error	9.25%
04/25/01	NS	NS	NS	NC	NS	NS	NC	NC	Median	98.65%
05/02/01	750,000	NS	698,000	724,000	4,350	23,400	13,875	98.08%	Standard Deviation	29.25%
05/17/01	753,000	NS	189,000	471,000	168	7,260	3,714	99.21%	Sample Variance	8.55%
06/14/01	386,000	NS	37,800	211,900	4,130	9,700	6,915	96.74%	Range	94.10%
07/16/01	480,000	NS	18,600	249,300	1,030	1,700	1,365	99.45%	Minimum	5.78%
07/17/01	NS	NS	36,300	36,300	NS	NS	NC	NC	Maximum	99.87%
08/28/01	396,000	NS	1,090	198,545	666	135	401	99.80%		
10/01/01	1,070,000	NS	57,100	563,550	62	1,380	721	99.87%		
10/24/01	322,000	NS	138,000	230,000	12,000	2,590	7,295	96.83%		
06/04/02	3,120,000	3,170,000	2,100,000	2,796,667	598,000	198,000	398,000	85.77%		
08/15/02	NS	NS	NS	NC	50,400	77,700	64,050	NC		
10/22/02	2,950,000	1,870,000	338,000	1,719,333	1,620,000	NS	1,620,000	5.78%		

NS – Sampled not submitted to laboratory due to lack of effluent
NC – Not calculated due to lack of data

Table 7-3 KEECO Iron Percent Reduction

KEECO Percent Reduction of Dissolved Iron (µg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**KEECO (1)**	**KEECO (9)**	**KEECO Average**	**KEECO % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	644,000	NS	NS	644,000	NS	NS	NC	NC	Mean	94.82%
03/10/01	NS	554,000	NS	554,000	16	818	417	99.92%	Standard Error	4.57%
04/25/01	NS	NS	NS	NC	NS	NS	NC	NC	Median	99.85%
05/02/01	1,150,000	NS	488,000	819,000	2,520	9,630	6,075	99.26%	Standard Deviation	14.44%
05/17/01	1,280,000	NS	8,860	644,430	19	144	81	99.99%	Sample Variance	2.08%
06/14/01	1,250,000	NS	2,550	626,275	11,700	12,400	12,050	98.08%	Range	46.18%
07/16/01	2,130,000	NS	6,600	1,068,300	22	333	178	99.98%	Minimum	53.81%
07/17/01	NS	NS	4,320	4,320	NS	NS	NC	NC	Maximum	99.99%
08/28/01	1,070,000	NS	219	535,110	1,710	158	934	99.83%		
10/01/01	5,680,000	NS	5,040	2,842,520	15	398	206	99.99%		
10/24/01	9,910,000	NS	12,800	4,961,400	10,200	2,830	6,515	99.87%		
06/04/02	28,300,000	35,300,000	14,700	21,204,900	929,000	127,000	528,000	97.51%		
08/15/02	NS	NS	NS	NC	9,720	12,000	10,860	NC		
10/22/02	29,400,000	21,400,000	53,300	16,951,100	7,830,000	NS	7,830,000	53.81%		

NS – Sampled not submitted to laboratory due to lack of effluent
NC – Not calculated due to lack of data

Table 7-4. KEECO Sulfate Percent Reduction

KEECO Percent Reduction of Sulfate (mg/L)										
Date	**Control (2)**	**Control (6)**	**Control (10)**	**Control Average**	**KEECO (1)**	**KEECO (9)**	**KEECO Average**	**KEECO % Reduction**	**Statistical Evaluation of % reduction**	
03/09/01	27,100	NS	NS	27,100	NS	NS	NC	NC	Mean	33.18%
03/10/01	NS	NS	NS	NC	NS	NS	NC	NC	Standard Error	44.02%
04/25/01	12	NS	2,200	1,106	1,990	7,230	4,610	-316.78%	Median	77.91%
05/02/01	NS	NS	NS	NC	NS	NS	NC	NC	Standard Deviation	132.07%
05/17/01	11,700	NS	4,530	8,115	2,050	1,970	2,010	75.23%	Sample Variance	174.43%
06/14/01	12,300	NS	3,490	7,895	2,110	1,980	2,045	74.10%	Range	407.01%
07/16/01	16,590	NS	3,618	10,104	2,059	1,609	1,834	81.85%	Minimum	-316.78%
07/17/01	NS	NS	NS	NC	NS	NS	NC	NC	Maximum	90.23%
08/28/01	14,000	NS	3,200	8,600	2,000	1,800	1,900	77.91%		
10/01/01	22,600	NS	3,850	13,225	1,810	1,910	1,860	85.94%		
10/24/01	38,000	NS	4,500	21,250	2,500	2,000	2,250	89.41%		
06/04/02	91,000	110,000	17,000	72,667	9,100	5,100	7,100	90.23%		
08/15/02	NS	NS	NS	NC	4,900	4,400	4,650	NC		
10/22/02	77,000	66,000	19,000	54,000	32,000	NS	32,000	40.74%		

NS – Sampled not submitted to lab due to lack of effluent
NC – Not calculated due to lack of data

8. Technology Conceptual Design and Cost Evaluation

As part of the requirements of the subcontract with MSE, the technology providers were to provide a cost estimate and conceptual treatment design to treat a hypothetical waste rock pile at the Gilt Edge Mine. The representative application was a waste rock pile containing 500,000 yd^3 or 750,000 tons of waste rock with the same composition that was used for the technology evaluation. The technology vendors designed the conceptual treatment assuming the waste rock was being treated while being transported and loaded into a dry pit on the Gilt Edge site. The technology providers were given the performance data for the project and were allowed to use different dosage rates for the cost estimate and conceptual design if they felt it was to their advantage.

8.1 KEECO Conceptual Design

KEECO proposed to treat the waste rock by building a portable enclosed structure adjacent to the pit and treat the waste rock in batches before it was loaded into the pit. The treatment facility included the enclosed structure, concrete mixing corral, slurry delivery unit, reagent delivery silos, and a water storage tank. Based on the results from the technology evaluation, KEECO increased the dosage rate for the conceptual design from 0.6% to 3.0%.

8.2 MT^2 Conceptual Design

The MT^2 treatment procedure included spraying the waste rock after it was dumped and spread out into
1-ft-thick lifts inside the pit. The equipment used to treat the waste rock included a tractor towing a spray unit over the waste rock, tanks, gravel pads for mixing areas, and mixing equipment. MT^2 proposed to use a material called ECOBOND for the conceptual design. For the technology evaluation, MT^2 used a dosage rate of 3%; however, for the conceptual design, a different method was used to calculate the dosage rates. MT^2 felt it necessary to treat only the top 2 inches of each layer loaded into the pit and it would treat that with a 1.5% dosage rate along with a new material, ECOBOND ARD 2 at a 0.1%. According to MT^2, ECOBOND ARD 2 would prevent the leaching of arsenic from the waste rock.

8.3 UNR Conceptual Design

The UNR conceptual design included using a system of silos, hoppers, and a conveyor belt to mix the waste rock with the magnesium oxide and CaO and then load the waste rock into the pit in 5-ft lifts. Once the waste rock was in place, each lift would be treated with the second phase of the treatment using an irrigation system for 8 hours. The dosage rates for the conceptual design were not adjusted from the technology evaluation.

8.4 Presumptive Remedy Conceptual Design

The PR conceptual design includes mixing the waste rock with CaO at the same dosage rate as the technology evaluation. The waste rock would be mixed with CaO by a local subcontractor adjacent to the pit prior to loading the waste rock into the pit. The subcontractor would use CaO silos and heavy equipment to mix the waste rock and CaO. The assumption was made that since the CaO has a limited life, CaO treatment would need to be attempted in the future to prevent ARD.

8.5 Conceptual Design Costs

Costs considered by each technology vendor for the conceptual design were reagent cost, capital, labor, equipment rental, operation and maintenance, engineering, permitting, disposal, consumables, and mobilization/demobilization, etc. Since a subcontractor would be used for the PR, no capital or separate labor is included in the cost. Table 8-1 shows the cost for each technology vendor to treat the representative application of a 750,000-ton waste rock pile.

Table 8-1. Technology Vendor's Conceptual Design Cost

Cost component	KEECO	UNR	MT2	PR
Reagent Cost	$10,137,000	$1,859,820	$3,273,750	$899,438
Capital	$250,000	$24,300	$23,000	$0
Equipment Rental	$280,000	$324,840	$230,000	$0
Operation and Maintenance	$0	$0	$0	$0
Engineering	$0	$100,000	$41,600	$0
Subcontracts	$0	$0	$0	$3,750,000
Operating Labor	$918,000	$360,000	$366,000	$0
Other	$1,097,998	$572,448	$100,400	$125,000
Total Cost	$12,682,998	$3,241,408	$4,034,750	$4,774,438

9. Quality Assurance

The QC activities completed during this technology demonstration included collecting field duplicates and extra volume for matrix spike/ matrix spike duplicate (MS/MSD) analysis, calibrating field instruments, and decontaminating the equipment used. A total of 20 field duplicates and extra volume for 11 MS/MSD analyses were submitted for a total of 110 water samples. Also, five field duplicates and extra volume for three MS/MSD analyses were submitted for the waste rock samples. The field instruments were calibrated at least on a daily basis, and the calibration was checked at least at the end of each day of use. The decontamination and sampling procedures required by CDM's SAP were adhered to throughout the investigation. All QC activities for this investigation were in accordance with EPA's *Guidance for Data Quality Assessment, Practical Methods for Data Analysis* (Ref. 2) and CDM's SAP (Ref. 3).

Once the samples were analyzed, the data was evaluated, validated, and reviewed by CDM QA/QC staff prior to using it for the technology evaluation. Samples that were flagged with an "R" (rejected due to poor QC) were not used for the technology evaluation. If a sample was flagged with other qualifiers, it was used as reported. There were zero rejected samples for the pH, TDS, arsenic, aluminum, iron, zinc, and sulfate data sets.

10. Conclusions

By evaluating the parameters of pH, TDS, dissolved arsenic, aluminum, iron, zinc, and sulfate, it was possible to determine that some technologies performed better than others. Table 10-1 summarizes the effectiveness of each technology in reducing the relevant contaminants by at least 90% or achieving the SD AWQC for the Gilt Edge site.

The PR performed well; however, the high pH may indicate the waste rock was overdosed, and the CaO does have a limited life. Once the CaO is exhausted, it may need to be reapplied, depending on the circumstance.

The Envirobond treatment from MT^2 did reduce some contaminants; however, the fact that it increased concentrations of arsenic, TDS, and sulfate cannot be ignored. If the Envirobond technology is to become a viable treatment, then modifications would need to be made to prevent such increases in the future. Also, the approach by MT^2 of treating only the top 2 inches of each layer of the hypothetical waste rock for the cost estimate is questionable since each lift is made of sulfidic waste rock through the whole thickness not just the top 2 inches. If MT^2 were to treat the whole thickness of each lift, the cost would increase substantially.

UNR's Permanganate Passivation treatment performed well, and it is cost effective compared to the other treatments. The advantage of the Permanganate Passivation treatment is that, in theory, it will not degrade over time and a one-time application is all that is required.

The SME treatment by KEECO did not perform well past the first field season. Increasing the treatment dosage may solve this problem; however, it will add to the cost and make it very expensive compared to the other treatments.

Table 10-1. Technology Performance Summary

Technology	Achieve 90% Reduction?			Achieve SD Discharge Limits?				Cost to Treat 750,000 Tons of Waste Rock	Comments
	Al	Fe	Sulfate	pH	TDS	As	Zn		
PR	Yes	Yes	Yes	No	Yes	Yes	Yes	$4,774,438	Effective, but pH was elevated above 8.8 and will fail once CaO is exhausted
MT^2	Yes	Yes	No	Yes	No	No	Yes	$4,034,750	Actually increased TDS, sulfate, and arsenic concentrations
UNR	Yes	Yes	No	Yes	Yes	Yes	Yes	$3,241,408	Effective and has longer life than lime treatment
KEECO	No	Yes	No	No	No	No	No	$12,682,998	Expensive and failed during second field season

11. References

1. CDM, *Multi-Cell Treatability Study Report for Gilt Edge Mine NPL Site, Lawrence County, South Dakota*, June 2002.

2. EPA, *Guidance for Data Quality Assessment, Practical Methods for Data Analysis*, EPA QA/G-9, QA00 Update, EPA/600/R-96/084, July 2000.

3. CDM, *Sampling and Analysis Plan for Multi-Cell Acid Rock Drainage (ARD) Treatment Technological Evaluation, Gilt Edge Mine, Lawrence County, South Dakota*, April 2001.

Appendix A

Leachate Results

Control Cells Leachate Results

Sample ID	Cell	Date Sampled	pH Lab	Conductivity	Total Solids		Hardness	Turbidity	Ammonia	Nitrate + Nitrite	Ortho-phosphate	Cyanide	
			Lab	Lab	Diss.	Susp.	Total	Lab	Total	Total	Total	Total	WAD
			ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	CLP	ULSA
			(su)	(umhos/cm @ 25 C)	(mg/L @ 180 C)	(mg/L @ 105 C)	(mg/L as CaCO3)	(NTU)	(mg/L as N)	(mg/L as N)	(mg/L as P)	(ug/L)	(ug/L)
01GE-TE02-N-0309	Cell 02	03/09/01	2.18 _H	30,000 UI,1 _H	38,000 _H	210 _JH	6,710 _H	0.8 _H	0.7 _H	5 UBHE_HUJ	162 _HJ	3.4 B _J	NR
01GE-TE02-N-0425	Cell 02	04/25/01	2.34	9,090 I _J	16,000 _J	16	4,110 _J	0.8 _J	0.4 _J	0.25 UBH_UJ	24.1 H_RJ	1 U_UJ	NR
01GE-TE02-N-0502	Cell 02	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	20 _J	NR
01GE-TE02-N-0517	Cell 02	05/17/01	2.47 _J	8,590 I	16,000 _J	17	4,340	2.2 _J	0.20	0.5 UB,H	25.5 _J	1.1 B_UJ	5 U
01GE-TE02-N-0614	Cell 02	06/14/01	2.49	7,830 I	15,000 _J	7 _J	3,616	1.2	0.2	0.1 UH	38.8	4.4 B_U	10 U_UJ
01GE-TE02-N-0716	Cell 02	07/16/01	2.31	9,940 I	18,317	31 _J	4,300	0.4 U	0.21	0.1 UH_R	NR	4.5 U_UJ	10 U
01GE-TE02-N-0828	Cell 02	08/28/01	1.98	10,300 I	18,000 _J	38 _J	4,000	0.3 _J	0.45	1.1 H_J	NR	4.5 U_UJ	10 U_UJR
01GE-TE02-N-1001	Cell 02	10/01/01	2.18	12,000 I	30,063 H_J	33 H_JJ	4,500	0.5 _J	0.3	0.12 UH	NR	3.1 B_UJ	10 U_UJ
01GE-TE02-N-1024	Cell 02	10/24/01	2.24	17,400 I	56,000	150 _J	6,100	2.6	0.96	0.12 UH	NR	2.1 B_J	10 U
02GE-TE02-N-0604	Cell 02	06/04/02	1.85	18800	27000	250	6200	0.277	48	0.23 UH	NR	3.5 U	10 U
02GE-TE02-N-1022	Cell 02	10/22/02	1.95	22100 I	130000	110	6400	0.447	54	6.3	NR	6.7 B	NS
02GE-TE02-D-1022	Cell 02	10/22/02	1.95	22900 I	130000	140	6500	0.618	47	0.12 U	NR	6.7 B	NS
01GE-TE06-N-0310	Cell 06	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NR	NS	NR
01GE-TE06-N-0828	Cell 06	08/28/01	NS	NS	NS	NS	NS	NS	NS	NS	NR	NS	NR
01GE-TE06-N-1001	Cell 06	10/01/01	NS	NS	NS	NS	NS	NS	NS	NS	NR	NS	NR
02GE-TE06-N-0604	Cell 06	06/04/02	1.77	20000	150000	230	5900	0.134	67	0.05 UH	NR	3.5 U	10 U
02GE-TE06-N-1022	Cell 06	10/22/02	1.97	17100 I	98000	87	5300	0.55	43	0.12 U	NR	6.9 B	NS
01GE-TE10-N-0425	Cell 10	04/25/01	5.36	2,760 I _J	3,200 _J	190	2,050 _J	98.7 _J	0.3 _J	0.05 UB,H_UJ	0.23 H_RJ	3.9 B _J	NR
01GE-TE10-N-0502	Cell 10	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	20 _J	NS
01GE-TE10-N-0517	Cell 10	05/17/01	4.39 _J	4,740 I	5,300 _J	420	3,700	803 _J	0.20	0.05 UBH	0.52 _J	7.8 B	5 U
01GE-TE10-N-0614	Cell 10	06/14/01	5.93	3,590 I	4,700 _J	130 _J	3,268	67.6	0.12 _U	0.05 UH_UJ	0.15	4.1 U	10 U_UJ
01GE-TE10-N-0716	Cell 10	07/16/01	5.83	2,920 I	4,567	134 _J	3,500	128 _J	0.1	0.05 UH_R	NR	6.4 B_RUJ	10 U
01GE-TE10-N-0717	Cell 10	07/17/01	NS	NS	NS	NS	NS	NS	NS	NS	NR	4.5 U_UJ	NS
01GE-TE10-N-0828	Cell 10	08/28/01	7.18	4,230 I	4,400 _J	290 _J	3,400	105	0.20	0.05 UH_J	NR	4.5 U_UJ	10 U_UJR
01GE-TE10-D-0828	Cell 10	08/28/01	7.22	4,180 I	4,200 _J	230 _J	3,100	116	0.17	0.05 UH_J	NR	4.5 U_UJ	10 U_UJR
01GE-TE10-N-1001	Cell 10	10/01/01	5.48	4,980 I	5,242 H_J	333 H_JJ	3,600	356 _J	0.24	22 H	NR	2 B_UJ	10 U_UJ
01GE-TE10-N-1024	Cell 10	10/24/01	5.31	5,120 I	6,280	330 _J	3,800	359	0.2	0.05 UH	NR	4.8 B	10 U
02GE-TE10-N-0604	Cell 10	06/04/02	3.41	10300	22000	1300	4800	1740	6.4	1.6 H	NR	3.5 U	10 U
02GE-TE10-N-1022	Cell 10	10/22/02	3.82	11300 I	28000	150	4800	88.5	3.8	1	NR	6.9 B	NS

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers

Note: Results from 2002 have not completed the validation process

NR- Analysis not requested

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NA- Not analyzed by lab although requested

I =interferent present

H = holding time expired before analysis

J = estimated result

B = estimated result

U = below the detection limit, reporting limit shown

R = result rejected due to poor QC

E = serial dilution was outside guidelines

CC = continuing calibration outside project and laboratory control limits

Control Cells Leachate Results

Sample ID	Cell	Date Sampled	Acidity Total ULSA (mg/L as CaCO3)	Alkalinity Total ULSA (mg/L as CaCO3)	Bicarbonate Total ULSA (mg/L as HCO3)	Carbonate Total ULSA (mg/L as CO3)	Bromide Total ULSA (mg/L)	Chloride Total ULSA (mg/L)	Fluoride Total ULSA (mg/L)	Sulfate Total ULSA (mg/L)	Sulfide Total ULSA (mg/L)
01GE-TE02-N-0309	Cell 02	03/09/01	24,500 _H	5 U_JH	5 U_JH	5 U_H	5 UB,E_H	13 B_H	303 B_H	27,100 _H	1 U_H
01GE-TE02-N-0425	Cell 02	04/25/01	6,650 _J	5 U_J	5U_UJ	5 U_UJ	1 UB	7 B	298 B	12.2 _J	1 U_UJ
01GE-TE02-N-0502	Cell 02	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
01GE-TE02-N-0517	Cell 02	05/17/01	8,000	156	5U_UJ	5 U	5 UB	35.6 B	27.9 B	11,700	1 U
01GE-TE02-N-0614	Cell 02	06/14/01	7,980	5 U	5 U	5 U	2 U	32	133.5 _UJ	12,300	0.01 U
01GE-TE02-N-0716	Cell 02	07/16/01	10,844	5 U	5 U	5 U	8 U	88	170	16,590	1 U_UJ
01GE-TE02-N-0828	Cell 02	08/28/01	102	5 U	5 U_UJ	5 U	1 U_UJ	49 _J	52 _J	14,000	1 U
01GE-TE02-N-1001	Cell 02	10/01/01	18,680	5 U	5 U	5 U	1 U_UJ	26	281 _J	22,600	1 U_UJ
01GE-TE02-N-1024	Cell 02	10/24/01	36,300	5 U	5 U_R	5 U_R	1 U	27	250 _J	38,000	1 U
02GE-TE02-N-0604	Cell 02	06/04/02	1900	5 U	5 U	5 U	140 H	51 H	0.2 UH	91000 H	0.18 U
02GE-TE02-N-1022	Cell 02	10/22/02	85000	5 U	5 U	5 U	1 U	17	220	77000	0.18 U
02GE-TE02-D-1022	Cell 02	10/22/02	86000	5 U	5 U	5 U	1 U	30	210	88000	0.18 U
01GE-TE06-N-0310	Cell 06	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
01GE-TE06-N-0828	Cell 06	08/28/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
01GE-TE06-N-1001	Cell 06	10/01/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
02GE-TE06-N-0604	Cell 06	06/04/02	2200	5 U	5 U	5 U	1 UH	13 H	340 H	110000 H	0.19
02GE-TE06-N-1022	Cell 06	10/22/02	59000	5 U	5 U	5 U	4.2	96	150	66000	0.18 U
01GE-TE10-N-0425	Cell 10	04/25/01	180 _J	20 _J	24 _J	5 U_UJ	1 UB	17 B	39.7 B	2,200 _J	1 U_UJ
01GE-TE10-N-0502	Cell 10	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
01GE-TE10-N-0517	Cell 10	05/17/01	1,200	5 U	5 U	5 U	1 UB	23.2 B	62.7 B,CC	4,530	1 U
01GE-TE10-N-0614	Cell 10	06/14/01	5 U	360	440	5 U	1 U	13	72.3	3,490	0.01 U
01GE-TE10-N-0716	Cell 10	07/16/01	52	280	340	5 U	1 U	8	73.1	3,618	0.05 U_UJ
01GE-TE10-N-0717	Cell 10	07/17/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
01GE-TE10-N-0828	Cell 10	08/28/01	5 U	58	71 _R	5 U	1 U_UJ	11 _J	52 _J	3,200	1 U
01GE-TE10-D-0828	Cell 10	08/28/01	5 U	56	68 _R	5 U	1 U_UJ	11 _J	52 _J	3,100	1 U
01GE-TE10-N-1001	Cell 10	10/01/01	684	16	5 U	5 U	1 U_UJ	21	96	3,850	1 U_UJ
01GE-TE10-N-1024	Cell 10	10/24/01	1,010	16	20 _R	5 U_R	1 U	27	300 _J	4,500	1 U
02GE-TE10-N-0604	Cell 10	06/04/02	14000	5 U	5 U	5 U	1 UH	17 H	210 H	17000 H	0.03
02GE-TE10-N-1022	Cell 10	10/22/02	22000	5 U	5 U	5 U	1 U	7.8	42	19000	0.013

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers

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R = result rejected due to poor QC

E = serial dilution was outside guidelines

CC = continuing calibration outside project and laboratory control lin

A-3

Control Cells Leachate Results

Sample ID	Cell	Date Sampled	Calcium Diss. CLP (mg/L)	Calcium Total ULSA (mg/L)	Calcium Total CLP (mg/L)	Magnesium Diss. CLP (mg/L)	Magnesium Total ULSA (mg/L)	Magnesium Total CLP (mg/L)	Sodium Diss. CLP (mg/L)	Sodium Total CLP (mg/L)	Potassium Diss. CLP (mg/L)	Potassium Total CLP (mg/L)	Sodium Adsorption Ratio Calculated (unitless)
01GE-TE02-N-0309	Cell 02	03/09/01	337_J	590_H	492	1,090	1,270_H	1,130	39.8_J	38.7 B	24_J	7.27 B	0.22
01GE-TE02-N-0425	Cell 02	04/25/01	NS	489_J	475	NS	701_J	773	NS	14.8 B	NS	6.55 B	0.10
01GE-TE02-N-0502	Cell 02	05/02/01	425	NS	416	923	NS	897	22	18	1.71 B_U	0.772 B_UJ	0.11
01GE-TE02-N-0517	Cell 02	05/17/01	429	453	397	825	779	760	17	15	1.48 B_U	0.991 B_J	0.10
01GE-TE02-N-0614	Cell 02	06/14/01	283	429	351	392	618	514	19.4_J	24	1.95 B_J	3.07 B	0.19
01GE-TE02-N-0716	Cell 02	07/16/01	295_J	458	321_J	411_J	760	437_J	11	11	0.819 B_J	0.914 B_J	0.09
01GE-TE02-N-0828	Cell 02	08/28/01	343_J	520	350_J	599_J	670	610_J	17.3_J	18	0.338 B	19	0.13
01GE-TE02-N-1001	Cell 02	10/01/01	398_J	519	436_J	885_J	781	875_J	10	9	0.368 B	0.325 B_U	0.06
01GE-TE02-N-1024	Cell 02	10/24/01	60.2	560	54.2_RJ	153	1,200	133_J	0.328 U	0.328 U	0.0278 U_UJ	0.0278 U_J	0.00
02GE-TE02-N-0604	Cell 02	06/04/02	481	460	478	1350	1200	1330	5.53 U	9450	1.41 B	2.27 B	0.0
02GE-TE02-N-1022	Cell 02	10/22/02	209	570	196	371	1200	296	1000	9.45 U	2.88 B	1.85 B	9.6
02GE-TE02-D-1022	Cell 02	10/22/02	200	580	194	292	1200	294	1000	9.45 U	1.36 B	1.8 B	10.5
01GE-TE06-N-0310	Cell 06	03/10/01	328_J	NS	466	442	NS	609	7.48_J	3.11 B_J	9.26_J	2.44 B	0.02
01GE-TE06-N-0828	Cell 06	08/28/01	NS	NS	317_J	NS	NR	538_J	NS	21	NS	16	0.17
01GE-TE06-N-1001	Cell 06	10/01/01	NS	NS	459_J	NS	NS	1,050_J	NS	7	NS	3.55 B	0.04
02GE-TE06-N-0604	Cell 06	06/04/02	447	400	458	1440	1200	1430	5.53 U	5.53 U	4.38 B	1.21 B	0.0
02GE-TE06-N-1022	Cell 06	10/22/02	234	610	213	351	930	257	1000	9.45 U	1.82 B	1.73 B	9.6
01GE-TE10-N-0425	Cell 10	04/25/01	NS	547_J	577	NS	165_J	165	NS	12 B	NS	10.3 B	0.11
01GE-TE10-N-0502	Cell 10	05/02/01	651	NS	629	671	NS	658	8	7	2.73 B_U	2.23 B_UJ	0.05
01GE-TE10-N-0517	Cell 10	05/17/01	624	644	609	539	508	522	11	10	3.32 B	3.19 B	0.07
01GE-TE10-N-0614	Cell 10	06/14/01	400	517	447	401	480	471	20.1_J	24	5.79_J	7	0.19
01GE-TE10-N-0716	Cell 10	07/16/01	529_J	575	483_J	540_J	493	527_J	17	17	7	6	0.13
01GE-TE10-N-0717	Cell 10	07/17/01	423_J	NS	406_J	371_J	NS	370_J	18	18	7.39_J	7.33_J	0.16
01GE-TE10-N-0828	Cell 10	08/28/01	495_J	610	456_J	416_J	450	382_J	20.2_J	18	9	27	0.15
01GE-TE10-D-0828	Cell 10	08/28/01	456_J	570	450_J	388_J	400	376_J	17.9_J	18	9	27	0.15
01GE-TE10-N-1001	Cell 10	10/01/01	554_J	667	552_J	444_J	481	489_J	13.2_J	13	6.99_J	8	0.10
01GE-TE10-N-1024	Cell 10	10/24/01	415	560	355_J	502	590	437_J	30	16	10.5_J	9.66_J	0.13
02GE-TE10-N-0604	Cell 10	06/04/02	467	430	431	1040	900	861	23.8 B	18.6 B	7.28 B	3.62 B	0.1
02GE-TE10-N-1022	Cell 10	10/22/02	90.8	460	357	146	880	985	25.5	18.6	16.2	15.8	0.4

