FINAL – Investigation Report

Report

Easy Junior Mine Site

White Pine County, Nevada

December 2003

Prepared for:

Sacramento District
Army Corps of Engineers
Restoration of Abandoned Mine Sites (RAMS)
Contract No. DACW05-00-D-006
Task Order No. 005

Prepared by:

CDM Federal Programs
Sacramento, CA

CDM Constructors Inc.
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Executive Summary

Site Location, Description and History

The Easy Junior Mine site (Site) is located on public lands administered by the Bureau of Land Management Field Office in Ely, Nevada. The remote site is located in White Pine County, Nevada, approximately 50 miles west/southwest of Ely, in the foothills of the Pancake