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Control Cells Leachate Results

Sample ID	Cell	Date Sampled	Aluminum Diss. CLP (ug/L)	Aluminum Total CLP (ug/L)	Antimony Diss. CLP (ug/L)	Antimony Total CLP (ug/L)	Arsenic Diss. CLP (ug/L)	Arsenic Total CLP (ug/L)	Barium Diss. CLP (ug/L)	Barium Total CLP (ug/L)	Beryllium Diss. CLP (ug/L)	Beryllium Total CLP (ug/L)
01GE-TE02-N-0309	Cell 02	03/09/01	162,000	1,620,000	1,810	2,420	41,100	44,500 J	117 B	30.3 B UJ	98.8	134
01GE-TE02-N-0425	Cell 02	04/25/01	NS	750,000	NS	1,040	NS	4,920 J	NS	25.4 B U	NS	82.4
01GE-TE02-N-0502	Cell 02	05/02/01	750,000	727,000	104 U UJ	104 U UJ	2,950	2,930	80.3 B	12.1 B J	62.9	59.6
01GE-TE02-N-0517	Cell 02	05/17/01	753,000	694,000	116 U R	116 U UJ	3,130	3,210	14.3 B J	13.2 B UJ	73.7	64.9
01GE-TE02-N-0614	Cell 02	06/14/01	386,000	508,000	26.1 B J	35.5 B J	3,370	4,510 J	8.3 B	8.9 B	45.3	53.6
01GE-TE02-N-0716	Cell 02	07/16/01	480,000	520,000	36.7 B J	37 B J	4,910	5,130 J	11 B J	10.1 B J	53.3	55.7 J
01GE-TE02-N-0828	Cell 02	08/28/01	396,000	829,000	35.4 B	46.7 B	4,250	4,460	66.8 B	5.8 B J	58.6 J	62.2 J
01GE-TE02-N-1001	Cell 02	10/01/01	1,070,000	985,000 J	58.8 B	50.6 B	14,100 J	13,100 J	83.4 B J	20.2 B J	96.5 J	100 J
01GE-TE02-N-1024	Cell 02	10/24/01	322,000	1,620,000 J	8 B	6.6 B	6,530 J	6,390	15.5 B	6.8 B J	24.2	23.3
02GE-TE02-N-0604	Cell 02	06/04/02	3120000	3020000	734	699	163000	161000	168 B	126 B	254	252
02GE-TE02-N-1022	Cell 02	10/22/02	2950000	2930000	6.4 B	2 U	158000	159000	156 B	86 B	104	93
02GE-TE02-D-1022	Cell 02	10/22/02	2970000	2920000	2 U	2 U	160000	159000	104 B	85 B	91	93
01GE-TE06-N-0310	Cell 06	03/10/01	891,000	997,000	1430	1,800	26,900	34,500 J	116 B	33 B UJ	77.3	97
01GE-TE06-N-0828	Cell 06	08/28/01	NS	2,800,000	NS	95.6	NS	20,100	NS	24.5 B J	NS	158 J
01GE-TE06-N-1001	Cell 06	10/01/01	NS	1,920,000 J	NS	112	NS	29,500 J	NS	44.7 B J	NS	169 J
02GE-TE06-N-0604	Cell 06	06/04/02	3170000	3040000	846	804	208000	178000	288 B	128 B	285	293
02GE-TE06-N-1022	Cell 06	10/22/02	1870000	1790000	6.3 B	2 U	117000	117000	144 B	64 B	80	72
01GE-TE10-N-0425	Cell 10	04/25/01	NS	59,100	NS	40.4 B	NS	25 B J	NS	29.7 B U	NS	7.3 B
01GE-TE10-N-0502	Cell 10	05/02/01	698,000	691,000	20.9 U UJ	104 U UJ	1,000	2,420	45.7 B	46.8 B	86.1	85.6
01GE-TE10-N-0517	Cell 10	05/17/01	189,000	200,000	23.2 U R	23.2 U	47	483	34.2 B	34.2 B	24.8	24.2
01GE-TE10-N-0614	Cell 10	06/14/01	37,800	45,000	4.9 U UJ	4.9 U	6.4 B U	12.2 UJ	20.8 B	26.4 B	7.9 U	7.9
01GE-TE10-N-0716	Cell 10	07/16/01	18,600	30,800 J	3 U UJ	3 U JU	6.8 B J	57.1 J	25.3 B J	28.1 B J	7.7 J	9.5 JU
01GE-TE10-N-0717	Cell 10	07/17/01	36,300	52,500	3.8 U UJ	3.8 U UJ	10.8 UJ	26 J	29.4 B J	28.3 B J	9.3	10.3 J
01GE-TE10-N-0828	Cell 10	08/28/01	1,090	28,200	4.9 U UJ	4.9 U	7.8 B U	26.2	73.9 B	28.9 B J	5.5 J	8.5 J
01GE-TE10-D-0828	Cell 10	08/28/01	1,170	31,100	4.9 U	4.9 U	9 B U	24.4 U	97.5 B	29.2 B J	5.2 J	8.7 J
01GE-TE10-N-1001	Cell 10	10/01/01	57,100	67,800 J	3 U UJ	3 U UJ	21.3 J	27.4 J	132 B J	40 B J	15.8 J	18.3 JU
01GE-TE10-N-1024	Cell 10	10/24/01	138,000	140,000 J	3.7 U	3.7 U	20.6 J	47.3	90.6 B	34.1 B J	17.8	19.4
02GE-TE10-N-0604	Cell 10	06/04/02	2100000	1720000	53 U	53 U	408	1040	91 B	29.4 B	252	222
02GE-TE10-N-1022	Cell 10	10/22/02	338000	2740000	2 U	2 U	654	452	128 B	52 B	442	283

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Control Cells Leachate Results

Sample ID	Cell	Date Sampled	Cadmium Diss. CLP (ug/L)	Cadmium Total CLP (ug/L)	Chromium Diss. CLP (ug/L)	Chromium Total CLP (ug/L)	Cobalt Diss. CLP (ug/L)	Cobalt Total CLP (ug/L)	Copper Diss. CLP (ug/L)	Copper Total CLP (ug/L)	Iron Diss. CLP (ug/L)	Iron Total CLP (ug/L)
01GE-TE02-N-0309	Cell 02	03/09/01	1,150	1,650	523	698	5,340	7,840	111,000	127,000	644,000 J	5,970,000
01GE-TE02-N-0425	Cell 02	04/25/01	NS	1,170	NS	225	NS	6,870	NS	66,600	NS	1,650,000
01GE-TE02-N-0502	Cell 02	05/02/01	1,300	1,240	110	97.7	7,300	6,960	61,800	58,600	1,150,000	1,130,000
01GE-TE02-N-0517	Cell 02	05/17/01	1,210 R	1,100	140	125	6,480	5,900	65,000	59,200	1,280,000	1,220,000
01GE-TE02-N-0614	Cell 02	06/14/01	652	805	99.6	129	3580	4,460	40,400	56,400	1,250,000	1,890,000
01GE-TE02-N-0716	Cell 02	07/16/01	814 J	873 J	145 J	153 J	4,010 J	4,380 J	56,300	58,900	2,130,000	2,270,000 J
01GE-TE02-N-0828	Cell 02	08/28/01	1,120 J	1,190 J	107 J	121 J	5,960 J	6,120 J	35,900	75,900	1,070,000	2,240,000
01GE-TE02-N-1001	Cell 02	10/01/01	1,070 J	994 J	313 J	298 J	5,500 J	5,320 J	78,900	78,900 J	5,680,000	4,880,000 J
01GE-TE02-N-1024	Cell 02	10/24/01	291	289	92.6	85.5	1,340	1,280	26,600	24,800	9,910,000	10,500,000 J
02GE-TE02-N-0604	Cell 02	06/04/02	2390	1540	2390	2340	9990	9820	134000	132000	28300000	29500000
02GE-TE02-N-1022	Cell 02	10/22/02	2430	2790	995	923	3840	3460	114000	111000	29400000	28300000
02GE-TE02-D-1022	Cell 02	10/22/02	3260	2720	965	912	3590	3420	115000	111000	29,600,000	27900000
01GE-TE06-N-0310	Cell 06	03/10/01	828	1,160	462	577	3,600	4,770	71,800	84,300	554,000 J	5,330,000
01GE-TE06-N-0828	Cell 06	08/28/01	NS	2,280 J	NS	454 J	NS	7,590 J	NS	213,000	NS	8,150,000
01GE-TE06-N-1001	Cell 06	10/01/01	NS	1,110 J	NS	554 J	NS	5,430 J	NS	103,000 J	NS	11,300,000 J
02GE-TE06-N-0604	Cell 06	06/04/02	2350	2320	3010	2570	12300	12300	128000	128000	35300000	32000000
02GE-TE06-N-1022	Cell 06	10/22/02	1360	1920	933	837	3270	2900	60000	56800	21400000	20100000
01GE-TE10-N-0425	Cell 10	04/25/01	NS	137	NS	10 U	NS	791	NS	4,020	NS	30,000
01GE-TE10-N-0502	Cell 10	05/02/01	1,170	1,160	76.4	75.2	5,060	5,000	58,500	58,500	488,000	698,000
01GE-TE10-N-0517	Cell 10	05/17/01	749 R	719	2.4 U	2.4 U	4,130	3,940	19,100	18,900	8,860	129,000
01GE-TE10-N-0614	Cell 10	06/14/01	317	345	0.5 U UJ	0.5 U	2,520	2,790	2,120	2,410	2,550	3,220
01GE-TE10-N-0716	Cell 10	07/16/01	432 J	389 J	8 B J	7.9 B J	3,130 J	2,780 J	1,230	2,200 J	6,600	20,400
01GE-TE10-N-0717	Cell 10	07/17/01	346 J	330 J	12.8 J	6.5 U UJ	2,420 J	2,320 J	2,630	3,770	4,320	17,200 J
01GE-TE10-N-0828	Cell 10	08/28/01	409 J	399 J	0.5 U UJ	21.7 J	2,890 J	2,680 J	128	2,660	219	23,600
01GE-TE10-D-0828	Cell 10	08/28/01	382 J	393 J	0.5 U J	0.5 U UJ	2,670 J	2,650 J	126	2,760	273	22,700
01GE-TE10-N-1001	Cell 10	10/01/01	387 J	396 J	6.1 B J	8.8 B J	2,670 J	2,790 J	5,980	5,720 J	5,040	16,000
01GE-TE10-N-1024	Cell 10	10/24/01	689	608	0.9 U	0.9 U	4,480	4,030	9,200	9,070	12,800	47,800 J
02GE-TE10-N-0604	Cell 10	06/04/02	1970	1630	14 U	28.7 B	9720	8070	99800	82000	14700	384000
02GE-TE10-N-1022	Cell 10	10/22/02	2420	1410	28	14	11600	7350	14000	125000	53300	51500

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A-5

Control Cells Leachate Results

Sample ID	Cell	Date Sampled	Lead Diss. CLP (ug/L)	Lead Total CLP (ug/L)	Manganese Diss. CLP (ug/L)	Manganese Total CLP (ug/L)	Mercury Diss. CLP (ug/L)	Mercury Total CLP (ug/L)	Nickel Diss. CLP (ug/L)	Nickel Total CLP (ug/L)	Selenium Diss. CLP (ug/L)	Selenium Total CLP (ug/L)	Silicon Total ULSA (mg/L as SiO2)
01GE-TE02-N-0309	Cell 02	03/09/01	91.2	125 J	29,000	260,000	0.1 U R	0.1 U R	2,650	4,140	80.2	52 J	206 H
01GE-TE02-N-0425	Cell 02	04/25/01	NS	42.9 J	NS	255,000	NS	0.1 U	NS	3,910	NS	30 U R	116 J
01GE-TE02-N-0502	Cell 02	05/02/01	24.4	29.6	356,000	342,000	0.1 U	0.1 U	4,180	4,410	2.1 U	52.5 U	NS
01GE-TE02-N-0517	Cell 02	05/17/01	23.5	21.7	311,000	302,000	0.1 U	0.1 U	3,760	3,410	46.7 U UJ	58.3 U UJ	141
01GE-TE02-N-0614	Cell 02	06/14/01	18.2	9.5 J	171,000 J	268,000	0.1 U UJ	0.29 J	2,090	2,580	4.4 U	4.4 U UJ	158.1
01GE-TE02-N-0716	Cell 02	07/16/01	49.8 J	29.9 J	226,000	249,000	0.1 U	0.1 U	2,320 J	2,500 J	3.3 U R	3.3 U R	NR
01GE-TE02-N-0828	Cell 02	08/28/01	11.3 J	24	187,000	382,000	0.13 B U	0.26 U	3,340 J	3,450 J	4.4 U	4.4 U R	NR
01GE-TE02-N-1001	Cell 02	10/01/01	140	104	315,000	314,000 J	0.12 B	0.11 B	2,960 J	2,900 J	16.1 J	3 U RUJ	NR
01GE-TE02-N-1024	Cell 02	10/24/01	23.9	44 U UJ	16,500	12,100	0.1 U UJ	0.1 U UJ	859	791	4.8 U UJ	4.8 U	NR
02GE-TE02-N-0604	Cell 02	06/04/02	382	17 U	210000	205000	0.2 U	0.2 U	7330	7150	1540	40 U	NR
02GE-TE02-N-1022	Cell 02	10/22/02	1510	1750	235000	230000	0.2	0.37	2550	2250	1140	2.5 U	NR
02GE-TE02-D-1022	Cell 02	10/22/02	1750	1720	236000	229000	0.24	0.34	2260	2230	1040	2.5 U	NR
01GE-TE06-N-0310	Cell 06	03/10/01	135	105 J	146,000	155,000	0.1 U R	0.1 U R	1,850	2,620	167	84.1 J	NS
01GE-TE06-N-0328	Cell 06	08/28/01	NS	228	NS	617,000	NS	0.24 U	NS	4,330 J	NS	4.4 U R	NR
01GE-TE06-N-1001	Cell 06	10/01/01	NS	232	NS	366,000 J	NS	0.25	NS	2,930 J	NS	3 U JUR	NR
02GE-TE06-N-0604	Cell 06	06/04/02	17 U	17 U	276000	389000	0.2 U	0.2 U	8640	8600	532	253	NR
02GE-TE06-N-1022	Cell 06	10/22/02	1080	1250	154000	147000	0.2 U	0.28	2280	1990	694	2.5 U	NR
01GE-TE10-N-0425	Cell 10	04/25/01	NS	10 U	NS	34,700	NS	0.1 U	NS	443	NS	15 U R	50.3 J
01GE-TE10-N-0502	Cell 10	05/02/01	22.4	24.8	265,000	262,000	0.1 U	0.1 U	2,740	2,710	52.5 U	52.5 U	NS
01GE-TE10-N-0517	Cell 10	05/17/01	0.8 U UJ	4	216,000	214,000	0.1 U	0.1 U	2,250	2,140	4.9 B J	2.3 U	46
01GE-TE10-N-0614	Cell 10	06/14/01	1.3 U	1.3 U UJ	157,000 J	208,000	0.1 U UJ	0.1 U UJ	1,160	1,280	4.4 U	4.4 U UJ	18.13
01GE-TE10-N-0716	Cell 10	07/16/01	15.1	16.1	185,000	176,000	0.1 U R	0.1 U R	1,200 J	1,110 J	51.3 J	53.8 J	NR
01GE-TE10-N-0717	Cell 10	07/17/01	50.8 J	3.2 J	182,000	179,000	0.1 U	0.1 U	1,060 J	1,000 J	3.3 U R	3.3 U R	NR
01GE-TE10-N-0828	Cell 10	08/28/01	1.3 U UJ	1.3 U	189,000	188,000	0.1 U	0.19 B U	1,080 J	1,080 J	4.4 U	4.4 U R	NR
01GE-TE10-D-0828	Cell 10	08/28/01	1.3 U UJ	1.3 U	178,000	184,000	0.12 B U	0.24 U	1,010 J	1,080 J	4.4 U	4.4 U R	NR
01GE-TE10-N-1001	Cell 10	10/01/01	12.8	15.7	180,000	196,000	0.1 U	0.1 U	940 J	979 J	40.1 J	52.6 J	NR
01GE-TE10-N-1024	Cell 10	10/24/01	15	14.6 R	277,000	278,000	0.1 U UJ	0.1 U UJ	1,880	1,650	64.2	50.6	NR
02GE-TE10-N-0604	Cell 10	06/04/02	56.6	49.8	387000	282000	0.2 U	0.21	6260	5280	40 U	40 U	NR
02GE-TE10-N-1022	Cell 10	10/22/02	68	79	54600	292000	0.2 U	0.2 U	8830	5430	84	54	NR

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Control Cells Leachate Results

Sample ID	Cell	Date Sampled	Silver Diss. CLP (ug/L)	Silver Total CLP (ug/L)	Thallium Diss. CLP (ug/L)	Thallium Total CLP (ug/L)	Vanadium Diss. CLP (ug/L)	Vanadium Total CLP (ug/L)	Zinc Diss. CLP (ug/L)	Zinc Total CLP (ug/L)
01GE-TE02-N-0309	Cell 02	03/09/01	3 U	30 U_UJ	181 _J	63.6 B_J	102	148 B	10,800 _J	85,600
01GE-TE02-N-0425	Cell 02	04/25/01	NS	30 U_UJ	NS	50 U_R	NS	38.5 B	NS	61,800
01GE-TE02-N-0502	Cell 02	05/02/01	45.9	46.6 _J	42.5 U_UJ	42.5 U	34.1 B	47.3 B	69,900	67,100
01GE-TE02-N-0517	Cell 02	05/17/01	32.1 _R	32.9	17 U	47.2 U_UJ	70.8	77	61,800	56,600
01GE-TE02-N-0614	Cell 02	06/14/01	0.7 U_UJ	2 B_UJ	5.6 U_UJ	5.6 U_UJ	165 _J	104	29,400	59,700
01GE-TE02-N-0716	Cell 02	07/16/01	16.4 _J	14.7 _J	4.9 U_R	4.9 U_R	1 U_UJ	1 U_UJ	54,500 _J	58,700 _J
01GE-TE02-N-0828	Cell 02	08/28/01	16.8	33	5.6 U_UJ	5.6 U_R	3.5 B_J	33.2 B	40,500 _J	85,500
01GE-TE02-N-1001	Cell 02	10/01/01	1 U_JU	1 U_R	4 U_JUR	4 U_RUJ	158 _J	138	71,300 _J	68,500
01GE-TE02-N-1024	Cell 02	10/24/01	1 U_UJ	1 U	70.3	64.7	18.7 B	22 B	4,650	3,460 _J
02GE-TE02-N-0604	Cell 02	06/04/02	11 U	11 U	299	193	1200	1420	66300	64200
02GE-TE02-N-1022	Cell 02	10/22/02	165 B	40 U	1190	7 U	1.5 U	1.5 U	10900	10100
02GE-TE02-D-1022	Cell 02	10/22/02	40 U	40 U	1440	7 U	1.5 U	1.5 U	10400	10100
01GE-TE06-N-0310	Cell 06	03/10/01	3 U	30 U_UJ	205 _J	150 _J	122	176 B	63,800 _J	63,800
01GE-TE06-N-0828	Cell 06	08/28/01	NS	0.7 U	NS	5.6 U_R	NS	204	NS	161,000
01GE-TE06-N-1001	Cell 06	10/01/01	NS	1 U_R	NS	4 U_JUR	NS	212	NS	71,200
02GE-TE06-N-0604	Cell 06	06/04/02	544	11 U	571	845	1130	828	70300	75400
02GE-TE06-N-1022	Cell 06	10/22/02	162 B	40 U	47	7.7 B	1.5 U	1.5 U	11800	10200
01GE-TE10-N-0425	Cell 10	04/25/01	NS	15 U_UJ	NS	25 U_R	NS	15 U	NS	7,780
01GE-TE10-N-0502	Cell 10	05/02/01	25.5	27.3 _J	42.5 U_UJ	42.5 U	17.7 B	31.5 B	55,500	54,700
01GE-TE10-N-0517	Cell 10	05/17/01	30.2 _R	29.6	18.9 U	18.9 U	7.4 B_J	10.3 B	40,500	38,800
01GE-TE10-N-0614	Cell 10	06/14/01	20.3	21.7	5.6 U	5.6 U	0.9 U_UJ	0.9 U	16,800	19,400
01GE-TE10-N-0716	Cell 10	07/16/01	1 U_JU	1 U_R	4 U_JUR	4 U_JRU	1 U_J	1 U	19,300	18,200
01GE-TE10-N-0717	Cell 10	07/17/01	15.3 _J	16.4	4.9 U_R	4.9 U_R	1 U_UJ	1 U_UJ	16,500 _J	15,600 _J
01GE-TE10-N-0828	Cell 10	08/28/01	23.2	18.7	5.6 U_UJ	5.6 U_R	0.9 U	0.9 U	14,100 _J	15,200
01GE-TE10-D-0828	Cell 10	08/28/01	20.5	18.2	5.6 U	5.6 U_R	0.9 U	0.9 U	12,700 _J	15,300
01GE-TE10-N-1001	Cell 10	10/01/01	1 U_JU	1 U_R	4 U_JUR	4 U_JUR	1 U_J	1 U	15,900	16,600
01GE-TE10-N-1024	Cell 10	10/24/01	7.1 B	4.8 B	189	161	0.9 U	0.9 U	47,400	44,000 _J
02GE-TE10-N-0604	Cell 10	06/04/02	11 U	11 U	55 U	55 U	17 U	17 U	79200	68600
02GE-TE10-N-1022	Cell 10	10/22/02	0.8 U	0.8 U	532	340	1.5 U	1.5 U	12700	72200

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Presumptive Remedy Cells Leachate Results

Cell	Sample ID	Date Sampled	pH Lab	Conductivity	Total Solids		Hardness	Turbidity	Ammonia	Nitrate + Nitrite	Ortho-phosphate	Cyanide	
			Lab	Lab	Diss.	Susp.	Total	Lab	Total	Total	Total	Total	WAD
			ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	CLP	ULSA
			(su)	(umhos/cm @ 25 C)	(mg/L @ 180 C)	(mg/L @ 105 C)	(mg/L as CaCO3)	(NTU)	(mg/L as N)	(mg/L as N)	(mg/L as P)	(ug/L)	(ug/L)
Cell 04	01GE-TE04-N-0309	03/09/01	7.23 _H	1,790 I_H	1,500 _H	4 _JH	1,240 _H	0.4 U_H	0.4 _H	0.05 UBH_HUJ	0.1 _HJ	10.9 _J	NR
Cell 04	01GE-TE04-N-0425	04/25/01	11.7	2,850 I_J	1,400 _J	40	1,120 _J	33.3 _J	2	0.05 UBH_UJ	0.09 H_RJ	4.6 B _J	NR
Cell 04	01GE-TE04-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.7 B _J	NR
Cell 04	01GE-TE04-N-0517	05/17/01	9.77 _J	1,060 I	960 _J	32	718	4.9 _J	2	0.05 UBH	0.04 _J	8.4 B	5 U
Cell 04	01GE-TE04-N-0614	06/14/01	11.73	1,870 I	960 _J	430 _J	856	35.5	3.48	0.05 UH_UJ	0.09	4.1 U	10 U_UJ
Cell 04	01GE-TE04-N-0716	07/16/01	11.4	1,690 I	976	6 _J	640	1.8 _JU	3.7	0.05 UH_R		4.5 U_UJ	8 J
Cell 04	01GE-TE04-D-0716	07/16/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.5 U_UJ	NR
Cell 04	01GE-TE04-N-0828	08/28/01	9.97	1,360 I	840 _J	14 _J	410	2.3 _J	4.2	0.05 UH_J	NR	12.8 _JU	10 U_UJR
Cell 04	01GE-TE04-N-1001	10/01/01	11.56	1,550 I	830 H_J	40 H_JJ	790	7.3 _J	8.1	0.05 UH	NR	6.5 B_UJ	10 U_UJ
Cell 04	01GE-TE04-D-1001	10/01/01	11.63	1,550 I	878 H_J	91 H_JJ	830	8.8 _J	7.8	0.05 UH	NR	6.7 B_UJ	10 U_UJ
Cell 04	01GE-TE04-N-1024	10/24/01	11.8	2,440	1,210	18 _J	710	2.1	6.8	0.05 UH	NR	4.9 B	2
Cell 04	01GE-TE04-D-1024	10/24/01	11.9	2,470	1,230	11 _J	670	1.6	6.9	0.05 UH	NR	5 B	3
Cell 04	02GE-TE04-N-0604	06/04/02	11.9	2860	1000	4 U	720	7.16	4.5	0.39 H	NR	3.5 U	10 U
Cell 04	02GE-TE04-N-0815	08/15/02	9.02	774	520	7	45	1.89	1.8	0.44	NR	3 U	10 U
Cell 04	02GE-TE04-N-1022	10/22/02	11.3	1290 I	680	21	150	4.12	5.4	0.12 U	NR	6.7 B	NS
Cell 07	01GE-TE07-N-0425	04/25/01	11.7	3,290 I_J	1,200 _J	65	950 _J	1.1 _J	4.1 _J	0.05 UBH_UJ	0.21 H_RJ	1.2 B _J	NR
Cell 07	01GE-TE07-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.7 U_UJ	NR
Cell 07	01GE-TE07-N-0517	05/17/01	11.5 _J	3,220 I	920 _J	180	1,030	16.3 _J	3	0.05 UBH	0.02 _J	0.99 B	5 U
Cell 07	01GE-TE07-N-0614	06/14/01	11.85	1,580 I	700 _J	110 _J	382	5.8	2.15	0.05 UH_UJ	1.25	5.8 B_U	10 U_UJ
Cell 07	01GE-TE07-N-0716	07/16/01	12.1	3,260 I	1,141	10 _J	780	2.6 _JU	4.5	0.05 UH_R	NR	4.5 U_UJ	10 U
Cell 07	01GE-TE07-N-0828	08/28/01	8.88	734 I	540 _J	190 _J	95	23.7 _J	3.5	1.2 H_J	NR	4.5 U_UJ	10 U_UJR
Cell 07	01GE-TE07-D-0828	08/28/01	9.23	742 I	410 _J	500 _J	110	103 _J	2.7	0.27 H_J	NR	4.5 U_UJ	10 U_UJR
Cell 07	01GE-TE07-N-1001	10/01/01	12.11	2,430 I	906 H_J	23 H_JJ	490	3.5 _J	7.6	0.098 H	NR	3.3 B_UJ	10 U_UJ
Cell 07	01GE-TE07-N-1024	10/24/01	12.2	3,190	1,320	16 _J	850	2.2	6.9	0.14 H	NR	2 B_J	10 U
Cell 07	02GE-TE07-N-0604	06/04/02	11.8	3690	1300	180	970	0.1 U	2.3	0.13 H	NR	3.5 U	10 U
Cell 07	02GE-TE07-N-0815	08/15/02	11.8	1670	900	21	350	3.7	0.87	0.16	NR	3 U	10 U
Cell 07	02GE-TE07-N-1022	10/22/02	12	2960	1200	42	680	6.52	4.1	0.12 U	NR	6.7 B	NS
Cell 07	02GE-TE07-D-1022	10/22/02	12.1	3020	1200	21	710	3.12	4.1	0.91	NR	6.9 B	NS
Cell 12	01GE-TE12-N-0425	04/25/01	12	4,420 I_J	1,300 _J	170	1,310 _J	2.3 _J	3.2 _J	0.05 UBH_UJ	0.02 H_RJ	1.8 B _J	NR
Cell 12	01GE-TE12-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.7 U_UJ	NS
Cell 12	01GE-TE12-D-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.7 U_UJ	NS
Cell 12	01GE-TE12-N-0517	05/17/01	11.3 _J	1,930 I	720 _J	160	623	12.5 _J	5	0.05 UBH	0.07 _J	1 B	5 U
Cell 12	01GE-TE12-N-0614	06/14/01	8.62	618 I	510 _J	240 _J	201	26.5	3.17	0.06 H_J	1.85	4.9 B_U	10 U_UJ
Cell 12	01GE-TE12-N-0828	08/28/01	8.04	1,050 I	720 _J	22 _J	260	13.5	5.4	0.05 UH_J	NR	4.5 U_UJ	10 U_UJR
Cell 12	01GE-TE12-N-1001	10/01/01	9.55	1,430 I	904 H_J	30 H_JJ	400	6.9 _J	9.1	0.11 H	NR	5.2 B_UJ	10 U_UJ
Cell 12	01GE-TE12-N-1024	10/24/01	10.9	1,630	1,220	57 _J	630	2.5	9.1	0.05 UH	NR	5.1 B	10 U
Cell 12	02GE-TE12-N-0604	06/04/02	11.2	1420	1000	6	450	1.01	5.4	0.4 H	NR	3.5 U	10 U
Cell 12	02GE-TE12-N-0815	08/15/02	8.44	1260	930	4	350	1.18	4	0.41	NR	3 U	10 U
Cell 12	02GE-TE12-D-0815	08/15/02	8.43	1280	970	10	350	1.54	3.9	0.42	NR	3 U	10 U
Cell 12	02GE-TE12-N-1022	10/22/02	10.5	1470	1300	14	670	2.42	8.4	1.6	NR	7 B	NS

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Presumptive Remedy Cells Leachate Results

Cell	Sample ID	Date Sampled	Acidity Total ULSA (mg/L as CaCO3)	Alkalinity Total ULSA (mg/L as CaCO3)	Bicarbonate Total ULSA (mg/L as HCO3)	Carbonate Total ULSA (mg/L as CO3)	Bromide Total ULSA (mg/L)	Chloride Total ULSA (mg/L)	Fluoride Total ULSA (mg/L)	Sulfate Total ULSA (mg/L)	Sulfide Total ULSA (mg/L)
Cell 04	01GE-TE04-N-0309	03/09/01	5 U_H	32_JH	39_JH	5 U_H	1 UB_H	19 B_H	1.3 B_H	1,130_H	1 U_H
Cell 04	01GE-TE04-N-0425	04/25/01	5 U_UJ	352_J	423_J	12,000_J	1 UB	52 B	1.3 B	668_J	10 U_UJ
Cell 04	01GE-TE04-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 04	01GE-TE04-N-0517	05/17/01	5 U	40	46	15	1 UB	54 B	0.9 BCC	641	1 U
Cell 04	01GE-TE04-N-0614	06/14/01	5 U	250	7	180	1 U	55	1.2	504	0.01 U
Cell 04	01GE-TE04-N-0716	07/16/01	5 U	170	9	120	1 U	55	1	581	1 U_UJ
Cell 04	01GE-TE04-D-0716	07/16/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 04	01GE-TE04-N-0828	08/28/01	5 U	50	32_JR	17_R	1 U_UJ	48_J	1.1_JR	530	1 U
Cell 04	01GE-TE04-N-1001	10/01/01	5 U	208	5 U	5 U	1 U_UJ	14	1	359	1 U_UJ
Cell 04	01GE-TE04-D-1001	10/01/01	5 U	220	5 U	5 U	0.2 J_UJ	11	1	363	1 U_UJ
Cell 04	01GE-TE04-N-1024	10/24/01	5 U	320	390_R	5 U_R	1 U	26	1_J	540	1 U
Cell 04	01GE-TE04-D-1024	10/24/01	5 U	330	400_R	5 U_R	1 U	38	0.96_J	540	1 U
Cell 04	02GE-TE04-N-0604	06/04/02	5 U	550	305	180	1 UH	26 H	0.62 H	210 H	0.01 U
Cell 04	02GE-TE04-N-0815	08/15/02	5 U	74	65.8	12	1 U	37	0.89	190	0.01 U
Cell 04	02GE-TE04-N-1022	10/22/02	5 U	126	5 U	24	1 U	24	1.2	280	0.01 U
Cell 07	01GE-TE07-N-0425	04/25/01	5 U_UJ	712_J	862_J	24,400_J	1 UB	23 B	5 B	286_J	1 U_UJ
Cell 07	01GE-TE07-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 07	01GE-TE07-N-0517	05/17/01	5 U	706	855	15,200	2 B	40 B	0.8 BCC	271	0.01 U
Cell 07	01GE-TE07-N-0614	06/14/01	5 U	320	8	230	5.4_U	42	0.4	173	0.01 U
Cell 07	01GE-TE07-N-0716	07/16/01	5 U	780	8	560	1 U	27	0.9	221	1 U_UJ
Cell 07	01GE-TE07-N-0828	08/28/01	5 U	56	64_JR	3	4.7_J	34_J	1.2_J	210	1 U
Cell 07	01GE-TE07-D-0828	08/28/01	5 U	42	44_JR	4	1 U_UJ	33_J	0.8_J	200	1 U
Cell 07	01GE-TE07-N-1001	10/01/01	5 U	490	5 U	5 U	1 U_UJ	11	0.9_J	208	1 U_UJ
Cell 07	01GE-TE07-N-1024	10/24/01	5 U	700	850_R	5 U_R	1 U	23	0.9_J	360	1 U
Cell 07	02GE-TE07-N-0604	06/04/02	5 U	900	366	360	1 UH	10 H	0.29 H	350 H	0.02
Cell 07	02GE-TE07-N-0815	08/15/02	5 U	240	5 U	28.8	1 U	16	0.7	330	0.01 U
Cell 07	02GE-TE07-N-1022	10/22/02	5 U	522	5 U	19.2	1 U	12	1	430	0.01 U
Cell 07	02GE-TE07-D-1022	10/22/02	5 U	530	5 U	31.2	1 U	12	0.95	440	0.01 U
Cell 12	01GE-TE12-N-0425	04/25/01	5 U_UJ	1,120_J	1,360_J	76,700_J	1 UB	38 B	3.5 B	321_J	10 U_UJ
Cell 12	01GE-TE12-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 12	01GE-TE12-D-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 12	01GE-TE12-N-0517	05/17/01	5 U	414	499	5,610	2.4 B	21.5 B	0.8 BCC	238	1 U
Cell 12	01GE-TE12-N-0614	06/14/01	5 U	74	90	5 U	1 U	17	0.7	234	0.01 U
Cell 12	01GE-TE12-N-0828	08/28/01	5 U	42	51_R	5 U	1 U_UJ	26_J	1.4_J	390	1 U
Cell 12	01GE-TE12-N-1001	10/01/01	5 U	42	5 U	5 U	1 U_UJ	7	1	530	1 U
Cell 12	01GE-TE12-N-1024	10/24/01	5 U	120	150_R	5 U_R	1 U	22	0.77_J	710	1 U
Cell 12	02GE-TE12-N-0604	06/04/02	5 U	250	61	120	1 UH	11 H	0.41 H	490 H	0.01 U
Cell 12	02GE-TE12-N-0815	08/15/02	5 U	44	53.6	5 U	1 U	15	0.84	560	0.01 U
Cell 12	02GE-TE12-D-0815	08/15/02	5 U	46	56.1	5 U	1 U	15	1.1	550	0.01 U
Cell 12	02GE-TE12-N-1022	10/22/02	5 U	144	5 U	45.6	1 U	13	1.2	3500	0.01 U

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Presumptive Remedy Cells Leachate Results

Cell	Sample ID	Date Sampled	Calcium			Magnesium			Sodium		Potassium		Sodium Adsorption Ratio
			Diss. CLP	Total ULSA	Total CLP	Diss. CLP	Total ULSA	Total CLP	Diss. CLP	Total CLP	Diss. CLP	Total CLP	Calculated
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(unitless)
Cell 04	01GE-TE04-N-0309	03/09/01	375_J	417_H	419	41	47_H	46	40.6_J	41	12.1_J	16.8 B	0.51
Cell 04	01GE-TE04-N-0425	04/25/01	NS	401_J	428	NS	28_J	47	NS	38	NS	37	0.47
Cell 04	01GE-TE04-N-0502	05/02/01	276	NS	315	0.177 B_U	NS	22	35	34	21	21	0.50
Cell 04	01GE-TE04-N-0517	05/17/01	247	263	281	7	15	16	39	41	19	21	0.64
Cell 04	01GE-TE04-N-0614	06/14/01	255	288	349	0.276 B	33	48	35.2_J	45	33.4_J	47	0.60
Cell 04	01GE-TE04-N-0716	07/16/01	197_J	256	235_J	0.0747 B_J	5 U	0.575 B_J	36	41	48.9_J	57.1_J	0.74
Cell 04	01GE-TE04-D-0716	07/16/01	223_J	NS	235_J	0.468 B_J	NS	0.534 B_J	48	42	53.7_J	56.6_J	0.75
Cell 04	01GE-TE04-N-0828	08/28/01	165_J	160	148_J	0.119 B_J	0.6	0.190 B_J	48.9_J	43	130	107	0.97
Cell 04	01GE-TE04-N-1001	10/01/01	171_J	312	174_J	0.0742 B_JU	2.3	0.314 B_JU	51.2_J	42	117_J	107	0.88
Cell 04	01GE-TE04-D-1001	10/01/01	173_J	330	184_J	0.0539 B_JU	2	0.850 B_J	101_J	43	227_J	111	0.87
Cell 04	01GE-TE04-N-1024	10/24/01	277	280	271_RJ	0.123 B_U	0.7	0.233 B_J	49	47	134_J	133_J	0.79
Cell 04	01GE-TE04-D-1024	10/24/01	287	270	291_RJ	0.115 B_U	0.2	0.191 B_J	51	47	139_J	133_J	0.76
Cell 04	02GE-TE04-N-0604	06/04/02	255	280	337	0.139 B	1.8	6.74 B	24.3 B	21.8 B	101	107	0.4
Cell 04	02GE-TE04-N-0815	08/15/02	12.6	17	14.7	0.692 B	0.7 J	0.642 B	34.1	33.8	134	130	2.5
Cell 04	02GE-TE04-N-1022	10/22/02	51.7	59	72.5	0.023 B	1 U	0.036 B	51.5	50.3	183	183	2.0
Cell 07	01GE-TE07-N-0425	04/25/01	NS	372_J	359	NS	6_J	17.7 B	NS	24.7 B	NS	84.6 B	0.35
Cell 07	01GE-TE07-N-0502	05/02/01	582	NS	553	0.0413 U	NS	5.23 B	25	23	73	69	0.27
Cell 07	01GE-TE07-N-0517	05/17/01	381	408	366	0.0413 U	2.0	2.04 B	24	22	63	57	0.32
Cell 07	01GE-TE07-N-0614	06/14/01	138	152	173	0.302 B	0.6 J	0.688 B	30.3_J	37	74.8_J	104	0.77
Cell 07	01GE-TE07-N-0716	07/16/01	240_J	312	275_J	0.0417 B_J	5 U	0.0488 B_J	35	39	90.7_J	110_J	0.65
Cell 07	01GE-TE07-N-0828	08/28/01	17.1_J	36	25.1_J	0.0632 B_J	1.2	0.801 B_J	42.7_J	41	122	124	2.20
Cell 07	01GE-TE07-D-0828	08/28/01	18.1_J	41	22.6_J	0.09 B_J	0.8	0.679 B_J	45.9_J	41	133	127	2.32
Cell 07	01GE-TE07-N-1001	10/01/01	207_J	196	193_J	0.0834 B_JU	0.19 J	0.142 B_J	50	41	137	129	0.81
Cell 07	01GE-TE07-N-1024	10/24/01	359	340	NS	0.0281 B_U	1.2	NS	49	NS	160_J	NS	NS
Cell 07	02GE-TE07-N-0604	06/04/02	386	390	396	0.138 U	1 U	0.885 B	22 B	18.5 B	89	71.9	0.3
Cell 07	02GE-TE07-N-0815	08/15/02	145	140	174	0.0464 B	0.06 J	0.0373 U	28.8	27.2	114	107	0.7
Cell 07	02GE-TE07-N-1022	10/22/02	410	270	285	0.069 B	1 U	0.142 B	52.5	48.7	163	165	0.7
Cell 07	02GE-TE07-D-1022	10/22/02	407	280	287	0.078 B	1 U	0.088 B	54.5	49.3	174	171	0.7
Cell 12	01GE-TE12-N-0425	04/25/01	NS	516_J	566	NS	5_J	10.9 B	NS	31	NS	113	0.35
Cell 12	01GE-TE12-N-0502	05/02/01	295	NS	331	0.128 B_U	NS	33	20	21	55	57	0.29
Cell 12	01GE-TE12-D-0502	05/02/01	284	NS	330	0.0926 B	NS	32	21	21	55	57	0.30
Cell 12	01GE-TE12-N-0517	05/17/01	252	243	237	0.301 B	4.0	13	24	22	64	58	0.38
Cell 12	01GE-TE12-N-0614	06/14/01	62.3	77	70.6	1.79 B	2.2	2.54 B	26.4_J	30	54_J	70	0.96
Cell 12	01GE-TE12-N-0828	08/28/01	100_J	99	97.9_J	1.96 B_J	2.5	1.9 B_J	39.5_J	37	90	101	1.01
Cell 12	01GE-TE12-N-1001	10/01/01	159_J	156	163_J	3.15 B_J	3.6	2.78 B_J	47_J	40	102_J	117	0.85
Cell 12	01GE-TE12-N-1024	10/24/01	260	250	245_RJ	1.1 B	2.2	1.11 B_J	50	45	142_J	133_J	0.79
Cell 12	02GE-TE12-N-0604	06/04/02	182	180	195	0.138 U	1 U	0.595 B	19.3 B	22.8 B	78.5	81.6	0.4
Cell 12	02GE-TE12-N-0815	08/15/02	155	140	152	0.668 B	0.7 J	0.601 B	28.7	27.7	118	112	0.6
Cell 12	02GE-TE12-D-0815	08/15/02	153	140	152	0.704 B	0.9 J	0.662 B	29	27.8	117	112	0.6
Cell 12	02GE-TE12-N-1022	10/22/02	284	270	285	0.249 B	1 U	0.273 B	42.7	41.6	162	135	0.7

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers

Note: Results from 2002 have not completed the validation process

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I =interferent present

H = holding time expired before analysis

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R = result rejected due to poor QC

E = serial dilution was outside guidelines

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H-10

Presumptive Remedy Cells Leachate Results

Cell	Sample ID	Date Sampled	Aluminum Diss. CLP (ug/L)	Aluminum Total CLP (ug/L)	Antimony Diss. CLP (ug/L)	Antimony Total CLP (ug/L)	Arsenic Diss. CLP (ug/L)	Arsenic Total CLP (ug/L)	Barium Diss. CLP (ug/L)	Barium Total CLP (ug/L)	Beryllium Diss. CLP (ug/L)	Beryllium Total CLP (ug/L)
Cell 04	01GE-TE04-N-0309	03/09/01	12 U	1,270	6 U	30 U	10.3 U	47.8 B J	225	47.3 B U	1 U	5 U
Cell 04	01GE-TE04-N-0425	04/25/01	NS	256 B U	NS	30 U	NS	40.8 B J	NS	37 B U	NS	5 U
Cell 04	01GE-TE04-N-0502	05/02/01	53.4 U	78.9 B U	20.9 U	20.9 U	25	30.6	130 B	29.8 B	0.4 U	0.4 U
Cell 04	01GE-TE04-N-0517	05/17/01	53.4 U	108 B	20.9 U R	23.2 U	28	38.6	23.3 B	27.4 B	0.4 U	0.44 U
Cell 04	01GE-TE04-N-0614	06/14/01	60.2 B U	391	4.9 U UJ	4.9 U	28.2 U	54 J	43.7 B	65 B	1.5 B U	1.2 B U
Cell 04	01GE-TE04-N-0716	07/16/01	135 B	109 B	3.8 U UJ	3.8 U UJ	29	32.8 J	46 B J	54.4 B J	0.66 B U	0.62 B UJ
Cell 04	01GE-TE04-D-0716	07/16/01	83.1 B	137 B	3.8 U UJ	3.8 U UJ	32	29.7 J	50.8 B J	54.3 B J	0.92 B U	0.52 B UJ
Cell 04	01GE-TE04-N-0828	08/28/01	66.2 B	97.6 B	4.9 U	4.9 U	35	31.9	259	56.3 B J	0.48 B UJ	0.56 B JU
Cell 04	01GE-TE04-N-1001	10/01/01	29.5 B JU	118 B JU	3 U	3 U	42.3 J	44.4 J	239 J	56.9 B J	1 U J	1 U JU
Cell 04	01GE-TE04-D-1001	10/01/01	43.1 B JU	138 B JU	3 U	3 U	44.5 J	45.2 J	97.3 B J	57.8 B J	1 U J	1 U JU
Cell 04	01GE-TE04-N-1024	10/24/01	71.3 B	87.2 B UJ	3.7 U	3.7 U	28.4 J	31.8	198 B	82.7 B J	0.4 U	0.4 U
Cell 04	01GE-TE04-D-1024	10/24/01	75.7 B	80.2 B UJ	3.7 U	3.7 U	29.3 J	34.2	115 B	86.7 B J	0.4 U	0.4 U
Cell 04	02GE-TE04-N-0604	06/04/02	139 U	437 B	53 U	53 U	21 U	54.4 B	287 B	148 B	1 U	3.6 B
Cell 04	02GE-TE04-N-0815	08/15/02	263	228	3.9 U	3.9 U	27.4	28.6	330	52.5 B	0.2 U	0.2 U
Cell 04	02GE-TE04-N-1022	10/22/02	115 B	84 B	2 U	2 U	19	20	227	62 B	0.6 B	1.6 B
Cell 07	01GE-TE07-N-0425	04/25/01	NS	946 B U	NS	120 U	NS	70 B J	NS	70.7 B U	NS	20 U
Cell 07	01GE-TE07-N-0502	05/02/01	53.4 U	132 B U	20.9 U UJ	20.9 U UJ	28	29.5	190 B	84.7 B	0.66 B UJ	0.99 B U
Cell 07	01GE-TE07-N-0517	05/17/01	53.4 U	59.3 U	20.9 U R	23.2 U	24	24.5	62.8 B	59.6 B	0.58 B U	0.44 U
Cell 07	01GE-TE07-N-0614	06/14/01	30.6 B U	111 B	4.9 U UJ	4.9 U	33	46 J	46.3 B	64.2 B	2.7 B U	1.3 B U
Cell 07	01GE-TE07-N-0716	07/16/01	212	211	3.8 U UJ	3.8 U UJ	32	28.3 J	98.4 B J	112 B J	0.7 B U	0.68 B UJ
Cell 07	01GE-TE07-N-0828	08/28/01	756	3,650	4.9 U	4.9 U	40	45.4	134 B	69.9 B J	0.43 B UJ	0.7 B JU
Cell 07	01GE-TE07-D-0828	08/28/01	558	3,070	4.9 U	4.9 U	45	43.8	344	63.8 B J	0.45 B UJ	0.7 B JU
Cell 07	01GE-TE07-N-1001	10/01/01	116 B	810 J	3 U	3 U	45.2 J	48.6 J	278 J	103 B J	1 U J	1 U JU
Cell 07	01GE-TE07-N-1024	10/24/01	55 U	NS	3.7 U	NS	27.3 J	NS	261	NS	0.4 U	NS
Cell 07	02GE-TE07-N-0604	06/04/02	586 B	2550	53 U	53 U	30 B	49.4 B	292 B	128 B	4.7 B	1.2 B
Cell 07	02GE-TE07-N-0815	08/15/02	356	451	3.9 U	3.9 U	15.7	18.2	250	81 B	0.2 U	0.2 U
Cell 07	02GE-TE07-N-1022	10/22/02	161 B	354	2 U	2 U	22	27	184 B	127 B	0.42 B	1.6 B
Cell 07	02GE-TE07-D-1022	10/22/02	187 B	229	2 U	2 U	20	25	244	128 B	0.4 U	1.7 B
Cell 12	01GE-TE12-N-0425	04/25/01	NS	95.8 B U	NS	30 U	NS	73.1 J	NS	85.6 B U	NS	5 U
Cell 12	01GE-TE12-N-0502	05/02/01	69.3 B U	868	20.9 U	20.9 U	23.6	33.4	79.7 B	53.1 B	0.77 B U	0.4 U
Cell 12	01GE-TE12-D-0502	05/02/01	53.4 U	831	20.9 U	20.9 U	21.6	29.8	68.1 B	52.5 B	0.4 U	0.4 U
Cell 12	01GE-TE12-N-0517	05/17/01	53.4 U	550	20.9 U R	23.2 U	27	31.4	54.4 B	50.3 B	0.65 B U	0.44 U
Cell 12	01GE-TE12-N-0614	06/14/01	13.6 B U	101 B	4.9 U UJ	4.9 U	37	48.1 J	24.3 B	31.6 B	3.2 B U	0.83 B U
Cell 12	01GE-TE12-N-0828	08/28/01	45.8 B U	55.1 B	4.9 U	4.9 U	39.8	42.4	275	45.7 B J	0.36 B UJ	0.55 B JU
Cell 12	01GE-TE12-N-1001	10/01/01	11 U UJ	53.2 B JU	3 U	3 U	60.2 J	64.9 J	246 J	58.7 B J	1 U J	1 U JU
Cell 12	01GE-TE12-N-1024	10/24/01	55 U	62.8 B UJ	3.7 U	3.7 U	40.7 J	47.2	139 B	71.6 B J	0.4 U	0.4 U
Cell 12	02GE-TE12-N-0604	06/04/02	540 B	167 B	53 U	53 U	21 U	21 U	200 B	43.2 B	5 B	2.6 B
Cell 12	02GE-TE12-N-0815	08/15/02	252	181 B	3.9 U	3.9 U	27.7	24.7	103 B	49 B	0.2 U	0.2 U
Cell 12	02GE-TE12-D-0815	08/15/02	223	201	3.9 U	3.9 U	25.4	23.3	261	49 B	0.2 U	0.2 U
Cell 12	02GE-TE12-N-1022	10/22/02	42 B	66 B	2 U	2 U	34	38	129 B	88 B	0.4 U	1.6 B

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11-11

Presumptive Remedy Cells Leachate Results

Cell	Sample ID	Date Sampled	Cadmium Diss. CLP (ug/L)	Cadmium Total CLP (ug/L)	Chromium Diss. CLP (ug/L)	Chromium Total CLP (ug/L)	Cobalt Diss. CLP (ug/L)	Cobalt Total CLP (ug/L)	Copper Diss. CLP (ug/L)	Copper Total CLP (ug/L)	Iron Diss. CLP (ug/L)	Iron Total CLP (ug/L)
Cell 04	01GE-TE04-N-0309	03/09/01	1 U	5 U	7.5 B	10 U	2 U	10 U	6.3 B_U	125 B_U	16 U_UJ	3980
Cell 04	01GE-TE04-N-0425	04/25/01	NS	5 U	NS	10 U	NS	10 U	NS	204 _U	NS	172 B
Cell 04	01GE-TE04-N-0502	05/02/01	1.5 U	1.5 U	10.4 B_U	7.2 B_J	4.4 U	4.4 U	92	104	16.7 U	89.1 B_U
Cell 04	01GE-TE04-N-0517	05/17/01	1.5 U_R	1.7 U	4.2 B_U	8.4 B	4.4 U	4.9 U	50.5 _UJ	86.4	16.7 U	261
Cell 04	01GE-TE04-N-0614	06/14/01	0.4 U_UJ	1.3 B	2.7 B_J	5.9 B	0.7 U_UJ	1.1 B	106	186	50.4 B	88.6 B
Cell 04	01GE-TE04-N-0716	07/16/01	0.5 U_UJ	0.5 U_UJ	6.5 U_UJ	6.5 U_UJ	1.8 U	1.8 U	87.8	118	38.9 B	131 _J
Cell 04	01GE-TE04-D-0716	07/16/01	0.5 U_UJ	0.5 U_J	6.5 U_UJ	6.5 U_UJ	1.8 U	1.8 U	93.1	128	66.7 B	65.4 B_J
Cell 04	01GE-TE04-N-0828	08/28/01	0.4 U_J	0.4 U_JU	1.2 B_UJ	1.1 B_J	0.78 B_J	0.7 U_J	70.6	63.4	36.9 B	1750
Cell 04	01GE-TE04-N-1001	10/01/01	1 U_J	1 U_J	1.2 B_J	1 U_UJ	2 U_J	2 B_J	59.4	65.3 _J	8 U_UJ	124 _J
Cell 04	01GE-TE04-D-1001	10/01/01	1 U_J	1 U_J	1.1 B_J	1 U_JU	2 U_J	2.1 B_J	61.7	62.7 _J	8 U_UJ	194
Cell 04	01GE-TE04-N-1024	10/24/01	0.4 U	0.4 U	2.7 B_U	2.6 B	2.3 B	2 B	74.1	73.9	22.6 U	40.6 B_J
Cell 04	01GE-TE04-D-1024	10/24/01	0.4 U	0.4 U	2.4 B_U	2.9 B	2.1 B	1.5 B	76.7	73.4	22.6 U	25.8 B_J
Cell 04	02GE-TE04-N-0604	06/04/02	6 U	6 U	14 U	14 U	13 U	13 U	178 B	187 B	145 U	839 B
Cell 04	02GE-TE04-N-0815	08/15/02	0.6 U	0.6 U	5 B	4.4 B	3.1 B	4 B	60.4	61.8	85.7 B	18.7 U
Cell 04	02GE-TE04-N-1022	10/22/02	0.5 U	0.5 U	5.9 B	5.7 B	3.6 B	2.8 B	113	117	113	28 B
Cell 07	01GE-TE07-N-0425	04/25/01	NS	20 U	NS	40 U	NS	40 U	NS	418 B_U	NS	320 U
Cell 07	01GE-TE07-N-0502	05/02/01	1.5 U	1.5 U	6.1 B_U	4.9 B_J	4.4 U	4.4 U	235	231	16.7 U	79.7 B_U
Cell 07	01GE-TE07-N-0517	05/17/01	1.5 U_R	1.7 U	8.3 B_U	7.3 B	4.4 U	4.9 U	230	212	16.7 U	74 B
Cell 07	01GE-TE07-N-0614	06/14/01	0.4 U_UJ	0.4 U	5.7 B	9.9 B	2 B_J	3.5 B	200	256	26.3 B	147
Cell 07	01GE-TE07-N-0716	07/16/01	0.5 U_UJ	0.5 U_UJ	8.3 B_J	6.7 B_J	1.8 U	2 B_J	178	196	131	95.3 B_J
Cell 07	01GE-TE07-N-0828	08/28/01	0.4 U_J	0.4 U_JU	3.1 B_J	5.6 B_J	1.8 B_J	2.7 B_J	118	133	102	4490
Cell 07	01GE-TE07-D-0828	08/28/01	0.4 U_J	0.4 U_JU	3.6 B_J	8.6 B_J	2.3 B_J	2.7 B_J	130	127	140	3660
Cell 07	01GE-TE07-N-1001	10/01/01	1 U_J	1 U_J	1.6 B_J	2 B_J	3.8 B_J	3.2 B_J	138	141 _J	8 U_JU	1900 _J
Cell 07	01GE-TE07-N-1024	10/24/01	0.4 U	NS	4.4 B_U	NS	3.8 B	NS	120	NS	22.6 U	NS
Cell 07	02GE-TE07-N-0604	06/04/02	65.7	6 U	22.9 B	14 U	13 U	13 U	30.3 B	62.2 B	901 B	5420
Cell 07	02GE-TE07-N-0815	08/15/02	0.6 U	0.6 U	7.9 B	7.5 B	1.9 B	1.8 B	92.7	92.9	18.7 U	227
Cell 07	02GE-TE07-N-1022	10/22/02	0.5 U	0.5 U	14	11	5.6 B	4.3 B	83	86	49 B	2040
Cell 07	02GE-TE07-D-1022	10/22/02	0.5 U	0.5 U	14	10	5.1 B	4.6 B	82	82	51 B	1180
Cell 12	01GE-TE12-N-0425	04/25/01	NS	5 U	NS	10 U	NS	10 U	NS	262	NS	144 B_U
Cell 12	01GE-TE12-N-0502	05/02/01	1.5 U	1.5 U	4.6 B_U	2.2 U_UJ	4.4 U	4.4 U	231	288	26.5 B_U	57.6 B_U
Cell 12	01GE-TE12-D-0502	05/02/01	1.5 U	1.5 U	3.3 B_U	2.2 U_UJ	4.4 U	4.4 U	234	285	16.7 U	48 B_U
Cell 12	01GE-TE12-N-0517	05/17/01	1.5 U_R	1.7 U	5.7 B_U	5.6 B	4.4 U	4.9 U	252	255	19.9 B_U	271
Cell 12	01GE-TE12-N-0614	06/14/01	0.4 U_UJ	0.4 U	5.3 B	8.3 B	1.1 B_J	2.5 B	144	195	19.4 U	64 B
Cell 12	01GE-TE12-N-0828	08/28/01	0.4 U_J	0.4 U_J	2.9 B_UJ	2.5 B_J	1.2 B_J	0.7 U_J	53.4	65.8	34.8 B	30.3 B_J
Cell 12	01GE-TE12-N-1001	10/01/01	1 U_J	1 U_J	4 B_J	3.6 B_JU	3.6 B_J	3 B_J	125	133 _J	8 U_UJ	60.5 B_JU
Cell 12	01GE-TE12-N-1024	10/24/01	0.4 U	0.4 U	6.4 B_U	6.7 B	4.3 B	3.4 B	105	100	22.6 U	22.6 U
Cell 12	02GE-TE12-N-0604	06/04/02	56.8	6 U	14 U	14 U	13 U	13 U	57.7 B	112 B	145 U	145 U
Cell 12	02GE-TE12-N-0815	08/15/02	0.6 U	0.6 U	5.9 B	5.3 B	2.2 B	3.1 B	53	51.8	18.7 U	41.7 B
Cell 12	02GE-TE12-D-0815	08/15/02	0.6 U	0.6 U	5.9 B	5.3 B	3.1 B	3.1 B	52.3	52.9	18.7 U	50.4 B
Cell 12	02GE-TE12-N-1022	10/22/02	0.5 U	0.5 U	7.3 B	6.8 B	5.5 B	4.6 B	74	74	22 B	18 U

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Presumptive Remedy Cells Leachate Results

Cell	Sample ID	Date Sampled	Lead Diss. CLP (ug/L)	Lead Total CLP (ug/L)	Manganese Diss. CLP (ug/L)	Manganese Total CLP (ug/L)	Mercury Diss. CLP (ug/L)	Mercury Total CLP (ug/L)	Nickel Diss. CLP (ug/L)	Nickel Total CLP (ug/L)	Selenium Diss. CLP (ug/L)	Selenium Total CLP (ug/L)
Cell 04	01GE-TE04-N-0309	03/09/01	2 U	10 U	12.4 B	219	0.1 U_R	0.1 U_R	2 B	10 U	12.9 _U	16.1 B_J
Cell 04	01GE-TE04-N-0425	04/25/01	NS	10 U	NS	111	NS	0.1 U	NS	12.6 B	NS	24.5 B_J
Cell 04	01GE-TE04-N-0502	05/02/01	0.8 U	1.3 B_U	0.7 U	55.3	0.1 U	0.1 U	8.9 U	14.8 B	31.6 _J	32
Cell 04	01GE-TE04-N-0517	05/17/01	0.8 U_UJ	1.1 B	0.7 U	39.5	0.1 U	0.1 U	8.9 U	9.9 U	24.4	27.2
Cell 04	01GE-TE04-N-0614	06/14/01	6.2 _U	5.8 _J	1.1 B_UJ	505	0.1 U_UJ	0.1 U_UJ	15.2 B	28 B	21.9	41.3 _J
Cell 04	01GE-TE04-N-0716	07/16/01	2.7 U_R	3.9 _J	2 B	26.7	0.1 U	0.1 U	16.6 B_J	17.7 B_J	11.4 _J	23.1 _J
Cell 04	01GE-TE04-D-0716	07/16/01	10.4 _J	5.1 _J	6.8 B	22.9	0.1 U	0.1 U	21.1 B_J	19.3 B_J	22.5 _J	18.5 _J
Cell 04	01GE-TE04-N-0828	08/28/01	1.3 U_UJ	4.2	1.3 B	14.6 B	0.14 B_U	0.14 B_U	25 B_J	21.2 B_J	20.8	18.9 _J
Cell 04	01GE-TE04-N-1001	10/01/01	2 U	2 U	2.1 B	19.6	0.1 U	0.1 U	37.9 B_J	35 B_J	28.7 _J	26.1 _J
Cell 04	01GE-TE04-D-1001	10/01/01	2 U	2 U	1 U	19.3	0.1 U	0.1 U	38.6 B_J	32.8 B_J	27.3 _J	26.4 _J
Cell 04	01GE-TE04-N-1024	10/24/01	2.2 U	2.2 U	1.4 B_U	12.1 B	0.1 U_UJ	2.6	28.8 B	28.8 B	23.7	21.6
Cell 04	01GE-TE04-D-1024	10/24/01	2.2 U	2.2 U	0.76 B_U	6.2 B_U	0.1 U_UJ	0.1 U_UJ	30 B	29.6 B	23.6	23.1
Cell 04	02GE-TE04-N-0604	06/04/02	17 U	17 U	3 U	121 B	0.2 U	0.2 U	14 U	21.2 B	40 U	62.8
Cell 04	02GE-TE04-N-0815	08/15/02	2.6 U	2.6 U	0.93 B	0.93 B	0.1 U	0.1 U	8.5 B	8 B	16.5	21
Cell 04	02GE-TE04-N-1022	10/22/02	1.5 U	1.5 U	0.6 U	0.84 B	0.2 U	0.2 U	24 B	24 B	25	28
Cell 07	01GE-TE07-N-0425	04/25/01	NS	40 U	NS	37.6 B	NS	0.29	NS	40 U	NS	60 U_R
Cell 07	01GE-TE07-N-0502	05/02/01	0.8 U	0.8 U	0.7 U	4.5 B_U	0.1 U	0.1 U	21.4 B_J	25.2 B_J	29.5 _J	29.6
Cell 07	01GE-TE07-N-0517	05/17/01	0.8 U_UJ	1.3 B	0.7 U	2.9 B	0.1 U	0.1 U	22.9 B	21 B	29.5	29.3
Cell 07	01GE-TE07-N-0614	06/14/01	2.8 B_U	3.2 _J	2.3 B_UJ	4.4 B	0.1 U_UJ	0.1 U_UJ	23.2 B	31.6 B	26.9	54.9 _J
Cell 07	01GE-TE07-N-0716	07/16/01	16.8 _J	9.7 _J	2 B	3.5 B	0.1 U	0.1 U	33.2 B_J	36 B_J	19.7 _J	25.2 _J
Cell 07	01GE-TE07-N-0828	08/28/01	1.3 U_UJ	7.5	4.1 B	132	0.13 B_U	0.14 B_U	36.6 B_J	37.2 B_J	18.7	17.7 _J
Cell 07	01GE-TE07-D-0828	08/28/01	1.3 U_UJ	7.7	3.6 B	115	0.18 B_U	0.12 B_U	38.7 B_J	38.6 B_J	19.9	22.3 _J
Cell 07	01GE-TE07-N-1001	10/01/01	2 U	2 U	1 U	65.2 _J	0.1 U	0.1 U	60.1 _J	54.6 _J	24.9 _J	20.7 _J
Cell 07	01GE-TE07-N-1024	10/24/01	2.2 U	NS	0.44 B_U	NS	0.1 U_UJ	NS	53.3	NS	25.6	NS
Cell 07	02GE-TE07-N-0604	06/04/02	17 U	17 U	10 B	107 B	0.2 U	0.2 U	14 U	14 U	40 U	40 U
Cell 07	02GE-TE07-N-0815	08/15/02	2.6 U	2.6 U	1.9 B	8.3 B	0.1 U	0.1 U	16.6 B	17 B	19	22.2
Cell 07	02GE-TE07-N-1022	10/22/02	1.5 U	1.5 U	0.67 B	25	0.2 U	0.2 U	30 B	22 B	33	27
Cell 07	02GE-TE07-D-1022	10/22/02	1.5 U	1.5 U	0.6 U	16	0.2 U	0.2 U	28 B	21 B	34	28
Cell 12	01GE-TE12-N-0425	04/25/01	NS	10 U	NS	27.2 B	NS	0.1 U	NS	17.2 B	NS	21.6 B_J
Cell 12	01GE-TE12-N-0502	05/02/01	0.8 U	0.97 B_U	0.83 B_U	60.6	0.1 U	0.1 U	21.3 B	35.1 B	23.6 _J	25
Cell 12	01GE-TE12-D-0502	05/02/01	0.8 U	0.8 U	0.7 U_U	59.5	0.1 U	0.1 U	27.3 B	40.9 B	19.4 _J	25
Cell 12	01GE-TE12-N-0517	05/17/01	0.8 U_UJ	1.1 B	3.6 B_U	123	0.1 U	0.1 U	29.4 B	30.3 B	24	24.9
Cell 12	01GE-TE12-N-0614	06/14/01	1.3 U	4.5 _J	5.4 B_J	17.6	0.1 U_UJ	0.1 U_UJ	22.8 B	36.5 B	11.8	20.4 _J
Cell 12	01GE-TE12-N-0828	08/28/01	1.3 U_UJ	1.3 U	3.3 B	6.2 B	0.15 B_U	0.15 B_U	8.9 B_J	12 B_J	8.4	10.8 _J
Cell 12	01GE-TE12-N-1001	10/01/01	2 U	2 U	25.3	63	0.1 U	0.1 U	35.7 B_J	34 B_J	22.2 _J	20.7 _J
Cell 12	01GE-TE12-N-1024	10/24/01	2.2 U	2.2 U	7 B	70.6	0.1 U_UJ	0.1 U_UJ	37 B	35.2 B	26.2	24.4
Cell 12	02GE-TE12-N-0604	06/04/02	17 U	26.6 B	3 U	20.5 B	0.2 U	0.2 U	14 U	28.8 B	40 U	40 U
Cell 12	02GE-TE12-N-0815	08/15/02	2.6 U	2.6 U	19	20.2	0.1 U	0.1 U	8.6 B	7.7 B	13.2	16.6
Cell 12	02GE-TE12-D-0815	08/15/02	2.6 U	2.6 U	28.4	36.7	0.1 U	0.1 U	8.5 B	7.5 B	15.1	16.2
Cell 12	02GE-TE12-N-1022	10/22/02	1.5 U	1.5 U	2.8 B	13 B	0.2 U	0.2 U	19 B	18 B	18	16

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Presumptive Remedy Cells Leachate Results

Cell	Sample ID	Date Sampled	Silicon Total ULSA (mg/L as SiO2)	Silver Diss. CLP (ug/L)	Silver Total CLP (ug/L)	Thallium Diss. CLP (ug/L)	Thallium Total CLP (ug/L)	Vanadium Diss. CLP (ug/L)	Vanadium Total CLP (ug/L)	Zinc Diss. CLP (ug/L)	Zinc Total CLP (ug/L)
Cell 04	01GE-TE04-N-0309	03/09/01	12,300 H	3 U	15 U UJ	5 U R	25 U R	3 U	15 U	182 J	153 U
Cell 04	01GE-TE04-N-0425	04/25/01	11.5 J	NS	15 U UJ	NS	25 U R	NS	15 U	NS	149 U
Cell 04	01GE-TE04-N-0502	05/02/01	NS	2.8 B U	2.1 U UJ	1.7 U UJ	1.7 U	2.4 U	2.4 U	6.2 B U	2.6 B U
Cell 04	01GE-TE04-N-0517	05/17/01	14	2.1 U R	3 B	1.7 U	1.9 U	2.4 U	2.7 U	2.2 B U	2.6 B
Cell 04	01GE-TE04-N-0614	06/14/01	58.51	1.2 B U	0.84 B U	6 B	5.6 U	5.6 B U	17.8 B	4.7 B U	46.6
Cell 04	01GE-TE04-N-0716	07/16/01	NR	1.2 U	1.2 U	4.9 U R	4.9 U R	5.9 B U	3.7 B U	12.7 B J	17.3 B J
Cell 04	01GE-TE04-D-0716	07/16/01	NR	1.2 U	1.2 U	4.9 U R	4.9 U R	8.2 B U	2.6 B U	31.3 J	25.3 J
Cell 04	01GE-TE04-N-0828	08/28/01	NR	0.84 B U	0.73 B	6 B U	5.6 U R	3.4 B	3.8 B U	23 J	95.9
Cell 04	01GE-TE04-N-1001	10/01/01	NR	1 U JU	1 U R	4 U R	4 U R	22.2 B J	23.1 B	5.5 B U	4.7 B
Cell 04	01GE-TE04-D-1001	10/01/01	NR	1 U JU	1 U R	4 U R	4 U R	23 B J	22.6 B	3 U	9.2 B
Cell 04	01GE-TE04-N-1024	10/24/01	NR	1 U	1 U	5.2 U	5.2 U	10.3 B	11.4 B	9.5 B UJ	1.1 U UJ
Cell 04	01GE-TE04-D-1024	10/24/01	NR	1 U	1 U	5.2 U	5.2 U	10.8 B	11.5 B	3.3 B UJ	1.1 U UJ
Cell 04	02GE-TE04-N-0604	06/04/02	NR	11 U	11 U	55 U	55 U	17 U	19.8 B	6 U	41.1 B
Cell 04	02GE-TE04-N-0815	08/15/02	NR	1.2 U	1.2 U	4.9 U	4.9 U	13.6 B	14.3 B	4 B	1.2 U
Cell 04	02GE-TE04-N-1022	10/22/02	NR	0.8 U	0.8 U	7 U	7 U	5.9 B	1.5 U	12 B	18 B
Cell 07	01GE-TE07-N-0425	04/25/01	9.85 J	NS	60 U UJ	NS	100 U R	NS	60 U	NS	260 B U
Cell 07	01GE-TE07-N-0502	05/02/01	NS	2.1 U	2.1 U UJ	1.7 U UJ	1.7 U	2.4 U	2.4 U	69.6 J	2.3 B UJ
Cell 07	01GE-TE07-N-0517	05/17/01	4	2.1 U R	2.3 U	1.7 U	1.9 U	2.4 U	2.7 U	2.6 B U	1.2 U
Cell 07	01GE-TE07-N-0614	06/14/01	4.314	0.98 B U	1.2 B U	6.3 B	7.3 B U	0.9 U UJ	0.9 U	46.8	43.6
Cell 07	01GE-TE07-N-0716	07/16/01	NR	1.2 U	1.2 U	4.9 U R	6.1 B J	8.2 B U	6.7 B U	87 J	24.2 J
Cell 07	01GE-TE07-N-0828	08/28/01	NR	1.2 B U	1.1 B J	5.6 U	5.6 U R	5.7 B	13.4 B	28.1 J	47.7
Cell 07	01GE-TE07-D-0828	08/28/01	NR	0.82 B U	0.8 B	10.3 U	5.6 U R	6.1 B	11.5 B	25 J	44.2
Cell 07	01GE-TE07-N-1001	10/01/01	NR	1 U JU	1 U R	4 U R	4 U R	17.4 B J	17.6 B	18.8 B UJ	17.2 B
Cell 07	01GE-TE07-N-1024	10/24/01	NR	1 U	NS	5.2 U	NS	10.3 B	NS	19.4 B UJ	NS
Cell 07	02GE-TE07-N-0604	06/04/02	NR	11 U	11 U	55 U	55 U	17 U	17 U	6 U	31.2 B
Cell 07	02GE-TE07-N-0815	08/15/02	NR	1.2 U	1.2 U	4.9 U	4.9 U	1.5 B	3 B	11.9 B	3.4 B
Cell 07	02GE-TE07-N-1022	10/22/02	NR	0.8 U	0.8 U	7 U	7 U	1.5 U	1.5 U	44	24
Cell 07	02GE-TE07-D-1022	10/22/02	NR	0.8 U	0.8 U	7 U	7 U	1.5 U	1.5 U	59	18 B
Cell 12	01GE-TE12-N-0425	04/25/01	4.99 J	NS	15 U UJ	NS	25 U R	NS	15 U	NS	30.7 B U
Cell 12	01GE-TE12-N-0502	05/02/01	NS	4.1 B U	2.1 U UJ	1.7 U UJ	1.7 U	2.4 U	2.4 U	12.2 B U	1.5 B U
Cell 12	01GE-TE12-D-0502	05/02/01	NS	2.1 U	2.1 U UJ	1.7 U UJ	1.7 U	2.4 U	2.4 U	3.3 B U	2 B U
Cell 12	01GE-TE12-N-0517	05/17/01	13	2.1 U R	2.3 U	1.7 U	1.9 U	2.4 U	2.7 U	8.8 B U	10 B
Cell 12	01GE-TE12-N-0614	06/14/01	22.67	1.5 B U	1.1 B U	5.6 U	5.6 U	4.1 B U	3.5 B U	5.3 B U	31.4
Cell 12	01GE-TE12-N-0828	08/28/01	NR	0.7 U	1.2 B	5.6 U	5.6 U R	8.1 B	9 B	25.4 J	15 B UJ
Cell 12	01GE-TE12-N-1001	10/01/01	NR	1 U JU	1 U R	4 U R	4 U R	29.2 B J	30.2 B	3 U	8.1 B
Cell 12	01GE-TE12-N-1024	10/24/01	NR	1 U	1 U	5.2 U	5.2 U	22.1 B	21.6 B	1.1 U UJ	1.1 U UJ
Cell 12	02GE-TE12-N-0604	06/04/02	NR	11 U	11 U	55 U	55 U	17 U	22.1 B	6 U	6 U
Cell 12	02GE-TE12-N-0815	08/15/02	NR	1.2 U	1.2 U	4.9 U	4.9 U	23.3 B	23.5 B	10.1 B	4 B
Cell 12	02GE-TE12-D-0815	08/15/02	NR	1.2 U	1.2 U	4.9 U	4.9 U	22.9 B	23.3 B	13.2 B	7.3 B
Cell 12	02GE-TE12-N-1022	10/22/02	NR	0.8 U	0.8 U	7 U	7 U	2.6 B	1.5 U	15 B	11 B

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MT^2 Cells Leachate Results

Cell	Sample ID	Date Sampled	pH Lab ULSA (su)	Conductivity Lab ULSA (umhos/cm @ 25 C)	Total Solids Diss. ULSA (mg/L @ 180 C)	Total Solids Susp. ULSA (mg/L @ 105 C)	Hardness Total ULSA (mg/L as CaCO3)	Turbidity Lab ULSA (NTU)	Ammonia Total ULSA (mg/L as N)	NITRATE NITRITE Total ULSA (mg/L as N)	P ORTHOPHOSPHATE Total ULSA (mg/L as P)	Cyanide Total CLP (ug/L)	Cyanide WAD ULSA (ug/L)
Cell 05	01GE-TE05-N-0309	03/09/01	7.21 _H	30,000 UI,1 _H	110,000 _H	160 _JH	932 _H	1.4 _H	5.1 _H	20 UBHE_HUJ	167,000 _HJ	8.1 B _J	NR
Cell 05	01GE-TE05-D-0309	03/09/01	NS	NS	NS	NS	910 _H	NS	5.3 _H	NS	NS	NS	NR
Cell 05	01GE-TE05-N-0425	04/25/01	7.12	24,900 I _J	85,000 _J	90	360 _J	0.6 _J	3.3 _J	0.5 UBH_UJ	7,920 H_RJ	4 B _J	NR
Cell 05	01GE-TE05-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.7 U_UJ	NR
Cell 05	01GE-TE05-N-0517	05/17/01	7.18 _J	21,000 I	55,000 _J	74	320	1.1 _J	3	1 UBH	4,720 _J	1.9 B	5 U
Cell 05	01GE-TE05-N-0614	06/14/01	6.92	28,800 I	74,000 _J	80 _J	383	0.9	4.18	0.5 UH_UJ	7,360	4.1 U	6 J_UJ
Cell 05	01GE-TE05-N-0716	07/16/01	7	24,700 I	41,121	55 _J	270	0.9 _JU	2.1	0.25 UH_R	NR	4.5 U_UJ	10 U
Cell 05	01GE-TE05-N-0828	08/28/01	6.97	24,100 I	57,000 _J	47 _J	270	6.5	2.6	0.23 UH_J	NR	4.5 U_UJ	10 U_UJR
Cell 05	01GE-TE05-N-1001	10/01/01	7.25	21,000 I	51,316 H_J	151 H_JJ	300	34.8 _J	0.7	0.65 H	NR	4.3 B_UJ	10 U_UJ
Cell 05	01GE-TE05-N-1024	10/24/01	7.03	20,800 I	43,300	82 _J	430	4.4	2.8	1.6 H	NR	3 B _J	2
Cell 05	02GE-TE05-N-0604	06/04/02	6.71	18000	20000	320	590	30.8	0.72	0.05 UH	NR	3.5 U	10 U
Cell 05	02GE-TE05-N-0815	08/15/02	6.98	17700 I	19000	20	530	2.24	0.078	0.05 U	NR	3 U	10 U
Cell 05	02GE-TE05-N-1022	10/22/02	6.69	41.5 I	19000	96	680	11.2	0.091	0.12 U	NR	6.9 B	NS
Cell 11	01GE-TE11-N-0310	03/10/01	7.75 _H	35,000 UI1 _H	160,000 _H	220 _JH	94 _H	2.9 _H	3.3 _H	1 UBH_HUJ	25,000 _HJ	4 B _J	NR
Cell 11	01GE-TE11-N-0425	04/25/01	7.49	27,300 I _J	100,000 _J	120	570 _J	0.6 _J	3.9 _J	1 UBH_UJ	11,400 H_RJ	20.8 _J	NR
Cell 11	01GE-TE11-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.7 B_J	NS
Cell 11	01GE-TE11-N-0517	05/17/01	7.66 _J	21,400 I	58,000 _J	40	270	2 _J	3	0.5 BH	6,220 _J	5.3 B	5 U
Cell 11	01GE-TE11-N-0614	06/14/01	7.55	24,800 I	48,000 _J	12 _J	289	1.3	2.74	1.2 UH_UJ	5,220	4.1 U	6 J_UJ
Cell 11	01GE-TE11-N-0828	08/28/01	8.25	27,000 I	32,000 _J	47 _J	140	3.5	0.07	0.23 UH_J	NR	4.5 U_UJ	10 U_UJR
Cell 11	01GE-TE11-N-1001	10/01/01	7.82	28,000 I	34,624 H_J	84 H_JJ	190	6.1 _J	0.54	0.12 UH	NR	6.1 B_UJ	2 J_UJ
Cell 11	01GE-TE11-N-1024	10/24/01	7.53	24,800 I	27,400	56 _J	310	4.6	0.56	0.87 H	NR	2.9 B _J	10 U
Cell 11	02GE-TE11-N-0604	06/04/02	7.84	13400	13000	53	250	11.1	0.16	0.05 UH	NR	3.5 U	10 U
Cell 11	02GE-TE11-N-1022	10/22/02	7.34	12500	12000	15	330	1.7	0.05 U	0.12 U	NR	7 B	NS

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MT² Cells Leachate Results

Cell	Sample ID	Date Sampled	Acidity Total ULSA (mg/L as CaCO3)	Alkalinity Total ULSA (mg/L as CaCO3)	Bicarbonate Total ULSA (mg/L as HCO3)	Carbonate Total ULSA (mg/L as CO3)	Bromide Total ULSA (mg/L)	Chloride Total ULSA (mg/L)	Fluoride Total ULSA (mg/L)	Sulfate Total ULSA (mg/L)	Sulfide Total ULSA (mg/L)
Cell 05	01GE-TE05-N-0309	03/09/01	2,400 H	430 JH	525 JH	5 U H	10 UBE H	10 UBE H	2 UBE H	34,200 H	1 U H
Cell 05	01GE-TE05-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	1 U H
Cell 05	01GE-TE05-N-0425	04/25/01	740 J	9,570 J	11,700 J	5 U UJ	1 UB	5 B	0.2 UB	27,300 J	1 U UJ
Cell 05	01GE-TE05-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 05	01GE-TE05-N-0517	05/17/01	870	7,400	9,028	5 U	10 UB	13.1 B	4 UB	22,000	1 U
Cell 05	01GE-TE05-N-0614	06/14/01	2,240	8,400	10,000	5 U	10 U	6	2 U	35,200	0.01 U
Cell 05	01GE-TE05-N-0716	07/16/01	681	4,200	5,100	5 U	5 U	9	1 U	18,921	1 U UJ
Cell 05	01GE-TE05-N-0828	08/28/01	5 U	4,600	5,600 R	5 U	1 U UJ	17 J	0.2 U	22,000	1 U
Cell 05	01GE-TE05-N-1001	10/01/01	612	4,098	5 U	5 U	2 B J	11	0.2 U J	22,300	1 U UJ
Cell 05	01GE-TE05-N-1024	10/24/01	734	2,700	3,300 R	5 U R	1 U	13	0.2 U J	20,000	1 U
Cell 05	02GE-TE05-N-0604	06/04/02	310	200	244	5 U	1 UH	5.8 H	0.2 UH	11000 H	0.15
Cell 05	02GE-TE05-N-0815	08/15/02	170	608	741	5 U	1 U	14	0.2 U	180	0.01
Cell 05	02GE-TE05-N-1022	10/22/02	380	14	17.1	5 U	1 U	9.5	0.2 U	11000	0.01 U
Cell 11	01GE-TE11-N-0310	03/10/01	3,500 H	702 JH	856 JH	5 U H	5 UB H	20 B H	2 UB H	26,400	1 U H
Cell 11	01GE-TE11-N-0425	04/25/01	1,220 J	17,000 J	20,700 J	5 U UJ	1 UB	3 B	0.1 UB	26,100 J	1 U UJ
Cell 11	01GE-TE11-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 11	01GE-TE11-N-0517	05/17/01	5 U	10,100	12,300	5 U	5 UB	7 B	1 UB	19,100	1 U
Cell 11	01GE-TE11-N-0614	06/14/01	166	7,400	9,000	5 U	95 U	92	3.96	17,000	0.01 U
Cell 11	01GE-TE11-N-0828	08/28/01	5 U	4,000	4,900 R	5 U	1 U UJ	7 J	0.2 U	12,000	1 U
Cell 11	01GE-TE11-N-1001	10/01/01	5 U	4,400	5 U	5 U	1 U UJ	12	0.2 U	14,600	1 U UJ
Cell 11	01GE-TE11-N-1024	10/24/01	5 U	2,600	3,100 R	5 U R	1 U	7	0.2 U J	12,000	1 U
Cell 11	02GE-TE11-N-0604	06/04/02	5 U	1210	1470	5 U	1 UH	4.3 H	0.2 UH	5900 H	0.04
Cell 11	02GE-TE11-N-1022	10/22/02	5 U	836	1020	5 U	1 U	6.8	0.2 U	5300	0.01 U

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MT² Cells Leachate Results

Cell	Sample ID	Date Sampled	Calcium			Magnesium			Sodium		Potassium		Sodium Adsorption Ratio
			Diss. CLP	Total ULSA	Total CLP	Diss. CLP	Total ULSA	Total CLP	Diss. CLP	Total CLP	Diss. CLP	Total CLP	Calculated
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(unitless)
Cell 05	01GE-TE05-N-0309	03/09/01	32.1_J	93_H	7.11B_U	72	170_H	16.6 B	469_J	49.8 B	43,800_J	53,500	2.5
Cell 05	01GE-TE05-D-0309	03/09/01	NS	120_H	NS	NS	150_H	NS	NS	NS	NS	NS	NS
Cell 05	01GE-TE05-N-0425	04/25/01	NS	33_J	33.2	NS	67_J	68	NS	212 L	NS	44,400	4.8
Cell 05	01GE-TE05-N-0502	05/02/01	32	NS	31	81	NS	79	218	206	39,800	39,900	4.5
Cell 05	01GE-TE05-N-0517	05/17/01	27.2	34	25.6	52	57	49	155	144	28,900	27,700	3.9
Cell 05	01GE-TE05-N-0614	06/14/01	15.1	33.4	21	25	73	33	264_J	440	24,800_J	3,270	14.0
Cell 05	01GE-TE05-N-0716	07/16/01	16.6_J	31.2	16.6_J	21.9_J	46	21.2_J	80	79	13,900_J	14,300_J	3.0
Cell 05	01GE-TE05-N-0828	08/28/01	18.8_J	35	17.4_J	23.6_J	45	22.4_J	270_J	85	22,200	21,400	3.2
Cell 05	01GE-TE05-N-1001	10/01/01	32.5_J	32.2	30.2_J	32.5_J	54	53.9_J	144	233_J	20,000	25,200_J	5.9
Cell 05	01GE-TE05-N-1024	10/24/01	43.5	48	40_RJ	71	75	64.3_J	137	131	17,100_J	16,700_J	3.0
Cell 05	02GE-TE05-N-0604	06/04/02	80.1	84	91.8	93.6	92	82.7	58.7	46.7 B	6730	5910	1.1
Cell 05	02GE-TE05-N-0815	08/15/02	NS	92	98.4	NS	74	88	NS	51.7	NS	7690	1.0
Cell 05	02GE-TE05-N-1022	10/22/02	106	88	84.8	115	110	96.5	60.6	56.2	6310	7140	1.0
Cell 11	01GE-TE11-N-0310	03/10/01	52.1_J	140_H	102	48	140_H	109	571_J	572	67,900_J	106,000	9.4
Cell 11	01GE-TE11-N-0425	04/25/01	NS	56_J	48.9B	NS	105_J	83.4 B	NS	343	NS	53,200	6.9
Cell 11	01GE-TE11-N-0502	05/02/01	39.5	NS	34.8	81	NS	72	249	215	47,700	43,000	4.8
Cell 11	01GE-TE11-N-0517	05/17/01	22.5	28	21.2	43	48	41	151	142	30,400	28,400	4.2
Cell 11	01GE-TE11-N-0614	06/14/01	12.8	32.2	16.7	18	51	23	192_J	271	178_J	22,500	10.1
Cell 11	01GE-TE11-N-0828	08/28/01	10_J	16	10.2_J	13.7_J	25	13_J	75.4_J	72	12,400	11,800	3.5
Cell 11	01GE-TE11-N-1001	10/01/01	17.5_J	26.5	20.2_J	21.2_J	30	29.3_J	107_J	146	18,900_J	15,800	4.9
Cell 11	01GE-TE11-N-1024	10/24/01	27.8	41	27.6_RJ	35	50	33_J	94	90	11,500_J	11,300_J	2.7
Cell 11	02GE-TE11-N-0604	06/04/02	29.5 B	29	28.2 B	46.5 B	43	43.3 B	42.9 B	31.2 B	4710	4240	1.1
Cell 11	02GE-TE11-N-1022	10/22/02	42.5	38	40.6	60.9	56	55.4	33.1	32.7	4510	4600	0.8

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MT² Cells Leachate Results

Cell	Sample ID	Date Sampled	Aluminum Diss. CLP (ug/L)	Aluminum Total CLP (ug/L)	Antimony Diss. CLP (ug/L)	Antimony Total CLP (ug/L)	Arsenic Diss. CLP (ug/L)	Arsenic Total CLP (ug/L)	Barium Diss. CLP (ug/L)	Barium Total CLP (ug/L)	Beryllium Diss. CLP (ug/L)	Beryllium Total CLP (ug/L)
Cell 05	01GE-TE05-N-0309	03/09/01	124 B_U	296 B_U	6 U	120 U	104,000	11,400 _J	32.4 B	20 U	3.8 B	20 U
Cell 05	01GE-TE05-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 05	01GE-TE05-N-0425	04/25/01	NS	60 U	NS	30 U	NS	54,800 _J	NS	17.2 B_U	NS	5 U
Cell 05	01GE-TE05-N-0502	05/02/01	99.8 B_U	176 B_U	20.9 U	20.9 U	54,000	53,300	25.5 B	9.6 B_U	0.4 U	0.4 U
Cell 05	01GE-TE05-N-0517	05/17/01	53.4 U	79.4 B	20.9 U_R	23.2 U	29,500	28,900	6.2 B_U	8.4 B	0.4 U	0.44 U
Cell 05	01GE-TE05-N-0614	06/14/01	5 U_UJ	5 U_UJ	4.9 U_UJ	4.9 U	47,900	68,500 _J	5.5 B	7.4 B	0.1 U	0.1 U
Cell 05	01GE-TE05-N-0716	07/16/01	6.8 U_UJ	6.8 U_UJ	3.8 U_UJ	4.2 B_UJ	22,500	22,400 _J	3.9 B_J	3.8 B_J	0.2 U	0.2 U_UJ
Cell 05	01GE-TE05-N-0828	08/28/01	6.8 U	6.8 U	4.9 U	4.9 U	32,500	30,200	34.5 B	5.8 B_J	0.1 U_J	0.1 U_JU
Cell 05	01GE-TE05-N-1001	10/01/01	11 U_UJ	55.3 B_JU	3 U	3 U_UJ	24,400 _J	24,500 _J	38.8 B_J	4.9 B_J	1.8 B_J	2.5 B_JU
Cell 05	01GE-TE05-N-1024	10/24/01	55 U	55 U_UJ	3.7 U	3.7 U	25,700 _J	25,100	52.1 B	8.6 B_J	0.4 U	0.4 U
Cell 05	02GE-TE05-N-0604	06/04/02	139 U	181 B	53 U	53 U	8340	7610	62.6 B	14 U	1 U	3.8 B
Cell 05	02GE-TE05-N-0815	08/15/02	NS	122 B	NS	3.9 U	NS	5130	NS	12.3 B	NS	0.26 B
Cell 05	02GE-TE05-N-1022	10/22/02	28 U	28 U	2.5 B	2.7 B	10500	9310	50 B	9.1 B	0.4 U	1.1 B
Cell 11	01GE-TE11-N-0310	03/10/01	766	1,140 B_U	6 U	120 U	80,500	77,000 _J	26.5 B_U	20 U	4.3 B	20 U
Cell 11	01GE-TE11-N-0425	04/25/01	NS	240 U	NS	120 U	NS	73,900 _J	NS	20 U	NS	20 U
Cell 11	01GE-TE11-N-0502	05/02/01	187 B_U	181 B_U	20.9 U	20.9 U	46,400	43,900	30.3 B	6.5 B_U	0.4 U	0.4 U
Cell 11	01GE-TE11-N-0517	05/17/01	103 B	59.3 U	23.2 U_R	23.2 U	25,400	27,000	7.7 B_U	6.9 B	0.44 U	0.44 U
Cell 11	01GE-TE11-N-0614	06/14/01	5 U_UJ	5 U_UJ	4.9 U_UJ	4.9 U	24,100	38,800 _J	6 B	7.9 B	0.1 U	0.1 U
Cell 11	01GE-TE11-N-0828	08/28/01	6.8 U	24.6 B_U	4.9 U	4.9 U	18,600	17,500	31.7 B	4.3 U_UJ	0.1 U_J	0.1 U_JU
Cell 11	01GE-TE11-N-1001	10/01/01	11 U_UJ	23.7 B_JU	3 U	3 U	17,200 _J	16,800 _J	83.8 B_J	5.9 B_J	1.2 B_J	2 B_JU
Cell 11	01GE-TE11-N-1024	10/24/01	55 U	105 B_UJ	3.7 U	3.7 U	16,000 _J	16,200	47.9 B	10.2 B_J	0.4 U	0.4 U
Cell 11	02GE-TE11-N-0604	06/04/02	388 B	825 B	53 U	53 U	8650	7650	44 B	14 U	5.6 B	3.8 B
Cell 11	02GE-TE11-N-1022	10/22/02	31 B	498	3.5 B	2 U	7140	7110	78 B	7.3 B	0.4 U	1.4 B

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MT^2 Cells Leachate Results

Cell	Sample ID	Date Sampled	Cadmium Diss. CLP (ug/L)	Cadmium Total CLP (ug/L)	Chromium Diss. CLP (ug/L)	Chromium Total CLP (ug/L)	Cobalt Diss. CLP (ug/L)	Cobalt Total CLP (ug/L)	Copper Diss. CLP (ug/L)	Copper Total CLP (ug/L)	Iron Diss. CLP (ug/L)	Iron Total CLP (ug/L)	Lead Diss. CLP (ug/L)	Lead Total CLP (ug/L)
Cell 05	01GE-TE05-N-0309	03/09/01	1 U	20 U	398	45.6 B	25.3 B	40 U	141	83.5 B_U	103_UJ	320 U	2 U	40 U
Cell 05	01GE-TE05-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 05	01GE-TE05-N-0425	04/25/01	NS	5 U	NS	236	NS	28.4 B	NS	104 B_U	NS	80 U	NS	10 U
Cell 05	01GE-TE05-N-0502	05/02/01	499	386	328	308	31.1 B	27.8 B	99.8	99.4	92.1 B_U	107 B_U	3.2 U	3.2 U
Cell 05	01GE-TE05-N-0517	05/17/01	342_R	281	213	211	13.2 B	22.5 B	68.4	77.1	54.1 B_U	86.1 B	1.6 U_UJ	1.8 U
Cell 05	01GE-TE05-N-0614	06/14/01	0.4 U_UJ	0.4 B	342	446	11.1 B	17.5 B	95.7	126	19.4 U	26.8 B	3.4_U	1.3 U_UJ
Cell 05	01GE-TE05-N-0716	07/16/01	0.5 U_UJ	0.5 U_J	160_J	155_J	8.9 B_J	8.4 B_J	60.6	61.8	22.2 U	22.2 U_UJ	2.7 U_R	2.7 U_UJ
Cell 05	01GE-TE05-N-0828	08/28/01	0.4 U_J	0.4 U_JU	178_J	182_J	8.1 B_J	7.8 B_J	58.3	57.9	19.4 U	129	1.3 U_UJ	1.3 U
Cell 05	01GE-TE05-N-1001	10/01/01	1 U_J	1 U_JU	83_J	81.7_J	8.4 B_J	6.9 B_J	42.8	65.4_J	8 U_UJ	70.1 B_JU	2 U	2 U_UJ
Cell 05	01GE-TE05-N-1024	10/24/01	0.41 B_U	0.46 B_U	126	118	21.2 B	20.4 B	39.1	47.4	22.6 U	22.6 U_J	2.2 U	2.2 U
Cell 05	02GE-TE05-N-0604	06/04/02	6 U	6 U	35.8 B	20 B	33 B	26.8 B	10 U	22.2 B	145 U	312 B	17 U	17 U
Cell 05	02GE-TE05-N-0815	08/15/02	NS	0.6 U	NS	15.9	NS	35.7 B	NS	5.8 B	NS	95.9 B	NS	2.6 U
Cell 05	02GE-TE05-N-1022	10/22/02	2 B	0.75 B	38	30	54	42 B	20 B	32	18 U	20 B	1.5 U	1.5 U
Cell 11	01GE-TE11-N-0310	03/10/01	2.9 B	20 U	699	765	41.4 B	111 B	316	405 B_U	299_J	540 B_U	2 U	40 U
Cell 11	01GE-TE11-N-0425	04/25/01	NS	20 U	NS	325	NS	40 U	NS	164 B_U	NS	320 U	NS	40 U
Cell 11	01GE-TE11-N-0502	05/02/01	467	382	474	413	27.6 B	20.8 B	268	233	118_U	179	4 U	3.2 U
Cell 11	01GE-TE11-N-0517	05/17/01	297_R	245	273	262	8.6 B	12.7 B	125	119	39.4 B_U	65.9 B	4.4 U_UJ	4.4 U
Cell 11	01GE-TE11-N-0614	06/14/01	0.4 U_UJ	0.4 U	260	339	5.7 B_J	9.5 B	96.6	138	19.4 U	19.4 U	1.3 U	1.3 U_UJ
Cell 11	01GE-TE11-N-0828	08/28/01	0.4 U_J	0.4 U_JU	127_J	127_J	0.7 U_UJ	0.7 U_J	65.5	63.7	61.6 B	19.4 U_UJ	1.3 U_UJ	1.3 U
Cell 11	01GE-TE11-N-1001	10/01/01	1 U_J	1 U_J	70.6_J	67.5_J	3.2 B_J	4.6 B_J	51.8	54.7_JU	8.4 B_UJ	58.1 B_UJ	2 U	2 U
Cell 11	01GE-TE11-N-1024	10/24/01	0.4 U	0.71 B_U	79.9	78.2	7 B	10.8 B	29.3	38.4	22.6 U	57.7 B_J	2.2 U	2.2 U
Cell 11	02GE-TE11-N-0504	06/04/02	49.4 B	6 U	44 B	22 B	13 U	13 U	10 U	33.6 B	145 U	2390	17 U	17 U
Cell 11	02GE-TE11-N-1022	10/22/02	1.2 B	0.5 U	19	20	9.3 B	9.5 B	11 B	29	18 U	18 U	1.5 U	1.5 U

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MT^2 Cells Leachate Results

Cell	Sample ID	Date Sampled	Manganese Diss. CLP (ug/L)	Manganese Total CLP (ug/L)	Mercury Diss. CLP (ug/L)	Mercury Total CLP (ug/L)	Nickel Diss. CLP (ug/L)	Nickel Total CLP (ug/L)	Selenium Diss. CLP (ug/L)	Selenium Total CLP (ug/L)	Silicon Total ULSA (mg/L as SiO2)
Cell 05	01GE-TE05-N-0309	03/09/01	2380	561	0.18 B_J	0.2	66.1	40 U	469	108 _J	167 _H
Cell 05	01GE-TE05-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 05	01GE-TE05-N-0425	04/25/01	NS	3080	NS	0.15 B	NS	84.1 B	NS	407 _J	94.2 _J
Cell 05	01GE-TE05-N-0502	05/02/01	4090	3890	0.16 B	0.11 B	109	107	405 _J	408	
Cell 05	01GE-TE05-N-0517	05/17/01	2030	1880	0.1 U	0.14 B	49.9	63.8	273	266	103
Cell 05	01GE-TE05-N-0614	06/14/01	1860 _J	2440	0.15 B_J	0.22 _J	46.7	62.8	248	443 _J	122.2
Cell 05	01GE-TE05-N-0716	07/16/01	956	969	0.1 U	0.1 U	26.6 B_J	26.5 B_J	235 _J	239 _J	NR
Cell 05	01GE-TE05-N-0828	08/28/01	984	916	0.28 _U	0.2 B_U	28.2 B_J	26.1 B_J	361	330 _J	NR
Cell 05	01GE-TE05-N-1001	10/01/01	654	955 _J	0.12 B	0.22 _J	26.5 B_J	27.9 B_J	289 _J	289 _J	NR
Cell 05	01GE-TE05-N-1024	10/24/01	1870	1750	0.1 U_UJ	0.1 U_UJ	55.6	50.4	318	308	NR
Cell 05	02GE-TE05-N-0604	06/04/02	2350	2090	0.2 U	0.2 U	52.1 B	56.5 B	97.9	219	NR
Cell 05	02GE-TE05-N-0815	08/15/02	NS	1930	NS	0.1 U	NS	72.8	NS	28.4	NR
Cell 05	02GE-TE05-N-1022	10/22/02	2860	2430	0.2 U	0.2 U	98	78	63	59	NR
Cell 11	01GE-TE11-N-0310	03/10/01	2110	4710	0.24 _J	0.25 _J	67.1	130 B	184	511 _J	153 _H
Cell 11	01GE-TE11-N-0425	04/25/01	NS	2,570	NS	0.28	NS	79.4 B	NS	364 _J	97.9 _J
Cell 11	01GE-TE11-N-0502	05/02/01	1070	951	0.24	0.22	51.5	45.8	220 _J	209	NR
Cell 11	01GE-TE11-N-0517	05/17/01	1010	936	0.14 B	0.22	27 B	36.3 B	155	164	91
Cell 11	01GE-TE11-N-0614	06/14/01	619 _J	802	0.14 B_J	0.1 U_UJ	16.6 B	24.7 B	144	204 _J	90.2
Cell 11	01GE-TE11-N-0828	08/28/01	54.3	89	0.16 B_U	0.19 B_U	9.3 B_J	8.3 B_J	173	173 _J	NR
Cell 11	01GE-TE11-N-1001	10/01/01	251	308	0.12 B	0.14 B	17.6 B_J	16.3 B_J	158 _J	144 _J	NR
Cell 11	01GE-TE11-N-1024	10/24/01	388	546	0.1 U_UJ	0.1 U_UJ	17.6 B	18.1 B	144	142	NR
Cell 11	02GE-TE11-N-0604	06/04/02	321	465	0.2 U	0.2 U	14 U	14 U	40 U	40 U	NR
Cell 11	02GE-TE11-N-1022	10/22/02	471	511	0.2 U	0.2 U	14 B	14 B	65	64	NR

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MT² Cells Leachate Results

Cell	Sample ID	Date Sampled	Silver Diss. CLP (ug/L)	Silver Total CLP (ug/L)	Thallium Diss. CLP (ug/L)	Thallium Total CLP (ug/L)	Vanadium Diss. CLP (ug/L)	Vanadium Total CLP (ug/L)	Zinc Diss. CLP (ug/L)	Zinc Total CLP (ug/L)
Cell 05	01GE-TE05-N-0309	03/09/01	6.3 B	60 U_UJ	5 U_R	100 U_R	144	60 U	217 _J	195 B_U
Cell 05	01GE-TE05-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS
Cell 05	01GE-TE05-N-0425	04/25/01	NS	15 U_UJ	NS	25 U_R	NS	110 B	NS	40.7 B_U
Cell 05	01GE-TE05-N-0502	05/02/01	2.1 U	3.3 B_J	45.3	65.2	90.9	91.2	64.5	11.5 B_U
Cell 05	01GE-TE05-N-0517	05/17/01	2.1 U_R	8.4 B	28.6	25.7	59.7	68	4.4 B_U	1.8 B
Cell 05	01GE-TE05-N-0614	06/14/01	0.7 U	0.7 U	5.6 U	6.8 B_U	58.8	75.5	16.1 B	37.9
Cell 05	01GE-TE05-N-0716	07/16/01	1.2 U	1.2 U	6.3 B_J	11.8 _J	29.2 B	27.1 B_J	14.1 B_J	21.1 _J
Cell 05	01GE-TE05-N-0828	08/28/01	0.7 U	0.76 B	5.6 U	8.9 B_J	28 B	29.6 B	34.7 _J	27
Cell 05	01GE-TE05-N-1001	10/01/01	3.1 B_J	3.9 B_J	6.4 B_J	6.8 B_J	14.7 B_J	14.5 B_J	907 B_J	173 _J
Cell 05	01GE-TE05-N-1024	10/24/01	1 U	1 U	10.1	7.1 B	11 B	10.4 B	32.4	20 B_J
Cell 05	02GE-TE05-N-0604	06/04/02	11 U	11 U	55 U	55 U	17 U	17 U	42.2 B	58.5 B
Cell 05	02GE-TE05-N-0815	08/15/02	NS	1.2 U	NS	4.9 U	NS	1 U	NS	12.5 B
Cell 05	02GE-TE05-N-1022	10/22/02	1.3 B	0.8 U	7 U	8.8 B	5.1 B	1.5 U	171	77
Cell 11	01GE-TE11-N-0310	03/10/01	9.5 B	60 U_UJ	5.9 B_J	100 U_R	336	741 B	460 _J	508 _U
Cell 11	01GE-TE11-N-0425	04/25/01	NS	60 U_UJ	NS	100 U_R	NS	214 B	NS	20 U
Cell 11	01GE-TE11-N-0502	05/02/01	4.2 B_U	2.1 U_UJ	52.3	58.6	103	91	88.6	15.3 B
Cell 11	01GE-TE11-N-0517	05/17/01	2.3 U_R	2.3 U	25	21.9 B	62.3	58.5	1.2 U	1.2 U
Cell 11	01GE-TE11-N-0614	06/14/01	0.7 U	0.7 U	5.6 U	5.6 U	49 B	63.1	17.8 B	37.3
Cell 11	01GE-TE11-N-0828	08/28/01	0.7 U	0.7 U	10.6 _U	5.6 U_R	30.2 B	29.4 B	74 _J	14.7 B_UJ
Cell 11	01GE-TE11-N-1001	10/01/01	1.5 B_J	1.9 B_J	6.7 B_J	5 B_J	19.1 B_J	19.3 B	37	16.9 B
Cell 11	01GE-TE11-N-1024	10/24/01	1 U	1 U	5.8 B	5.2 U	9.5 B	11.8 B	12.8 B_UJ	26.7 _J
Cell 11	02GE-TE11-N-0604	06/04/02	11 U	11 U	55 U	55 U	17 U	17 U	47.4 B	195 B
Cell 11	02GE-TE11-N-1022	10/22/02	0.8 U	0.8 U	7 U	7 U	2.8 B	1.5 U	142	27

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KEECO Cells Leachate Results

Cell	Sample ID	Date Sampled	pH Lab	Conductivity	Total Solids		Hardness	Turbidity	Ammonia	NITRATE NITRITE	P ORTHOPHOSPHATE	Cyanide	
			Lab	Lab	Diss.	Susp.	Total	Lab	Total	Total	Total	Total	WAD
			ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	CLP	ULSA
			(su)	(umhos/cm @ 25 C)	(mg/L @ 180 C)	(mg/L @ 105 C)	(mg/L as CaCO3)	(NTU)	(mg/L as N)	(mg/L as N)	(mg/L as P)	(ug/L)	(ug/L)
Cell 01	01GE-TE01-N-0310	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	12.1 _J	NR
Cell 01	01GE-TE01-D-0310	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	12.3 _J	NR
Cell 01	01GE-TE01-N-0425	04/25/01	6.05	2,800 I _J	3,000 _J	240	1,950 _J	696 _J	0.5 _J	0.05 UB,H_UJ	0.45 H_RJ	9.4 B _J	NR
Cell 01	01GE-TE01-D-0425	04/25/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	11 _J	NR
Cell 01	01GE-TE01-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.4 B _J	NR
Cell 01	01GE-TE01-N-0517	05/17/01	7.57 _J	2,260 I	2,500 _J	83	2,040	135 _J	0	0.05 UB,H	0.03 _J	6.2 B_UJ	5 U
Cell 01	01GE-TE01-D-0517	05/17/01	7.57 _J	2,610 I	2,400 _J	79	2,140	133 _J	0	0.05 UB,H	0.07 _J	8.7 B	5 U
Cell 01	01GE-TE01-N-0614	06/14/01	6.13	2,680 I	2,900 _J	90 _J	1,930	121	0.32	0.1 H_J	0.02	4.1 U	10 U_UJ
Cell 01	01GE-TE01-D-0614	06/14/01	6.22	2,410 I	2,300 _J	100 _J	2,179	119	0.17	0.05 UH_UJ	0.02	4.1 U	10 U_UJ
Cell 01	01GE-TE01-N-0716	07/16/01	6.82	2,750 I	2,961	91 _J	2,000	202 _J	0.38	0.05 UH_R	NR	4.5 U_UJ	10 U
Cell 01	01GE-TE01-N-0828	08/28/01	6.84	2,910 I	2,600 _J	62 _J	1,800	119 _J	0.64	0.14 H_J	NR	4.5 U_UJ	10 U_UJR
Cell 01	01GE-TE01-N-1001	10/01/01	7.31	2,750 I	2,818 H_J	46 H_JJ	2,000	66.6 _J	0.5	0.05 UH	NR	1 U_UJ	10 U_UJ
Cell 01	01GE-TE01-N-1024	10/24/01	6.18	3,490	3,450	89 _J	2,600	52.2	0.4	0.52 H	NR	2.4 B_J	10 U
Cell 01	02GE-TE01-N-0604	06/04/02	2.64	7,060	13,000	1,400	3,400	1,780	4	1.2 H	NR	3.5 U	10 U
Cell 01	02GE-TE01-N-0815	08/15/02	2.88	5390 I	6,400	18	3,400	3	1	0.05 U	NR	3 U	2 J
Cell 01	02GE-TE01-N-1022	10/22/02	2.38	14800 I	44,000	340	4,100	258	24	2	NR	6.5 B	NS
Cell 09	01GE-TE09-N-0310	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.4 B _J	NR
Cell 09	01GE-TE09-N-0425	04/25/01	6.25	6,760 I _J	110,000 _J	410	6,920 _J	7.2 _J	0.5 _J	0.05 UB,H_UJ	0.42 H_RJ	7.5 B _J	NR
Cell 09	01GE-TE09-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.3 B _J	NR
Cell 09	01GE-TE09-N-0517	05/17/01	6.45 _J	2,570 I	2,400 _J	91	2,120	85.3 _J	0	0.05 UB,H	0.03 _J	8.6 B	5 U
Cell 09	01GE-TE09-N-0614	06/14/01	6.01	2,300 I	2,600 _J	110 _J	1,903	59.9	0.23	0.05 UH_UJ	0.03	4.7 B_U	10 U_UJ
Cell 09	01GE-TE09-N-0716	07/16/01	6.69	2,230 I	2,304	59 _J	1,800	54 _J	0.49	0.05 UH_R	NR	4.5 U_UJ	10 U
Cell 09	01GE-TE09-D-0716	07/16/01	6.65	2,440 I	2,332	33 _J	1,800	51.6 _J	0.55	0.05 UH_R	NR	4.5 U_UJ	10 U
Cell 09	01GE-TE09-N-0828	08/28/01	8.05	3,000 I	2,700 _J	85 _J	1,900	50.7	0.35	0.05 UH_J	NR	4.5 U_UJ	10 U_UJR
Cell 09	01GE-TE09-N-1001	10/01/01	6.81	3,130 I	2,782 H_J	29 H_JJ	2,000	69.3 _J	0.4	0.05 UH	NR	2.8 B_UJ	10 U_UJ
Cell 09	01GE-TE09-N-1024	10/24/01	6.78	3,080	2,750	920 _J	2,000	50.4	0.4	0.05 UH	NR	3.8 B	10 U
Cell 09	02GE-TE09-N-0604	06/04/02	2.91	5160	5000	28000	3100	36800	5.2	0.12 UH	NR	4.2 B	10 U
Cell 09	02GE-TE09-D-0604	06/04/02	2.87	5190	5700	25000	3300	37900	4.9	1 H	NR	3.5 U	10 U
Cell 09	02GE-TE09-N-0815	08/15/02	3.01	5200 I	5800	920	3300	657	1.7	0.05 U	NR	3 U	10 U

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KEECO Cells Leachate Results

Cell	Sample ID	Date Sampled	Acidity Total ULSA (mg/L as CaCO3)	Alkalinity Total ULSA (mg/L as CaCO3)	Bicarbonate Total ULSA (mg/L as HCO3)	Carbonate Total ULSA (mg/L as CO3)	Bromide Total ULSA (mg/L)	Chloride Total ULSA (mg/L)	Fluoride Total ULSA (mg/L)	Sulfate Total ULSA (mg/L)	Sulfide Total ULSA (mg/L)
Cell 01	01GE-TE01-N-0310	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 01	01GE-TE01-D-0310	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 01	01GE-TE01-N-0425	04/25/01	6_J	106_J	129_J	5 U_UJ	1 UB	18 B	20.1 B	1,990_J	1 U_UJ
Cell 01	01GE-TE01-D-0425	04/25/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 01	01GE-TE01-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 01	01GE-TE01-N-0517	05/17/01	5 U	156	190	5 U	1 UB	17 B	8.9 B,CC_J	2,050	1 U
Cell 01	01GE-TE01-D-0517	05/17/01	5 U	152	185	5 U	1 UB	16.9 B	10.9 B,CC	1,960	1 U
Cell 01	01GE-TE01-N-0614	06/14/01	5 U	160	190	5 U	1 U	16	12	2,110	0.01 U
Cell 01	01GE-TE01-D-0614	06/14/01	5 U	160	190	5 U	1 U	16	10	2,150	0.01 U
Cell 01	01GE-TE01-N-0716	07/16/01	5 U	140	180	5 U	1 U	10.9	12.3	2,059	1 U_UJ
Cell 01	01GE-TE01-N-0828	08/28/01	5 U	170	210_JR	5 U	1 U_UJ	16_J	11_J	2,000	1 U
Cell 01	01GE-TE01-N-1001	10/01/01	5 U	172	5 U	5 U	1 U_UJ	20	10.7_J	1,810	1 U_UJ
Cell 01	01GE-TE01-N-1024	10/24/01	5 U	270	330_R	5 U_R	1 U	22	23_J	2,500	1 U
Cell 01	02GE-TE01-N-0604	06/04/02	6300	5 U	5 U	5 U	1 UH	21 H	0.31 H	9100 H	0.27
Cell 01	02GE-TE01-N-0815	08/15/02	1300	5 U	5 U	5 U	1 U	14	78	4900	0.09 U
Cell 01	02GE-TE01-N-1022	10/22/02	28000	5 U	5 U	5 U	1 U	11	140	32000	0.18 U
Cell 09	01GE-TE09-N-0310	03/10/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 09	01GE-TE09-N-0425	04/25/01	94_J	184_J	224_J	5 U_UJ	1 UB	40.9 B	78.7 B	7,230_J	1 U_UJ
Cell 09	01GE-TE09-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 09	01GE-TE09-N-0517	05/17/01	5 U	210	256	5 U	2 UB	18.2 B	17.8 B,CC	1,970	1 U
Cell 09	01GE-TE09-N-0614	06/14/01	5 U	98	120	5 U	1_U	17	22.8	1,980	0.01 U
Cell 09	01GE-TE09-N-0716	07/16/01	5 U	130	160	5 U	1 U	11	9.4	1,609	1 U_UJ
Cell 09	01GE-TE09-D-0716	07/16/01	5 U	130	160	5 U	1 U	12	9.8	1,842	1 U_UJ
Cell 09	01GE-TE09-N-0828	08/28/01	5 U	130	160_R	5 U	1 U_UJ	14_J	16_J	1,800	1 U
Cell 09	01GE-TE09-N-1001	10/01/01	5 U	178	5 U	5 U	1 U_UJ	17	12	1,910	1 U_UJ
Cell 09	01GE-TE09-N-1024	10/24/01	5 U	170	200_R	5 U_R	1 U	16	13_J	2,000	1 U
Cell 09	02GE-TE09-N-0604	06/04/02	2200	5 U	5 U	5 U	1 UH	9 H	50 H	5100 H	0.18 U
Cell 09	02GE-TE09-D-0604	06/04/02	1200	5 U	5 U	5 U	1 UH	7.4 H	80 H	5200 H	0.45 U
Cell 09	02GE-TE09-N-0815	08/15/02	910	5 U	5 U	5 U	1 U	12	160	4400	0.17

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KEECO Cells Leachate Results

Cell	Sample ID	Date Sampled	Calcium			Magnesium			Sodium		Potassium		Sodium Adsorption Ratio
			Diss. CLP	Total ULSA	Total CLP	Diss. CLP	Total ULSA	Total CLP	Diss. CLP	Total CLP	Diss. CLP	Total CLP	Calculated
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(unitless)
Cell 01	01GE-TE01-N-0310	03/10/01	486_J	NS	616	174	NS	191	19.3_J	19 B	3.98 B_J	16.6 B	0.2
Cell 01	01GE-TE01-D-0310	03/10/01	495_J	NS	588	179	NS	182	17.8_J	18.7 B	8.83_J	21.9 B	0.2
Cell 01	01GE-TE01-N-0425	04/25/01	NS	559_J	630	NS	135_J	154	NS	12.8 B	NS	10.7 B	0.1
Cell 01	01GE-TE01-D-0425	04/25/01	NS	NS	650	NS	NS	161	NS	13.1 B	NS	20 B	0.1
Cell 01	01GE-TE01-N-0502	05/02/01	575	NS	560	129	NS	125	14	12	13	13	0.1
Cell 01	01GE-TE01-N-0517	05/17/01	592	596	566	134	133	125	14	13	11.8_R	11	0.1
Cell 01	01GE-TE01-D-0517	05/17/01	603	629	567	136	139	126	14	13	12	9	0.1
Cell 01	01GE-TE01-N-0614	06/14/01	476	537	589	137	143	185	16.1_J	22	5.5_J	8	0.2
Cell 01	01GE-TE01-D-0614	06/14/01	483	607	59	140	161	16	16.6_J	1.48 B	5.7_J	0.424 B	0.04
Cell 01	01GE-TE01-N-0716	07/16/01	442_J	605	489_J	96.7_J	120	105_J	18	19	18.3_J	20.2_J	0.2
Cell 01	01GE-TE01-N-0828	08/28/01	516_J	550	515_J	110_J	100	111_J	24_J	24	33	34	0.3
Cell 01	01GE-TE01-N-1001	10/01/01	561_J	607	582_J	130_J	122	136_J	19	19	25	26	0.2
Cell 01	01GE-TE01-N-1024	10/24/01	707	650	596_RJ	255	240	224_J	32	27	42.5_J	39.5_J	0.2
Cell 01	02GE-TE01-N-0604	06/04/02	489	490	500	530	520	537	15.4 B	5.73 B	7.05 B	8.09 B	0.1
Cell 01	02GE-TE01-N-0815	08/15/02	320	550	322	323	490	324	8.72	8.7	15.4	15.4	0.1
Cell 01	02GE-TE01-N-1022	10/22/02	300	520	303	410	680	375	0.884 B	9.45 U	2.21 B	2.87 B	0.0
Cell 09	01GE-TE09-N-0310	03/10/01	504_J	NS	533	105	NS	103	18.5_J	19.4 B	11.3_J	9.49 B	0.2
Cell 09	01GE-TE09-N-0425	04/25/01	NS	807_J	541	NS	1,190_J	1,360	NS	180	NS	31	0.9
Cell 09	01GE-TE09-N-0502	05/02/01	585	NS	584	166	NS	167	12	11	6	6	0.1
Cell 09	01GE-TE09-N-0517	05/17/01	569	581	530	173	163	160	13	12	8	7	0.1
Cell 09	01GE-TE09-N-0614	06/14/01	459	536	521	128	137	152	17.4_J	22	9.42_J	12	0.2
Cell 09	01GE-TE09-N-0716	07/16/01	422_J	565	479_J	72.1_J	87	81_J	21	23	20.7_J	23.5_J	0.3
Cell 09	01GE-TE09-D-0716	07/16/01	397_J	565	492_J	67.3_J	89	86.3_J	21	25	19.2_J	24.7_J	0.3
Cell 09	01GE-TE09-N-0828	08/28/01	517_J	560	493_J	128_J	120	120_J	24.6_J	23	25	23	0.2
Cell 09	01GE-TE09-N-1001	10/01/01	568_J	597	530_J	122_J	116	118_J	18.7_J	18	18.3_J	19	0.2
Cell 09	01GE-TE09-N-1024	10/24/01	633	580	636_RJ	139	130	142_J	23	23	27_J	28.6_J	0.2
Cell 09	02GE-TE09-N-0604	06/04/02	554	660	591	354	360	337	10.1 B	5.53 U	11.9 B	9.86 B	0.1
Cell 09	02GE-TE09-D-0604	06/04/02	583	700	569	373	370	313	10.7 B	5.53 U	11.4 B	8.83 B	0.1
Cell 09	02GE-TE09-N-0815	08/15/02	300	510	312	349	500	348	32.9	33.9	14.6	13.9	0.3

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KEECO Cells Leachate Results

Cell	Sample ID	Date Sampled	Aluminum Diss. CLP (ug/L)	Aluminum Total CLP (ug/L)	Antimony Diss. CLP (ug/L)	Antimony Total CLP (ug/L)	Arsenic Diss. CLP (ug/L)	Arsenic Total CLP (ug/L)	Barium Diss. CLP (ug/L)	Barium Total CLP (ug/L)	Beryllium Diss. CLP (ug/L)	Beryllium Total CLP (ug/L)
Cell 01	01GE-TE01-N-0310	03/10/01	2,040	11,600	6 U	60 U	4.5 B_UJ	46.7 B_J	168 B	25.8 B_U	1 B	10 U
Cell 01	01GE-TE01-D-0310	03/10/01	2,340	12,200	6 U	60 U	6.3 B_UJ	45.9 B_J	112 B	34.4 B_U	1.1 B	10 U
Cell 01	01GE-TE01-N-0425	04/25/01	NS	179,000	NS	215 B	NS	57.2 B_J	NS	47.3 B_U	NS	16.1 B
Cell 01	01GE-TE01-D-0425	04/25/01	NS	127,000	NS	145 B	NS	64.6 B_J	NS	46.3 B_U	NS	10 U
Cell 01	01GE-TE01-N-0502	05/02/01	4,350	15,000	20.9 U_UJ	20.9 U_UJ	4.6 B_J	12.2	125 B	27 B	1.4 B_UJ	2.2 B_UJ
Cell 01	01GE-TE01-N-0517	05/17/01	168 B	6,650	23.2 U_R	23.2 U_UJ	7.6 B_UJ	5.4 B_J	23.6 B	23.8 B	1.2 B_UJ	0.75 B_U
Cell 01	01GE-TE01-D-0517	05/17/01	178 B	6,590	20.9 U_R	23.2 U	7.5 B_UJ	7.7 B	24.1 B	23.5 B	1 B_UJ	0.44 U
Cell 01	01GE-TE01-N-0614	06/14/01	4,130	9,710	4.9 U_UJ	4.9 U	7.1 B_UJ	9.8 B_UJ	19.6 B	28.9 B	1.9 B_UJ	2.5 B_UJ
Cell 01	01GE-TE01-D-0614	06/14/01	4,230	952	4.9 U_UJ	4.9 U	6.3 B_UJ	3.5 U_UJ	20.2 B	4.3 U	2.2 B_UJ	0.58 B_U
Cell 01	01GE-TE01-N-0716	07/16/01	1,030	8,560	3.8 U_UJ	3.8 U_UJ	7.5 B_UJ	12 _UJ	22.8 B_J	28 B_J	1.6 B_UJ	2.3 B_UJ
Cell 01	01GE-TE01-N-0828	08/28/01	666	1,870	4.9 U_UJ	4.9 U	11.2 _U	11.9 _U	123 B	34 B_J	0.93 B_UJ	1.4 B_J
Cell 01	01GE-TE01-N-1001	10/01/01	61.5 B_JU	915 _J	3 U_UJ	3 U_UJ	7.5 B_J	8.8 B_J	237 _J	35.2 B_J	1 U_J	1 U_UJ
Cell 01	01GE-TE01-N-1024	10/24/01	12,000	15,300 _J	3.7 U	3.7 U	22.2 _J	20.4	170 B	49.1 B_J	2.6 B_U	2.8 B_U
Cell 01	02GE-TE01-N-0604	06/04/02	598000	622000	53 U	53 U	1340	4050	111 B	42.3 B	78	79.2
Cell 01	02GE-TE01-N-0815	08/15/02	50400	50900	3.3 U	3.3 U	16.6	25.8	33.4 B	6.7 B	5.5	5.5
Cell 01	02GE-TE01-N-1022	10/22/02	1620000	1710000	2 U	2 U	17300	18000	108 B	37 B	118	117
Cell 09	01GE-TE09-N-0310	03/10/01	218 _U	2,840	6 U	60 U	28.3	30 U	159 B	43.5 B_U	1 U	10 U
Cell 09	01GE-TE09-N-0425	04/25/01	NS	83,000	NS	30 U	NS	26.9 B_J	NS	48.8 B_U	NS	7 B
Cell 09	01GE-TE09-N-0502	05/02/01	23,400	74,900	20.9 U_UJ	20.9 U_UJ	9.4 B_J	21.7	104 B	27.1 B	3.7 B_UJ	7.5 _U
Cell 09	01GE-TE09-N-0517	05/17/01	7,260	20,700	23.2 U_R	23.2 U	6.3 B_UJ	10.1 B	23.4 B	23.4 B	2.4 B_UJ	2.2 B
Cell 09	01GE-TE09-N-0614	06/14/01	9,700	19,400	4.9 U_UJ	4.9 U	3.5 U_UJ	11.7 _UJ	21.3 B	28.7 B	4.2 B_UJ	3.1 B_UJ
Cell 09	01GE-TE09-N-0716	07/16/01	1,700	5,600	3.8 U_UJ	3.8 U_UJ	7 B_UJ	7.8 B_UJ	36.9 B_J	29.4 B_J	1.3 B_UJ	1.2 B_UJ
Cell 09	01GE-TE09-D-0716	07/16/01	1,660	5,770	4.7 B_UJ	3.8 U_UJ	9.1 B_U	7.5 B_UJ	35.1 B_J	29.9 B_J	1.3 B_U	1.2 B_UJ
Cell 09	01GE-TE09-N-0828	08/28/01	135 B	6,950	4.9 U_UJ	4.9 U	10.6 _U	14 _U	169 B	30.8 B_J	0.31 B_J	1.3 B_J
Cell 09	01GE-TE09-N-1001	10/01/01	1,380	3,170 _J	3 U_UJ	3 U_UJ	12.1 _J	15.8 _J	188 B_J	30.3 B_J	1 U_J	1.3 B_JU
Cell 09	01GE-TE09-N-1024	10/24/01	2,590	4,180 _J	3.7 U	3.7 U	8.2 B_J	16.3	120 B	33.2 B_J	0.8 B_U	0.98 B_U
Cell 09	02GE-TE09-N-0604	06/04/02	198000	407000	53 U	266 B	81 B	24500	101 B	59.5 B	31.4 B	42.4 B
Cell 09	02GE-TE09-D-0604	06/04/02	214000	406000	53 U	237 B	72.8 B	25200	91.8 B	59.5 B	32.9 B	44.4 B
Cell 09	02GE-TE09-N-0815	08/15/02	77700	76800	3.9 U	3.9 U	16.8	481	109 B	34.9 B	12.2	12.1

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KEECO Cells Leachate Results

Cell	Sample ID	Date Sampled	Cadmium Diss. CLP (ug/L)	Cadmium Total CLP (ug/L)	Chromium Diss. CLP (ug/L)	Chromium Total CLP (ug/L)	Cobalt Diss. CLP (ug/L)	Cobalt Total CLP (ug/L)	Copper Diss. CLP (ug/L)	Copper Total CLP (ug/L)	Iron Diss. CLP (ug/L)	Iron Total CLP (ug/L)	Lead Diss. CLP (ug/L)	Lead Total CLP (ug/L)
Cell 01	01GE-TE01-N-0310	03/10/01	47.2	54.2	2 U	20 U	830	928	141	772	16 U_UJ	38,100	4.1	20 U
Cell 01	01GE-TE01-D-0310	03/10/01	49	51.2	2 U	20 U	879	890	155	767	16 U_UJ	40,500	4.5 _J	20 U
Cell 01	01GE-TE01-N-0425	04/25/01	NS	93.4	NS	20 U	NS	877	NS	6,380	NS	59,300	NS	20 U
Cell 01	01GE-TE01-D-0425	04/25/01	NS	93	NS	20 U	NS	918	NS	5,100	NS	101,000	NS	20 U
Cell 01	01GE-TE01-N-0502	05/02/01	46.9	47.2	2.2 U	2.2 U_UJ	541	512	269	1,080	2,520	25,400	0.8 U	1.5 B_U
Cell 01	01GE-TE01-N-0517	05/17/01	37.3 _R	40.9	2.4 U	2.4 U	511	500	39	412	18.6 U	9,900	0.89 U_UJ	0.89 U
Cell 01	01GE-TE01-D-0517	05/17/01	38.9 _R	40.6	2.2 U	2.4 U	521	500	35.8	413	34.2 B_U	10,000	0.8 U_UJ	3.2 B
Cell 01	01GE-TE01-N-0614	06/14/01	54.8	70.7	0.54 B_J	8.3 B	545	706	314	722	11,700	24,300	1.3 U_UJ	1.3 U_UJ
Cell 01	01GE-TE01-D-0614	06/14/01	57.5	6.2	2.2 B_J	0.98 B_U	562	62.7	322	62.9	12,100	2,290	5.6 _UJ	1.3 U_UJ
Cell 01	01GE-TE01-N-0716	07/16/01	36.7 _J	43.1 _J	9.5 B_J	8.6 B_J	311 _J	350 _J	71.7	800	22.2 U	19,900 _J	2.7 U_R	2.7 U_UJ
Cell 01	01GE-TE01-N-0828	08/28/01	23.6 _J	25.1 _J	2.5 B_UJ	4.1 B_J	192 _J	196 _J	24.6 B	62.5	1,710	4,010	1.3 U_UJ	1.3 U
Cell 01	01GE-TE01-N-1001	10/01/01	11.1 _J	11.6 _J	1 U_J	1 U_UJ	95.5 _J	99.3 _J	10.3 B	50 _UJ	14.6 B_JU	5,320 _J	2 U_UJ	2 U_UJ
Cell 01	01GE-TE01-N-1024	10/24/01	95.5	87.7	1.6 B_U	0.9 U	1,130	993	342	801	10,200	27,800 _J	4.6	4.5 _R
Cell 01	02GE-TE01-N-0604	06/04/02	490	494	151	157	4660	4740	22300	24100	929000	1380000	17 U	17 U
Cell 01	02GE-TE01-N-0815	08/15/02	127	127	4.8 B	4.6 B	1350	1350	2510	2540	9720	15700	1.6 U	2.8 B
Cell 01	02GE-TE01-N-1022	10/22/02	903	1020	587	592	4350	4270	56700	60200	7830000	8620000	415	521
Cell 09	01GE-TE09-N-0310	03/10/01	11.9 _J	11 B	2 U	20 U	68	64.5 B	52.7	177 B_U	818 _J	1,800	2 U_UJ	20 U
Cell 09	01GE-TE09-N-0425	04/25/01	NS	388	NS	10 U	NS	4,500	NS	6,960	NS	283 B	NS	17.8 _J
Cell 09	01GE-TE09-N-0502	05/02/01	120	124	2.2 U	10.1 B_J	746	755	2,090	3,500	9,630	33,700	0.8 U	3.7 _U
Cell 09	01GE-TE09-N-0517	05/17/01	69.9 _R	64.1	2.4 U	2.4 U	470	431	276	743	144 _U	7,040	0.89 U_UJ	1.1 B
Cell 09	01GE-TE09-N-0614	06/14/01	65.4	74.8	0.5 U_UJ	8.1 B	398	453	836	1,350	12,400	19,700	2.9 B_UJ	6.5 _J
Cell 09	01GE-TE09-N-0716	07/16/01	27.7 _J	32.1 _J	6.5 U_UJ	7.6 B_J	154 _J	175 _J	127	393	333	5,400 _J	2.7 U_R	2.7 U_UJ
Cell 09	01GE-TE09-D-0716	07/16/01	26.1 _J	34 _J	6.5 U_UJ	6.8 B	144 _J	188 _J	127	434	452	6,390 _J	6.3 _J	2.7 U_UJ
Cell 09	01GE-TE09-N-0828	08/28/01	15.2 _J	33.9 _J	2.1 B_UJ	2.6 B_J	213 _J	226 _J	23.9 B	332	158	7,320	1.8 B_J	1.3 U
Cell 09	01GE-TE09-N-1001	10/01/01	27.4 _J	26.4 _J	1 U_J	1 U_JU	125 _J	123 _J	52.2	170 _J	398	6,250	2 U_UJ	2 U_UJ
Cell 09	01GE-TE09-N-1024	10/24/01	28.7	31	0.9 U	0.9 U	199	212	108	236	2,830	7,160 _J	2.2 U	2.2 U_UJ
Cell 09	02GE-TE09-N-0604	06/04/02	442	506	27.9 B	998	2460	2370	12800	18600	127000	8670000	17 U	17 U
Cell 09	02GE-TE09-D-0604	06/04/02	421	472	26.3 B	991	2560	2200	13200	18400	129000	8250000	17 U	17 U
Cell 09	02GE-TE09-N-0815	08/15/02	289	285	7.8 B	26.3	2100	2100	5820	5780	12000	168000	6.4	6.1

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KEECO Cells Leachate Results

Cell	Sample ID	Date Sampled	Manganese Diss. CLP (ug/L)	Manganese Total CLP (ug/L)	Mercury Diss. CLP (ug/L)	Mercury Total CLP (ug/L)	Nickel Diss. CLP (ug/L)	Nickel Total CLP (ug/L)	Selenium Diss. CLP (ug/L)	Selenium Total CLP (ug/L)	Silicon Total ULSA (mg/L as SiO2)
Cell 01	01GE-TE01-N-0310	03/10/01	56,500	64,500	0.1 U_R	0.1 U_R	431	495	6 _UJ	30 U_R	NS
Cell 01	01GE-TE01-D-0310	03/10/01	60,400	62,300	0.1 U_R	0.1 U_R	452	450	7.5 _UJ	30 U_R	NS
Cell 01	01GE-TE01-N-0425	04/25/01	NS	48,500	NS	0.15 B	NS	494	NS	30 U_R	70
Cell 01	01GE-TE01-D-0425	04/25/01	NS	50,000	NS	0.1 B	NS	518	NS	30 U_R	NS
Cell 01	01GE-TE01-N-0502	05/02/01	36,400	34,500	0.1 U	0.1 U	309	300	4.2 U	4.2 U	NS
Cell 01	01GE-TE01-N-0517	05/17/01	37,000	36,100	0.1 U_J	0.1 U	302 _UJ	300	4.7 U	4.7 U_UJ	21
Cell 01	01GE-TE01-D-0517	05/17/01	37,800	36,400	0.1 U	0.1 U	304 _J	293	4.2 U	4.7 U	22
Cell 01	01GE-TE01-N-0614	06/14/01	41,500 _J	61,300	0.1 U_UJ	0.1 U_UJ	297	386	4.4 U	4.4 U_UJ	25.58
Cell 01	01GE-TE01-D-0614	06/14/01	42,800 _J	4,590	0.1 U_UJ	0.16 B_J	306	35.1 B	4.4 U	4.4 U_UJ	26.91
Cell 01	01GE-TE01-N-0716	07/16/01	25,700	28,400	0.1 U	0.1 U	181 _J	202 _J	3.3 U_R	3.3 U_R	NR
Cell 01	01GE-TE01-N-0828	08/28/01	27,600	27,700	0.1 U	0.19 B_U	93.6 _J	95.4 _J	4.4 U	4.4 U_R	NR
Cell 01	01GE-TE01-N-1001	10/01/01	20,300	20,600 _J	0.1 U	0.1 U	57.2 _J	54.6 _J	3 U_JR	3 U_RUJ	NR
Cell 01	01GE-TE01-N-1024	10/24/01	64,200	59,500	0.1 U_UJ	0.1 U_UJ	600	530	20	16.3	NR
Cell 01	02GE-TE01-N-0604	06/04/02	173000	175000	0.2 U	0.2 U	3100	3150	40 U	40 U	NR
Cell 01	02GE-TE01-N-0815	08/15/02	132000	134000	0.1 U	0.1 U	824	830	6.3	9.3	NR
Cell 01	02GE-TE01-N-1022	10/22/02	235000	249000	0.38	0.64	2790	2710	279	2.5 U	NR
Cell 09	01GE-TE09-N-0310	03/10/01	11,000	11,200	0.1 U_R	0.1 U_R	58	43.2 B	3.8 B_UJ	30 U_R	NS
Cell 09	01GE-TE09-N-0425	04/25/01	NS	261,000	NS	0.1 U	NS	3020	NS	15 U_R	18 _J
Cell 09	01GE-TE09-N-0502	05/02/01	35,000	35,600	0.1 U	0.1 U	426	423	4.2 U	4.2 U	NS
Cell 09	01GE-TE09-N-0517	05/17/01	29,000	26,400	0.1 U	0.1 U	301 _J	270	2.3 U_UJ	2.3 U	33
Cell 09	01GE-TE09-N-0614	06/14/01	25,200 _J	32,300	0.1 U_UJ	0.1 U_UJ	237	286	4.4 U	4.4 U_UJ	36.12
Cell 09	01GE-TE09-N-0716	07/16/01	11,200	12,800	0.1 U	0.1 U	150 _J	102 _J	3.3 U_R	3.3 U_R	NR
Cell 09	01GE-TE09-D-0716	07/16/01	10,500	13,700	0.1 U	0.1 U	143 _J	108 _J	3.3 U_R	3.3 U_R	NR
Cell 09	01GE-TE09-N-0828	08/28/01	16,800	16,700	0.17 B_U	0.13 B_U	119 _J	130 _J	4.4 U	4.4 U_R	NR
Cell 09	01GE-TE09-N-1001	10/01/01	15,500	15,600	0.1 U	0.1 U	82 _J	75.3 _J	3 U_JR	3.6 B_J	NR
Cell 09	01GE-TE09-N-1024	10/24/01	21,000	21,400	0.1 U_UJ	0.1 U_UJ	111	114	7.9	7.2	NR
Cell 09	02GE-TE09-N-0604	06/04/02	91900	87900	0.2 U	0.2 U	1520	1440	40 U	168	NR
Cell 09	02GE-TE09-D-0604	06/04/02	96900	81800	0.2 U	0.2 U	1580	1350	40 U	142	NR
Cell 09	02GE-TE09-N-0815	08/15/02	130000	128000	0.1 U	0.1 U	1220	1230	13.5	16.6	NR

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KEECO Cells Leachate Results

Cell	Sample ID	Date Sampled	Silver Diss. CLP (ug/L)	Silver Total CLP (ug/L)	Thallium Diss. CLP (ug/L)	Thallium Total CLP (ug/L)	Vanadium Diss. CLP (ug/L)	Vanadium Total CLP (ug/L)	Zinc Diss. CLP (ug/L)	Zinc Total CLP (ug/L)
Cell 01	01GE-TE01-N-0310	03/10/01	3 U	30 U_UJ	5 U_R	50 U_R	3 U	30 U	2,800 _J	3,370
Cell 01	01GE-TE01-D-0310	03/10/01	3 U	30 U_UJ	5 U_R	50 U_R	3 U	30 U	2,770 _J	3,130
Cell 01	01GE-TE01-N-0425	04/25/01	NS	30 U_UJ	NS	50 U_R	NS	30 U	NS	4,600
Cell 01	01GE-TE01-D-0425	04/25/01	NS	30 U_UJ	NS	50 U_R	NS	30 U	NS	4,700
Cell 01	01GE-TE01-N-0502	05/02/01	7.9 B_UJ	2.5 B_J	1.7 U_UJ	1.7 U	2.4 U	2.4 U	2,310	2,290
Cell 01	01GE-TE01-N-0517	05/17/01	5.9 B	5.1 B_J	3.8 U	3.8 U_UJ	2.7 U	2.7 U_UJ	1,430	1,820
Cell 01	01GE-TE01-D-0517	05/17/01	4.2 B_R	3.6 B	3.4 U	3.8 U	2.4 U	2.7 U	1,460	1,830
Cell 01	01GE-TE01-N-0614	06/14/01	3.2 B_UJ	3.8 B_UJ	5.6 U_UJ	5.6 U_UJ	0.9 U_UJ	0.9 U	1,900	2,560
Cell 01	01GE-TE01-D-0614	06/14/01	3.4 B_UJ	0.7 U	5.6 U_UJ	5.6 U	0.9 U_UJ	0.9 U	1,950	231
Cell 01	01GE-TE01-N-0716	07/16/01	1.2 U	1.2 U	4.9 U_R	4.9 U_R	1 U_UJ	1 U_UJ	1,230 _J	1,680 _J
Cell 01	01GE-TE01-N-0828	08/28/01	2 B_UJ	1.1 B_J	5.6 U_UJ	12.3	0.9 U	0.9 U	600 _J	615
Cell 01	01GE-TE01-N-1001	10/01/01	1 U_UJ	1 U_R	4 U_RUJ	4 U_RUJ	1 U_J	1 U	333 _J	274
Cell 01	01GE-TE01-N-1024	10/24/01	4.8 B	1.6 B	58.1	46.7	0.9 U_UJ	0.9 U_UJ	4,920	4,460 _J
Cell 01	02GE-TE01-N-0604	06/04/02	11 U	11 U	55 U	55 U	17 U	38.7 B	23400	23900
Cell 01	02GE-TE01-N-0815	08/15/02	6.5 B	6.8 B	4.1 U	4.1 U	1.1 U	1.1 U	4410	4420
Cell 01	02GE-TE01-N-1022	10/22/02	40 U	40 U	232	220	101	88	13400	12900
Cell 09	01GE-TE09-N-0310	03/10/01	3 U	30 U_UJ	5 U_R	50 U_R	3 U	30 U	520 _J	503 _U
Cell 09	01GE-TE09-N-0425	04/25/01	NS	15 U_UJ	NS	25 U_R	NS	15 U	NS	28,600
Cell 09	01GE-TE09-N-0502	05/02/01	6.2 B_U	4.2 B_J	1.7 U_UJ	1.7 U	2.4 U	3.3 B_U	6,860	6,920
Cell 09	01GE-TE09-N-0517	05/17/01	6.6 B_R	2.3 U	1.9 U	3.8 U	2.7 U	2.7 U	3,490	3,380
Cell 09	01GE-TE09-N-0614	06/14/01	2.4 B_UJ	1.9 B_UJ	5.6 U_UJ	5.6 U_UJ	0.9 U_UJ	0.9 U	2,970	3,400
Cell 09	01GE-TE09-N-0716	07/16/01	1.2 U	1.2 U	4.9 U_R	4.9 U_R	1.2 B_UJ	1 U_UJ	877 _J	1,110 _J
Cell 09	01GE-TE09-D-0716	07/16/01	1.2 U	1.2 U	4.9 U_R	4.9 U_R	1.4 B_U	1 U_UJ	830 _J	1,150 _J
Cell 09	01GE-TE09-N-0828	08/28/01	1.4 B_UJ	1.1 B	5.6 U_UJ	8.6 B_J	0.9 U	0.9 U	111 _J	1,120
Cell 09	01GE-TE09-N-1001	10/01/01	1 U_JU	1 U_R	4 U_JUR	4 U_JUR	1 U_J	1 U	809	888
Cell 09	01GE-TE09-N-1024	10/24/01	1 U_UJ	1.4 B	22.1	19	0.9 U_UJ	1.8 B	1,030	1,080 _J
Cell 09	02GE-TE09-N-0604	06/04/02	11 U	11 U	55 U	623	17 U	119 B	20300	19400
Cell 09	02GE-TE09-D-0604	06/04/02	11 U	11 U	55 U	574	17 U	133 B	20900	18500
Cell 09	02GE-TE09-N-0815	08/15/02	3.2 B	5.1 B	27.2	24.3	1 U	1 U	13500	13500

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UNR Cells Leachate Results

Cell	Sample ID	Date Sampled	pH Lab	Conductivity	Total Solids		Hardness	Turbidity	Ammonia	NITRATE NITRITE	P ORTHOPHOSPHATE	Cyanide	
			Lab	Lab	Diss.	Susp.	Total	Lab	Total	Total	Total	Total	WAD
			ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	ULSA	CLP	ULSA
			(su)	(umhos/cm @ 25 C)	(mg/L @ 180 C)	(mg/L @ 105 C)	(mg/L as CaCO3)	(NTU)	(mg/L as N)	(mg/L as N)	(mg/L as P)	(ug/L)	(ug/L)
Cell 03	01GE-TE03-N-0309	03/09/01	6.55 _H	2,480 I_H	2,300 _H	100 _JH	1,480 _H	19.4 _H	0.4 _H	3.1 B,H_HJ	0.05 _HJ	37.3 _J	NR
Cell 03	01GE-TE03-D-0309	03/09/01	6.68 _H	2,750 I_H	2,300 _H	47 _H		19.4 _H		2.99 B,H_HJ	0.1 _HJ	NS	NR
Cell 03	01GE-TE03-N-0425	04/25/01	7.89	2,190 I_J	2,400 _J	4 U	1,570 _J	0.2 _J	1.7 _J	0.13 B,H_J	0.04 H_RJ	3.2 B	NR
Cell 03	01GE-TE03-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.7 U_UJ	NS
Cell 03	01GE-TE03-D-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.7 U_UJ	NS
Cell 03	01GE-TE03-N-0517	05/17/01	7.68 _J	2,300 I	2,300 _J	10	1,550	2 _J	2	0.05 UB,H	0.02 _J	2.2 B_UJ	5 U
Cell 03	01GE-TE03-N-0614	06/14/01	7.92	2,250 I	2,400 _J	10 _J	1,461	1.2	1.51	0.05 UH	0.02	4.9 B_U	10 U_UJ
Cell 03	01GE-TE03-N-0716	07/16/01	7.29	2,620 I	2,237	11 _J	1,600	1 _JU	0.88	0.78 H_J		4.5 U_UJ	10 U
Cell 03	01GE-TE03-N-0828	08/28/01	6.53	3,430 I	2,800 _J	33 _J	1,700	4.2 _J	0.61	0.39 H_J	NR	4.5 U_UJ	10 U_UJR
Cell 03	01GE-TE03-N-1001	10/01/01	7.48	2,890 I	2,872 H_J	38 H_JJ	1,900	15.2 _J	1.18	0.05 UH	NR	1 U_UJ	10 U_UJ
Cell 03	01GE-TE03-D-1001	10/01/01	7.53	3,220 I	2,802 H_J	64 H_JJ	1,800	26.1 _J	1.36	0.05 UH	NR	5.2 B_UJ	10 U_UJ
Cell 03	01GE-TE03-N-1024	10/24/01	6.8	3,060	2,860	12 _J	1,800	1.1	0.88	1.7 H	NR	5.6 B	2
Cell 03	01GE-TE03-D-1024	10/24/01	7.32	3,260	2,930	11 _J	1,900	1.2	0.95	1.9 H	NR	6.3 B	3
Cell 03	02GE-TE03-N-0604	06/04/02	6.8	2730	2600	71	1800	5.6	0.05 U	3 H	NR	3.5 U	10 U
Cell 03	02GE-TE03-D-0604	06/04/02	7.99	2840	2700	51	1700	5.65	0.057	0.57 H	NR	3.5 U	10 U
Cell 03	02GE-TE03-N-0815	08/15/02	8.48	2900	2600	6	1700	1.14	0.071	0.05 U	NR	3 U	10 U
Cell 03	02GE-TE03-N-1022	10/22/02	7.16	3500	3100	110	2200	14.2	0.11	0.9	NR	6.5 B	NS
Cell 08	01GE-TE08-N-0425	04/25/01	7.49	2,480 I_J	2,400 _J	5	1,410 _J	0.5 _J	1.4 _J	0.05 UB,H_UJ	0.05 H_RJ	3.2 B_J	NR
Cell 08	01GE-TE08-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.7 U_UJ	NS
Cell 08	01GE-TE08-N-1001	10/01/01	7.76	2,930 I	3,074 H_J	12 H_JJ	2,000	0.9 _J	0.4	2.2 H	NR	5.9 B_UJ	10 U_UJ
Cell 08	02GE-TE08-N-0604	06/04/02	8.61	2270	2500	59	1600	1.83	0.05 U	1.4 H	NR	3.5 U	10 U
Cell 08	02GE-TE08-N-0815	08/15/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 08	02GE-TE08-N-1022	10/22/02	8.37	3160	3000	17	2100	1.58	0.16	2.1	NR	6.8 B	NS

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UNR Cells Leachate Results

Cell	Sample ID	Date Sampled	Acidity Total ULSA (mg/L as CaCO3)	Alkalinity Total ULSA (mg/L as CaCO3)	Bicarbonate Total ULSA (mg/L as HCO3)	Carbonate Total ULSA (mg/L as CO3)	Bromide Total ULSA (mg/L)	Chloride Total ULSA (mg/L)	Fluoride Total ULSA (mg/L)	Sulfate Total ULSA (mg/L)	Sulfide Total ULSA (mg/L)
Cell 03	01GE-TE03-N-0309	03/09/01	5 U_H	14 _H	17 _JH	5 U_H	1 UB_H	35.1 B_H	0.6 B_H	1,710 _H	1 U_H
Cell 03	01GE-TE03-D-0309	03/09/01	5 U_H	30 _H	37 _H	5 U_H	1 UB_H	35.3 B_H	0.7 B_H	1,760 _H	NS
Cell 03	01GE-TE03-N-0425	04/25/01	5 U_J	38 _J	46 _J	5 U_UJ	1 UB	23 B	0.2 UB	1,330 _J	1 U_UJ
Cell 03	01GE-TE03-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 03	01GE-TE03-D-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 03	01GE-TE03-N-0517	05/17/01	5 U	74	90	5 U	1 UB	39 B	0.4 B,CC	1,660	1 U
Cell 03	01GE-TE03-N-0614	06/14/01	5 U	48	59	5 U	1 U	30	0.5 _UJ	1,790	0.01 U
Cell 03	01GE-TE03-N-0716	07/16/01	5 U	62	76	5 U	1 U	34	0.3	1,826	1 U_UJ
Cell 03	01GE-TE03-N-0828	08/28/01	5 U	36	44 _JR	5 U	1 U_UJ	25 _J	0.5 _J	2,000	1 U
Cell 03	01GE-TE03-N-1001	10/01/01	5 U	92	5 U	5 U	1 U_UJ	40	0.6 _J	1,920	1 U_UJ
Cell 03	01GE-TE03-D-1001	10/01/01	5 U	92	5 U	5 U	1 U_UJ	40	0.4 _J	1,910	1 U_UJ
Cell 03	01GE-TE03-N-1024	10/24/01	34	66	81 _R	5 U_R	1 U	25	0.51 _J	2,100	1 U
Cell 03	01GE-TE03-D-1024	10/24/01	5 U	68	83 _R	5 U_R	1 U	26	0.47 _J	2,000	1 U
Cell 03	02GE-TE03-N-0604	06/04/02	5 U	48	58.5	5 U	1 UH	19 H	0.2 UH	15000 H	0.03
Cell 03	02GE-TE03-D-0604	06/04/02	5 U	60	73.1	5 U	1 UH	18 H	0.2 UH	18000 H	0.03
Cell 03	02GE-TE03-N-0815	08/15/02	5 U	28	34.1	5 U	1 U	29	2	1900	0.011
Cell 03	02GE-TE03-N-1022	10/22/02	5 U	94	115	5 U	1 U	20	1.5	2100	0.01 U
Cell 08	01GE-TE08-N-0425	04/25/01	5 U_UJ	34 _J	41 _J	5 U_UJ	1 UB	27 B	0.8 B	1,650 _J	1 U_UJ
Cell 08	01GE-TE08-N-0502	05/02/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 08	01GE-TE08-N-1001	10/01/01	5 U	116	5 U	5 U	1 U_UJ	12	1.1 _J	2,070	1 U_UJ
Cell 08	02GE-TE08-N-0604	06/04/02	8	50	61	5 U	1 UH	12 H	0.2 UH	1700 H	0.01 U
Cell 08	02GE-TE08-N-0815	08/15/02	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 08	02GE-TE08-N-1022	10/22/02	5 U	134	163	5 U	1 U	16	1.1	2000	0.01 U

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers
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UNR Cells Leachate Results

Cell	Sample ID	Date Sampled	Calcium Diss. CLP (mg/L)	Calcium Total ULSA (mg/L)	Calcium Total CLP (mg/L)	Magnesium Diss. CLP (mg/L)	Magnesium Total ULSA (mg/L)	Magnesium Total CLP (mg/L)	Sodium Diss. CLP (mg/L)	Sodium Total CLP (mg/L)	Potassium Diss. CLP (mg/L)	Potassium Total CLP (mg/L)	Sodium Adsorption Ratio Calculated (unitless)
Cell 03	01GE-TE03-N-0309	03/09/01	492_J	505_H	519	55	54_H	55	152_J	150	116_J	143	1.7
Cell 03	01GE-TE03-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 03	01GE-TE03-N-0425	04/25/01	NS	542_J	512_J	NS	53_J	38	NS	114_J	NS	81	1.3
Cell 03	01GE-TE03-N-0502	05/02/01	554	NS	576	17	NS	18	103	104	54	58	1.2
Cell 03	01GE-TE03-D-0502	05/02/01	552	NS	562	17	NS	17	101	102	54	55	1.2
Cell 03	01GE-TE03-N-0517	05/17/01	570	588	538	18	19	17	106_J	100	62	58	1.2
Cell 03	01GE-TE03-N-0614	06/14/01	482	528	531	29	35	34	106_J	129	83_J	207	1.5
Cell 03	01GE-TE03-N-0716	07/16/01	464_J	610	542_J	17.3_J	22	20.1_J	78	111	58.9_J	70.5_J	1.3
Cell 03	01GE-TE03-N-0828	08/28/01	550_J	640	540_J	21.8_J	24	21.7_J	119_J	112	107	90	1.3
Cell 03	01GE-TE03-N-1001	10/01/01	699_J	704	717_J	23.7_J	25	25.7_J	97	88	71	67	0.9
Cell 03	01GE-TE03-D-1001	10/01/01	709_J	699	689_J	24_J	24	24.8_J	99	84_J	76	64_J	0.9
Cell 03	01GE-TE03-N-1024	10/24/01	689	650	665_RJ	50	46	49.9_J	120	115	108_J	107_J	1.2
Cell 03	01GE-TE03-D-1024	10/24/01	673	670	672_RJ	50	45	45.2_J	118	107	107_J	100_J	1.1
Cell 03	02GE-TE03-N-0604	06/04/02	533	580	542	75.8	78	75.1	60.5	57.2	43.8 B	44.3 B	0.6
Cell 03	02GE-TE03-D-0604	06/04/02	546	550	555	77.4	79	78.6	60	55	43.6 B	43.4 B	0.6
Cell 03	02GE-TE03-N-0815	08/15/02	572	600	555	47.8	45	46.2	79.1	75.4	63.3	59.4	0.9
Cell 03	02GE-TE03-N-1022	10/22/02	488	660	527	123	130	132	84.3	93.6	85.6	113	0.9
Cell 08	01GE-TE08-N-0425	04/25/01	NS	483_J	493	NS	50_J	40	NS	107	NS	98	1.2
Cell 08	01GE-TE08-N-0502	05/02/01	556	NS	522	49	NS	46	82	77	86	82	0.9
Cell 08	01GE-TE08-N-1001	10/01/01	539_J	667	567_J	60.6_J	70	67.7_J	98	103	88	77	1.1
Cell 08	02GE-TE08-N-0604	06/04/02	512	520	527	60.5	62	63	44.3 B	42.7 B	44.2 B	40 B	0.5
Cell 08	02GE-TE08-N-0815	08/15/02	100	NS	NS	89.3	NS	NS	53.1	NS	8050	NS	0.9
Cell 08	02GE-TE08-N-1022	10/22/02	1040	680	798	111	86	100	89.4	86.4	105	103	0.7

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UNR Cells Leachate Results

Cell	Sample ID	Date Sampled	Aluminum		Antimony		Arsenic		Barium		Beryllium	
			Diss.	Total	Diss.	Total	Diss.	Total	Diss.	Total	Diss.	Total
			CLP	CLP	CLP	CLP	CLP	CLP	CLP	CLP	CLP	CLP
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
Cell 03	01GE-TE03-N-0309	03/09/01	144 B_U	120 U	6 U	60 U	22.8	38.4 B_J	163 B	39.1 B_U	1 U	10 U
Cell 03	01GE-TE03-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 03	01GE-TE03-N-0425	04/25/01	NS	12 U	NS	6 U	NS	9.8 B	NS	28.9 B	NS	1 U
Cell 03	01GE-TE03-N-0502	05/02/01	53.4 U	53.4 U	20.9 U_UJ	20.9 U_UJ	11.6	10.3 B_J	121 B	26 B	0.4 U	0.4 U
Cell 03	01GE-TE03-D-0502	05/02/01	53.4 U	53.4 U	20.9 U	20.9 U_UJ	12	8.1 B_J	94.4 B	25 B	0.4 U	0.4 U_U
Cell 03	01GE-TE03-N-0517	05/17/01	53.4 U	59.3 U_UJ	20.9 U_R	23.2 U_UJ	12.7	12.9	31.3 B	28.5 B	0.4 U	0.44 U
Cell 03	01GE-TE03-N-0614	06/14/01	42.8 B_U	52.1 B_J	4.9 U_UJ	4.9 U	10.9 _UJ	236 _J	33.1 B	37.3 B	1.2 B_UJ	0.46 B_UJ
Cell 03	01GE-TE03-N-0716	07/16/01	179 B	163 B	3.8 U_UJ	3.8 U_UJ	11.3 _UJ	7.5 B_UJ	31.6 B_J	36.6 B_J	0.59 B_UJ	0.47 B_UJ
Cell 03	01GE-TE03-N-0828	08/28/01	53.8 B_U	93.1 B	4.9 U_UJ	4.9 U	9 B_U	14.6 _U	135 B	44.6 B_J	0.34 B_UJ	0.43 B_JU
Cell 03	01GE-TE03-N-1001	10/01/01	11 U_UJ	29 B_UJ	3 U_UJ	3 U_UJ	9.8 B_J	11.8 _J	213 _J	39.4 B_J	1 U_J	1 U_UJ
Cell 03	01GE-TE03-D-1001	10/01/01	11 U_UJ	53.4 B_UJ	3 U_UJ	3 U_UJ	17.2 _J	13.6 _J	89.1 B_J	65.7 B_J	1 U_J	1 U_UJ
Cell 03	01GE-TE03-N-1024	10/24/01	55 U	293 _J	3.7 U	3.7 U	8.5 B_J	21.7	155 B	54.4 B_J	0.4 U	0.4 U
Cell 03	01GE-TE03-D-1024	10/24/01	55 U	68.4 B_UJ	3.7 U	3.7 U	8.1 B_J	15.5	95.5 B	51.2 B_J	0.4 U	0.4 U
Cell 03	02GE-TE03-N-0604	06/04/02	139 U	139 U	53 U	53 U	21 U	21 U	148 B	14 U	2 B	1.7 B
Cell 03	02GE-TE03-D-0604	06/04/02	139 U	139 U	53 U	53 U	21 U	21 U	90.6 B	30.9 B	1 U	1.6 B
Cell 03	02GE-TE03-N-0815	08/15/02	268	224	3.9 U	3.9 U	9.5 B	11.3	268	25.6 B	0.2 U	0.2 U
Cell 03	02GE-TE03-N-1022	10/22/02	48 B	679	2 U	2 U	2.6 U	15	118 B	55 B	0.51 B	1.4 B
Cell 08	01GE-TE08-N-0425	04/25/01	NS	124 B_U	NS	30 U	NS	23 B_J	NS	41.4 B_U	NS	5 U
Cell 08	01GE-TE08-N-0502	05/02/01	53.4 U	53.4 U	20.9 U	20.9 U	7.6 B_J	10.5 B	104 B	34.6 B	0.4 U	0.4 U
Cell 08	01GE-TE08-N-1001	10/01/01	11 U_UJ	116 B_JU	3 U_UJ	3 U_UJ	6.2 B_J	5.9 B_J	141 B_J	44.5 B_J	1 U_J	1 U_JU
Cell 08	02GE-TE08-N-0604	06/04/02	512 B	242 B	53 U	53 U	21 B	22.4 B	276 B	14 U	4.8 B	1.8 B
Cell 08	02GE-TE08-N-0815	08/15/02	170 B	NS	3.9 U	NS	5220	NS	72.2 B	NS	0.22 B	NS
Cell 08	02GE-TE08-N-1022	10/22/02	28 U	28 U	2 U	2 U	9.1 B	2.6 U	167 B	46 B	0.41 B	1.6 B

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers
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UNR Cells Leachate Results

Cell	Sample ID	Date Sampled	Cadmium		Chromium		Cobalt		Copper		Iron	
			Diss. CLP	Total CLP	Diss. CLP	Total CLP	Diss. CLP	Total CLP	Diss. CLP	Total CLP	Diss. CLP	Total CLP
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
Cell 03	01GE-TE03-N-0309	03/09/01	1 U_UJ	10 U	16.8	20 U	2.9 B_J	20 U	29.1	20 U	559 _J	160 U
Cell 03	01GE-TE03-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 03	01GE-TE03-N-0425	04/25/01	NS	1 U	NS	14.6	NS	2.8 B_J	NS	10.3 B_U	NS	16 U
Cell 03	01GE-TE03-N-0502	05/02/01	1.5 U	1.5 U	5.3 B_U	9.5 B_J	4.4 U	4.4 U	7.7 B_U	24 B_J	16.7 U	33.4 B_U
Cell 03	01GE-TE03-D-0502	05/02/01	1.5 U	1.5 U	4.2 B_U	3.8 B_J	4.4 U	4.4 U	4.5 B_U	4.5 B_U	16.7 U	19.5 B_U
Cell 03	01GE-TE03-N-0517	05/17/01	1.5 U_R	1.7 U	5.6 B_U	6.9 B	4.4 U	4.9 U	3.2 B_J	4.9 B	16.7 U	18.6 U
Cell 03	01GE-TE03-N-0614	06/14/01	0.4 U_UJ	0.5 B_J	7.3 B	9.7 B	0.7 U_UJ	1.5 B_J	14.1 B	24.3 B	19.4 U	25.2 B
Cell 03	01GE-TE03-N-0716	07/16/01	0.5 U_UJ	0.5 U_UJ	6.5 U_UJ	6.5 U_UJ	1.8 U_UJ	1.8 U_UJ	15.4 B	35.2	189	176 _J
Cell 03	01GE-TE03-N-0828	08/28/01	0.4 U_UJ	0.4 U_JU	1.1 B_UJ	2.5 B_J	0.7 U_UJ	0.98 B_J	16.4 B	13.2 B	20.2 B	107 _J
Cell 03	01GE-TE03-N-1001	10/01/01	1 U_JU	1 U_UJ	1 U_J	1 U_UJ	2 B_J	2.7 B_J	4.6 B	6 B_UJ	27.7 B_JU	327 _J
Cell 03	01GE-TE03-D-1001	10/01/01	1 U_JU	1 U_UJ	1 U_J	1.6 B_J	2 U_J	7 B_J	4.5 B	7.2 B_UJ	39.7 B_JU	597 _J
Cell 03	01GE-TE03-N-1024	10/24/01	0.4 U_UJ	0.46 B_UJ	2.3 B_UJ	3.3 B_J	5.1 B	4.4 B	7.6 B	24.1 B	22.6 U	1,340 _J
Cell 03	01GE-TE03-D-1024	10/24/01	0.4 U_UJ	0.4 U_UJ	2.3 B_UJ	1.9 B_J	5 B	5.2 B	7.9 B	8.6 B	22.6 U	215 _J
Cell 03	02GE-TE03-N-0604	06/04/02	6 U	6 U	14 U	14 U	13 U	13 U	10 U	10 U	940 B	996 B
Cell 03	02GE-TE03-D-0604	06/04/02	6 U	6 U	14 U	14 U	13 U	13 U	10 U	10 U	145 U	200 B
Cell 03	02GE-TE03-N-0815	08/15/02	0.6 U	0.6 U	1.1 U	1.1 U	1 U	1 U	8.7 B	6.3 B	18.7 U	46 B
Cell 03	02GE-TE03-N-1022	10/22/02	0.5 U	0.5 U	0.64 B	9.8 B	4 B	6.2 B	5.6 B	42	18 U	2960
Cell 08	01GE-TE08-N-0425	04/25/01	NS	5 U	NS	10 U	NS	10 U	NS	10 U	NS	241 B_U
Cell 08	01GE-TE08-N-0502	05/02/01	1.5 U	1.5 U	12.5 _U	11 B_J	4.4 U	4.4 U	10.2 B_U	13.8 B	16.7 U	102 B_U
Cell 08	01GE-TE08-N-1001	10/01/01	1 U_JU	1 U_JU	2.8 B_J	3.1 B_J	5.5 B_J	4.9 B_J	4.7 B	7.4 B_JU	8 U_UJ	282 _J
Cell 08	02GE-TE08-N-0604	06/04/02	63.2	6 U	15.8 B	14 U	13 U	13 U	10 U	10 U	538 B	2980
Cell 08	02GE-TE08-N-0815	08/15/02	0.6 U	NS	16.6	NS	35.8 B	NS	5.5 B	NS	66.4 B	NS
Cell 08	02GE-TE08-N-1022	10/22/02	2 B	1.6 B	4.8 B	6.7 B	16 B	15 B	7.6 B	11 B	18 U	18 U

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers
Note: Results from 2002 have not completed the validation process

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UNR Cells Leachate Results

Cell	Sample ID	Date Sampled	Lead Diss. CLP (ug/L)	Lead Total CLP (ug/L)	Manganese Diss. CLP (ug/L)	Manganese Total CLP (ug/L)	Mercury Diss. CLP (ug/L)	Mercury Total CLP (ug/L)	Nickel Diss. CLP (ug/L)	Nickel Total CLP (ug/L)	Selenium Diss. CLP (ug/L)	Selenium Total CLP (ug/L)
Cell 03	01GE-TE03-N-0309	03/09/01	2 U_UJ	20 U	1,140	1,190	0.1 U_R	0.1 U_R	6 B	20 U	188	170 _J
Cell 03	01GE-TE03-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 03	01GE-TE03-N-0425	04/25/01	NS	2 U	NS	439	NS	0.1 U	NS	2.6 B	NS	172
Cell 03	01GE-TE03-N-0502	05/02/01	0.8 U	0.8 U	610	623	0.1 U	0.1 U	8.9 U	8.9 U	115 _J	118
Cell 03	01GE-TE03-D-0502	05/02/01	0.8 U	0.8 U	605	606	0.1 U	0.1 U	8.9 U	8.9 U	117 _J	117
Cell 03	01GE-TE03-N-0517	05/17/01	0.8 U_UJ	0.89 U	769	719	0.1 U	0.1 U	8.9 U	9.9 U	110 _R	112
Cell 03	01GE-TE03-N-0614	06/14/01	4.6 _UJ	2.1 B_J	902 _J	1,010	0.1 U_UJ	0.1 U_UJ	3.9 B_UJ	13.3 B_J	93	120 _J
Cell 03	01GE-TE03-N-0716	07/16/01	23.6 _J	5.5 _J	1,290	1,520	0.1 U	0.1 U	8.6 B_J	9.7 B_J	29.2 _J	38.6 _J
Cell 03	01GE-TE03-N-0828	08/28/01	1.3 U_UJ	1.3 U	48.8	1,050	0.1 U	0.14 B_U	4 B_UJ	4.4 B_J	19.1	21.9 _J
Cell 03	01GE-TE03-N-1001	10/01/01	2 U_JU	2 U_UJ	4,230	4,720 _J	0.14 B	0.1 U	9.6 B_J	9.7 B_J	21.2 _J	28.3 _J
Cell 03	01GE-TE03-D-1001	10/01/01	2 U_JU	2 U_UJ	4,040	8,990 _J	0.1 U	0.1 U_UJ	9.9 B_J	11.2 B_J	21.6 _J	34.8 _J
Cell 03	01GE-TE03-N-1024	10/24/01	2.2 U	2.2 U_UJ	6,890	6,840	0.1 U_UJ	0.1 U_UJ	9.5 B	10.2 B	78.2	77.5
Cell 03	01GE-TE03-D-1024	10/24/01	2.2 U	2.2 U_UJ	6,830	6,720	0.1 U_UJ	0.1 U_UJ	9 B	8.1 B	78.6	71.2
Cell 03	02GE-TE03-H-0604	06/04/02	17 U	17 U	241	698	0.2 U	0.2 U	17.2 B	14 U	40 U	40 U
Cell 03	02GE-TE03-D-0604	06/04/02	17 U	17 U	229	640	0.2 U	0.2 U	14 U	14 U	78.7	97.7
Cell 03	02GE-TE03-N-0815	08/15/02	2.6 U	2.6 U	73.7	109	0.1 U	0.1 U	2.8 B	2 U	40.5	36.5
Cell 03	02GE-TE03-N-1022	10/22/02	1.5 U	1.5 U	3620	5070	0.2 U	0.2 U	7.3 B	11 B	22	29
Cell 08	01GE-TE08-N-0425	04/25/01	NS	10 U	NS	66.9 B	NS	0.1 U	NS	10 U	NS	133 _J
Cell 08	01GE-TE08-N-0502	05/02/01	0.8 U	0.94 B_U	2.3 B_U	4.5 B_U	0.1 U	0.1 U	8.9 U	8.9 U	103 _J	105
Cell 08	01GE-TE08-N-1001	10/01/01	2 U_UJ	2 U_UJ	3,890	4,340 _J	0.1 U	0.1 U	9.7 B_J	9.5 B_J	60.2 _J	64.7 _J
Cell 08	02GE-TE08-N-0604	06/04/02	17 U	17 U	7.2 B	71.8 B	0.2 U	0.2 U	14 U	14 U	55.9	40 U
Cell 08	02GE-TE08-N-0815	08/15/02	2.6 U	NS	1930	NS	0.1 U	NS	74.9	NS	25.6	NS
Cell 08	02GE-TE08-N-1022	10/22/02	1.5 U	1.5 U	3800	3610	0.2 U	0.2 U	27 B	27 B	69	64

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers
Note: Results from 2002 have not completed the validation process
NR- Analysis not requested
NS- Sample not submitted to laboratory
NA- Not analyzed by lab although requested
I =interferent present
H = holding time expired before analysis
J = estimated result
B = estimated result
U = below the detection limit, reporting limit shown
R = result rejected due to poor QC
E = serial dilution was outside guidelines
CC = continuing calibration outside project and laboratory control limits

UNR Cells Leachate Results

Cell	Sample ID	Date Sampled	Silicon Total ULSA (mg/L as SiO2)	Silver Diss. CLP (ug/L)	Silver Total CLP (ug/L)	Thallium Diss. CLP (ug/L)	Thallium Total CLP (ug/L)	Vanadium Diss. CLP (ug/L)	Vanadium Total CLP (ug/L)	Zinc Diss. CLP (ug/L)	Zinc Total CLP (ug/L)
Cell 03	01GE-TE03-N-0309	03/09/01	14.3 _H	3 U	30 U_UJ	5 U_R	50 U_R	3 U	30 U	160 _J	29.9 B_U
Cell 03	01GE-TE03-D-0309	03/09/01	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cell 03	01GE-TE03-N-0425	04/25/01	13.1 _J	NS	3 U	NS	5 U	NS	3 U	NS	3.1 B_U
Cell 03	01GE-TE03-N-0502	05/02/01	NS	2.1 U	2.1 U_UJ	1.7 U_UJ	3.2 B_U	2.4 U	2.4 U	142 _J	35.6 _J
Cell 03	01GE-TE03-D-0502	05/02/01	NS	2.1 U	2.1 U_UJ	1.7 U_UJ	3 B_U	2.4 U	2.4 U	30.7	2.3 B_UJ
Cell 03	01GE-TE03-N-0517	05/17/01	17	2.1 U	2.3 U_UJ	2.3 B	2.5 B_J	2.4 U_U	2.7 U_UJ	7.2 B	8.8 B_U
Cell 03	01GE-TE03-N-0614	06/14/01	17.42	0.86 B_UJ	0.94 B_UJ	5.6 U_UJ	5.6 U	0.9 U_UJ	1 B_UJ	6.9 B_U	28.7
Cell 03	01GE-TE03-N-0716	07/16/01	NR	1.2 U	1.2 U	4.9 U_R	4.9 U_R	2.9 B_UJ	1 U_UJ	46.4 _J	25.1 _J
Cell 03	01GE-TE03-N-0828	08/28/01	NR	0.7 U	1 B_J	5.6 U_UJ	5.6 U_R	0.9 U	0.9 U	35.9 _J	21.8
Cell 03	01GE-TE03-N-1001	10/01/01	NR	1 U_JU	1 U_R	4 U_JUR	4 U_RUJ	1 U_J	1 U	122 _J	8.6 B_J
Cell 03	01GE-TE03-D-1001	10/01/01	NR	1 U_JU	1 U_UJR	4 U_JUR	4 U_UJR	1 U_J	1.4 B_J	43.3 _J	14.5 B_J
Cell 03	01GE-TE03-N-1024	10/24/01	NR	1 U_UJ	1 U	6.5 B	6.9 B	0.9 U_UJ	0.9 U_UJ	28.1 _U	15.1 B_J
Cell 03	01GE-TE03-D-1024	10/24/01	NR	1 U_UJ	1 U	7.5 B	5.6 B	0.9 U_UJ	1 B	22.2 _UJ	8.9 B_J
Cell 03	02GE-TE03-N-0604	06/04/02	NR	11 U	11 U	55 U	55 U	17 U	17 U	75.4 B	6 U
Cell 03	02GE-TE03-D-0604	06/04/02	NR	11 U	11 U	55 U	55 U	17 U	17 U	13.2 B	30.8 B
Cell 03	02GE-TE03-N-0815	08/15/02	NR	1.5 B	1.2 U	4.9 U	4.9 U	1 U	1 U	11.4 B	1.9 B
Cell 03	02GE-TE03-N-1022	10/22/02	NR	0.8 U	0.8 U	7 U	7 U	1.5 U	1.5 U	105	52
Cell 08	01GE-TE08-N-0425	04/25/01	10.5 _J	NS	15 U_UJ	NS	25 U_R	NS	15 U	NS	30.3 B_U
Cell 08	01GE-TE08-N-0502	05/02/01	NS	2.1 U	2.1 U_UJ	2.2 B_J	3.5 B_U	2.4 U	2.4 U	130	3.1 B_U
Cell 08	01GE-TE08-N-1001	10/01/01	NR	1 U_JU	1 U_R	4 U_JUR	4 U_RUJ	1 U_J	1 U	46.3 _J	25.6
Cell 08	02GE-TE08-N-0604	06/04/02	NR	11 U	11 U	55 U	55 U	17 U	17 U	6 U	44.2 B
Cell 08	02GE-TE08-N-0815	08/15/02	NR	1.2 U	NS	4.9 U	NS	1 U	NS	30.8	NS
Cell 08	02GE-TE08-N-1022	10/22/02	NR	0.8 U	0.8 U	7 U	7 U	1.5 U	1.5 U	224	82

Note: Qualifiers before underscore are laboratory qualifiers and after are CDM validation qualifiers
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H = holding time expired before analysis
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Appendix B

pH, Conductivity, Temperature, Dissolved Oxygen, Turbidity,
and Oxidation-Reduction Potential of Test Cells

	Cell	Date	pH	Cond (mS/cm)	Temperature (C)	DO (mg/L)	Turb (NTU)	ORP (mV)
Control	2	5/2/01	3.73	9.0	12.6	3.46	79	585
		5/17/01	2.52	9.9	16.6	3.49	0	610
		6/14/01	2.48	9.4	12.5	7.97	4	592
		7/16/01	2.41	12.0	21.7	0.94	-8	514
		8/28/01	2.34	11.5	21.6	7.98	189	584
		10/2/01	2.14	12.8	19.8	0.56	8	
		10/24/01	2.36	1.9	1.6	0.70	159	555
		6/4/02	1.97	23.9	13.62	2.18		599.2
		8/15/02						
		10/22/02	2.16	24.1	1.14			558.9
	6	5/2/01						
		5/17/01						
		6/14/01						
		7/16/01						
		8/28/01	2.11	21.1	19.9	8.19	10	605
		10/2/01	2.04	17.2	20.2	3.37	431	
		10/24/01						
		6/4/02	1.99	25.2	13.33	3.63		671.1
		8/15/02						
		10/22/02	1.81	21.2	0.32			579.9
	10	5/2/01	4.09	7.6	11.9	3.44	10	576
		5/17/01	4.48	5.5	15.9	5.07	24	325.9
		6/14/01	6.24	4.4	12.7	7.19	25	118
		7/16/01	6.62	4.1	23.0	5.07	27	202
		8/28/01	6.65	4.2	21.4	8.02	143	445
		10/2/01	5.26	5.6	17.5	2.72	485	
		10/24/01	4.51	7.5	7.1	3.25	654	650
		6/4/02	3.5	12.0	14.38	5.27		496.2
		8/15/02	3.51	10.9	22.8	5.82	27	515
		10/22/02	3.89	13.4	2.48			376.8
PR	4	5/2/01	11.55	1.7	12.3	2.45	7	127
		5/17/01	9.56	1.3	15.8	5.68	0	100.7
		6/14/01	11.21	2.4	11.1	3.48	2	31
		6/14/01	11.18	2.0	10.4	2.39	53	-72
		7/16/01	11.05	1.7	24.6	4.48	7	38
		8/28/01	9.55	1.3	21.4	8.32	6	440
		10/2/01	11.49	1.5	19.5	9.27	158	0
		10/24/01	12.55	2.6	1.2	1.66	5	90
		6/4/02	11.76	3.5	12.98	5.49		142.2
		8/15/02	8.63	0.7	23.9	7.4	2	175
		10/22/02	11.42	1.2	2.45			187.5
	7	5/2/01	12.74	5.2	8	2.94	10	57
		5/17/01	11.75	3.7	15	4.38	0	-65.1
		6/14/01	10.77	2.0	12.1	6.63	1	-32
		6/14/01						
		7/16/01	11.14	3.4	20.4	1.68	145	-1
		8/28/01	3.4	1.2	20.7	8.25	34	560
		10/2/01	12.02	2.6	18.3	1.89	-1	0
		10/24/01	12.10	3.4	4.6	1.10	4	-30
		6/4/02	11.9	4.1	13.05	7.87		259.5
		8/15/02	8.78	0.8	21	6.95	5	190
		10/22/02	12.15	3.2	1.56			224.6
	12	5/2/01	11.97	2.5	6.3	3.57	10	83
		5/17/01	11.73	2.5	11.9	3.73	3	-42.9
		6/14/01	7.58	0.8	11.7	6.31	1	64
		6/14/01						
		7/16/01						
		8/28/01	7.61	1.3	20.7	8.27	2	334
		10/2/01	9.16	1.3	20	3.29	25	0
		10/24/01	11.22	1.6	4.1	0.31	11	100
		6/4/02	11.13	1.4	14.41	3.23		195.2
		8/15/02	7.88	1.0	24.7	8.18	0	330
		10/22/02	10.85	1.7	0.17			252.3

	Cell	Event	pH	Cond (mS/cm)	Temperature (C)	DO (mg/L)	Turb (NTU)	ORP (mV)
MT2	5	5/2/01	7.71	6.5	11.6	1.7	10	189
		5/17/01	7.38	56.9	14.9	1.71	0	149.1
		6/14/01	7.07	7.6	12.8	4.93	4	122
		6/14/01	6.71	90.0	11.6	3.46	5	100
		7/16/01	6.97	47.3	22.7	0.7	1	316
		8/28/01	7.31	55.3	20	7.06	141	306
		10/2/01	7.47	47.1	20	8.99	269	
		10/24/01	7.06	50.0	4.3	1.44	67	245
		6/4/02	6.98	22.3	12.5	10.38		259.9
		8/15/02	7.41	16.2	20.8	6.81	0	245
		10/22/02	6.52	22.6	1.61			278.2
	11	5/2/01	7.83	6.9	9.2	4.12	10	314
		5/17/01	8.01	44.9	15.6	2.21	0	56.7
		6/14/01	7.37	63.0	12.5	5.9	2	24
		6/14/01						
		7/16/01						
		8/28/01	8.49	33.8	21.2	7.12	999	309
		10/2/01	8.06	36.0	18.9	3.15	27	
		10/24/01	7.52	35.1	2.8	3.67	21	195
		6/4/02	8.05	15.7	14.24	8.88		407.9
		8/15/02						
		10/22/02	7.04	15.0	1.59			232.9
KEECO	1	5/2/01	7.92	2.7	11.3	1.72	5.16	138
		5/17/01	6.2	3.0	8.7	2.77	0	110.1
		6/14/01	6.37	2.9	11.4	6.36	121	135
		6/14/01	6.09	3.0	11.6	2.45	16	65
		7/16/01	6.57	2.7	20.8	4.59	495	118
		8/28/01	5.91	3.0	18.8	9.55	228	191
		10/2/01	7.08	2.9	19.8	5.8	63	193
		10/24/01	6.20	3.5	13.3	0.79	17	165
		6/4/02	2.61	8.0	12.31	0.92		518.8
		8/15/02	2.94	5.0	21.9	6.96	9	575
		10/22/02	1.99	15.5	1.31			524.8
	9	5/2/01	7.19	2.6	7.9	0	355	144
		5/17/01	6.41	2.9	10.8	1.44	13	153.9
		6/14/01	5.87	2.9	10.6	3	222	85
		6/14/01	5.42	3.0	8.9	3.42	21	94
		7/16/01	6.02	2.5	21.3	2.66	238	126
		8/28/01	6.54	3.0	21.4	8.04	5	491
		10/2/01	6.64	2.9	17.2	1.54	37	0
		10/24/01	6.54	3.1	4.5	0.56	76	175
		6/4/02	2.8	5.7	14.06	5.89		599.7
		8/15/02	2.95	5.2	21.3	7.31	25	580
		10/22/02						
UNR	3	5/2/01	6.6	2.4	11.5	1.62	10	470
		5/17/01	7.52	2.8	14.9	3.12	0	137.2
		6/14/01	6.68	2.9	10.8	7.88	4	400
		6/14/01						
		7/16/01	8	2.6	25.8	9.07	0	300
		8/28/01	3.81	3.4	20.8	8.54	14	536
		10/2/01	6.92	3.1	19.7	3.68	24	0
		10/24/01	7.17	3.4	1.0	3.70	7	405
		6/4/02	5.25	2.9	13.12	10.5		489.4
		8/15/02	7.45	2.9	24.8	7.58	12	265
		10/22/02	5.85	3.5	0.31			280.9
	8	5/2/01	10.05	2.4	11	4.73	10	113
		5/17/01						
		6/14/01						
		6/14/01						
		7/16/01						
		8/28/01						
		10/2/01	8.16	3.2	19	4.6	-10	0
		10/24/01						
		6/4/02	9.08	2.7	13.55	10.83		324.4
		8/15/02						
		10/22/02	8.45	3.2	2.75			185.7

Appendix C

Applicable South Dakota Water Quality Criteria

South Dakota Water Quality Criteria for a coldwater marginal fish life propagation water. (Section 74:51:01:46)

Unionized ammonia nitrogen as N	<0.02	mg/L	30-day average
	applicable criterion in	mg/L	Daily maximum
Dissolved oxygen	>5.0	mg/L	
Undisassociated hydrogen sulfide	<0.002	mg/L	
pH	>6.5-<8.8	units	See section 74:51:01:07--no change in receiving water greater than 0.5 units
Total suspended solids	<90	mg/L	30-day average
	<158	mg/L	Daily maximum
Temperature	<75	°F	See section 74:51:01:31--no temp change over spawning beds, < 4 °F change

Effluent limitations for discharges to trout fishery waters. (Section 74:51:01:32)

Suspended solids	<10	mg/L	24-hr composited sample
	<17.5	mg/L	Grab sample maximum
BOD5	<10	mg/L	24-hr composited sample
	<17.5	mg/L	Grab sample maximum

Criteria for limited contact recreation waters. (Section 74:51:01:51)

Dissolved oxygen	>5.00	mg/L	
Fecal coliform (May 1-Sept 30)	<1,000	/100mL	Geometric mean based on a minimum of five samples obtained during separate 24 hour periods for any 30-day period, and they may not exceed this value in more than 20 percent of the samples examined in this same 30-day period
	<2,000	/100mL	in any one sample

Criteria for irrigation waters (Section 75:51:01:53)

Conductivity at 25°C	<2,500	umhos/cm	30-day average
	<4,375	umhos/cm	Daily maximum
Sodium adsorption ratio	<10		[Na+]/sqrt(([Ca+2] + [Mg+2])/2) all in meq/L

Criteria for fish and wildlife propagation , recreation, and stock watering (Section 74:51:01:52)

Total alkalinity as $CaCO_3$	<750	mg/L	30-day average
	<1313	mg/L	Daily maximum
Total dissolved solids	<2500	mg/L	30-day average
	<4,375	mg/L	Daily maximum
Conductivity at 25 °C	<4,000	umhos/cm	30-day average
	<7,000	umhos/cm	Daily maximum
Nitrates as N	<50	mg/L	30-day average
	<88	mg/L	Daily maximum
pH	>6.0 - <9.5	units	See section 74:51:01:07--no change in receiving water greater than 0.5 units
TPH	<10	mg/L	See section 74:51:01:10--Cannot impart a visible film or sheen on the surface of the water or adjacent shoreline
Oil and Grease	<10	mg/L	See section 74:51:01:10--Cannot impart a visible film or sheen on the surface of the water or adjacent shoreline

Combined South Dakota Water Quality Criteria Applicable to the Gilt Edge Mine

pH	>6.5-<8.8	units	See section 74:51:01:07--no change in receiving water greater than 0.5 units
Conductivity at 25C	<2,500	umhos/cm	30-day average
	<4,375	umhos/cm	daily maximum
Temperature	<75	°F	See section 74:51:01:31--no temp change over spawning beds, <4 °F change
dissolved oxygen	>5.0	mg/L	
Total alkalinity as CaCO3	<750	mg/L	30-day average
	<1313	mg/L	daily maximum
Total Dissolved Solids	<2500	mg/L	30-day average
	<4,375	mg/L	daily maximum
Suspended Solids	<10	mg/L	24-hr composited sample
	<17.5	mg/L	Grab sample maximum
Sodium adsorption ratio	<10		[Na+]/sqrt([Ca+2] + [Mg+2])/2) all in meq/L
un-ionized ammonia nitrogen as N	<0.02	mg/L	30-day average
	<1.75 times the applicable criterion in Appendix A	mg/L	daily maximum
Nitrates as N	<50	mg/L	30-day average
	<88	mg/L	daily maximum
Undisassociated hydrogen sulfide	<0.002	mg/L	
BOD5	<10	mg/L	24-hr composited sample
	<17.5	mg/L	Grab sample maximum
	<1,000	/100mL	geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period, and they may not exceed this value in more than 20% of the samples examined in this same 30-day period
Fecal Coliform (May 1-Sept 30)	<2,000	/100mL	in any one sample
TPH	<10	mg/L	See section 74:51:01:10--Cannot impart a visible film or sheen on the surface of the water or adjacent shoreline
Oil and Grease	<10	mg/L	See section 74:51:01:10--Cannot impart a visible film or sheen on the surface of the water or adjacent shoreline

Dissolved Concentrations Parameter	Acute	Chronic	
Arsenic (ug/L)	360	190	
Cadmium (ug/L)	17 [1]	3	[8]
Chromium (III)	1708 [2]	554	[9]
Chromium (VI)	15	10	
Copper	63 [3]	37	[10]
Cyanide (weak acid dissociable) (ug/L)	22	5.2	
Lead	281 [4]	10.9	[11]
Mercury	2.1	0.012	based on dissolved conc (for acute) and tot-rec for chronic
Nickel	4569 [5]	508	[12]
Selenium	20	5	
Silver	37.4 [6]		
Zinc	370 [7]	338	[13]

Hardness (in mg/L CaCO3)
use 25 mg/L as a minimum
use 400 mg/L as a maximum

Concentration is a function of hardness, according to the equations:

Acute:		Chronic:
[1](1.136672-(LN(Hardness)*0.041838))*EXP(1.128*(LN (Hardness))-3.828)	[8]	(1.101672-LN(Hardness)*0.041838))*EXP(0.7852* (Hardness))-3.49)
[2]0.316*EXP(0.819*(LN(Hardness))+3.688)	[9]	0.86*EXP(0.819*(Hardness))+1.561)
[3]0.96*EXP(0.9422*(LN(Hardness))-1.464)	[10]	0.96*EXP(0.8545*(LN(Hardness))-1.465)
[4](1.46203-(LN(Hardness)*0.145712))*EXP(1.273*(LN (Hardness))-1.46)	[11]	(1.46203-(LN(Hardness)*0.145712))*EXP(1.273*(LN (Hardness))-4.705)
[5]0.997*EXP(0.846*(LN(Hardness))+3.3612)	[12]	0.997*EXP(0.846*(LN(Hardness))+1.1645)
[6]0.85*EXP(1.72*LN(Hardness)-6.52)	[13]	0.986*EXP(0.8473*(LN(Hardness))+0.7614)
[7]0.978*EXP(0.8473*(LN(Hardness))+0.8604)		

Appendix D

Acid-Base Accounting Results for Multicell Treatability Study

Table 3-2 Acid-Base Accounting Results for Multicell Treatability Study

Vendor Name	Cell	Sample ID	Sample Date	Paste pH (su)	Acid Potential (T CaCO3/ 1000 T)	Neutralization Potential (T CaCO3 /1000 T)	Acid/Base Potential (T CaCO3/ 1000 T)	NP:AP	Sulfur, Hot Water Extractable (%)	Sulfur, HCl Extractable (%)	Sulfur, HNO3 Extractable (%)	Sulfur, Residual (%)	Sulfur, Total (%)
Control	2	00GE-TW0202-N-1026	10/26/00	2.4	47	1 U	-47	0.02	0.68	0.22	1.11	0.16	2.17
		00GE-TW0204-N-1028	10/28/00	2.5	70	1 U	-70	0.01	0.61	0.20	1.89	0.15	2.85
		00GE-TW0206-N-1029	10/29/00	2.6	55	1 U	-55	0.02	0.58	0.19	1.38	0.20	2.35
		00GE-TW0208-N-1031	10/31/00	2.4	41	1 U	-41	0.02	0.68	0.14	1.00	0.17	1.99
		00GE-TW0208-D-1031	10/31/00	2.3	59	1 U	-59	0.02	0.72	0.12	1.59	0.17	2.60
	6	00GE-TW0602-N-1025	10/25/00	4.3	24	3	-22	0.13	0.27	0.07	0.53	0.18	1.05
		00GE-TW0604-N-1026	10/26/00	2.5	34	1 U	-34	0.03	0.64	0.10	0.87	0.12	1.73
		00GE-TW0606-N-1028	10/28/00	3.7	38	1 U	-38	0.03	0.54	0.05 U	1.09	0.14	1.77
		00GE-TW0608-N-1030	10/30/00	2.4	49	1 U	-49	0.02	0.64	0.15	1.19	0.24	2.22
	10	00GE-TW1002-N-1026	10/26/00	2.3	71	1 U	-71	0.01	0.64	0.21	1.74	0.31	2.90
		00GE-TW1002-D-1026	10/26/00	2.4	87	1 U	-87	0.01	0.56	0.39	2.09	0.30	3.34
		00GE-TW1004-N-1027	10/27/00	3.7	32	1 U	-32	0.03	0.42	0.08	0.81	0.12	1.43
		00GE-TW1006-N-1029	10/29/00	2.6	52	1 U	-52	0.02	0.60	0.18	1.28	0.21	2.27
		00GE-TW1008-N-1031	10/31/00	2.4	62	1 U	-62	0.02	0.49	0.29	1.48	0.20	2.46
PR	4	00GE-TW0402-N-1026	10/26/00	2.1	67	1 U	-67	0.01	0.41	0.33	1.60	0.24	2.56
		00GE-TW0404-N-1026	10/26/00	2.1	70	1 U	-70	0.01	0.61	0.15	1.80	0.29	2.85
	7	00GE-TW0702-N-1026	10/26/00	2.2	59	1 U	-59	0.02	0.76	0.11	1.45	0.34	2.66
		00GE-TW0704-N-1028	10/28/00	2.6	130	1 U	-130	0.01	0.83	0.15	3.57	0.52	5.07
		00GE-TW0704-D-1028	10/28/00	2.8	42	1 U	-42	0.02	0.57	0.14	0.93	0.27	1.91
		00GE-TW0706-N-1029	10/29/00	2.4	56	1 U	-56	0.02	0.75	0.15	1.44	0.20	2.54
		00GE-TW0708-N-1104	11/4/00	3.2	25	1 U	-25	0.04	0.54	0.06	0.58	0.15	1.33
	12	00GE-TW1202-N-1026	10/26/00	2.5	85	1 U	-85	0.01	0.43	0.19	2.24	0.28	3.14
		00GE-TW1202-D-1026	10/26/00	2.4	69	1 U	-69	0.01	0.60	0.18	1.75	0.29	2.82
		00GE-TW1204-N-1027	10/27/00	3.1	30	1 U	-30	0.03	0.49	0.06	0.66	0.24	1.45
		00GE-TW1206-N-1029	10/29/00	3.4	33	1 U	-33	0.03	0.43	0.12	0.75	0.17	1.47
		00GE-TW1208-N-1031	10/31/00	2.6	41	1 U	-41	0.02	0.66	0.12	1.02	0.18	1.98

T = tons U = result below reporting limit shown

Table 3-2 Acid-Base Accounting Results for Multicell Treatability Study Page 2 of 2

Vendor Name	Cell	Sample ID	Sample Date	Paste pH (su)	Acid Potential (T CaCO3/ 1000 T)	Neutralization Potential (T CaCO3/ 1000 T)	Acid/Base Potential (T CaCO3/ 1000 T)	NP:AP NA	Sulfur, Hot Water Extractable (%)	Sulfur, HCl Extractable (%)	Sulfur, HNO3 Extractable (%)	Sulfur, Residual (%)	Sulfur, Total (%)
KEECO	1	00GE-TW0102-N-1026	10/26/00	2.5	34	1 U	-34	0.03	0.68	0.10	0.81	0.17	1.76
		00GE-TW0104-N-1028	10/28/00	2.6	62	1 U	-62	0.02	0.62	0.24	1.54	0.20	2.60
		00GE-TW0106-N-1029	10/29/00	3.2	24	1 U	-24	0.04	0.49	0.06	0.57	0.13	1.25
		00GE-TW0108-N-1031	10/31/00	2.4	36	1 U	-36	0.03	0.72	0.14	0.83	0.19	1.88
	9	00GE-TW0902-N-1026	10/26/00	2.7	39	1 U	-39	0.03	0.56	0.11	0.96	0.19	1.82
		00GE-TW0904-N-0101	1/1/00	2.6	38	1 U	-38	0.03	0.60	0.11	0.95	0.14	1.80
		00GE-TW0906-N-1029	10/29/00	3.1	29	1 U	-29	0.03	0.55	0.10	0.70	0.13	1.48
		00GE-TW0908-N-1031	10/31/00	2.6	36	1 U	-36	0.03	0.62	0.08	0.93	0.14	1.77
UNR	3	00GE-TW0302-N-1025	10/25/00	2.5	33	1 U	-33	0.03	0.43	0.13	0.79	0.14	1.49
		00GE-TW0306-N-1029	10/29/00	2.4	44	1 U	-44	0.02	0.70	0.10	1.20	0.12	2.12
		00GE-TW0308-N-1031	10/31/00	2.3	57	1 U	-57	0.02	0.61	0.24	1.40	0.17	2.42
	8	00GE-TW0802-N-1026	10/26/00	2.2	80	1 U	-80	0.01	0.67	0.18	2.08	0.30	3.23
		00GE-TW0804-N-1027	10/27/00	2.8	38	1 U	-38	0.03	0.40	0.18	0.89	0.13	1.60
		00GE-TW0806-N-1029	10/29/00	3.4	31	1 U	-31	0.03	0.58	0.06	0.73	0.20	1.57
		00GE-TW0808-N-1030	10/30/00	2.3	49	1 U	-49	0.02	0.53	0.19	1.24	0.15	2.11
MT[2]	5	00GE-TW0502-N-1025	10/25/00	5.3	30	9	-21	0.30	0.36	0.06	0.76	0.14	1.32
		00GE-TW0504-N-1027	10/27/00	2.4	51	1 U	-51	0.02	0.71	0.19	1.25	0.19	2.34
		00GE-TW0504-D-1027	10/27/00	2.3	64	1 U	-64	0.02	0.60	0.13	1.65	0.26	2.64
		00GE-TW0506-N-1029	10/29/00	2.4	49	1 U	-49	0.02	0.64	0.13	1.32	0.13	2.22
		00GE-TW0508-N-1031	10/31/00	2.5	41	1 U	-41	0.02	0.72	0.07	1.06	0.17	2.02
	11	00GE-TW1102-N-1026	10/26/00	3.8	37	12	-25	0.32	0.41	0.14	0.90	0.15	1.60
		00GE-TW1104-N-1027	10/27/00	3	30	1 U	-30	0.03	0.44	0.12	0.69	0.14	1.39
		00GE-TW1106-N-1029	10/29/00	3.2	30	2	-28	0.07	0.42	0.10	0.67	0.20	1.39
		00GE-TW1108-N-1030	10/30/00	3.1	26	1 U	-26	0.04	0.58	0.12	0.57		1.41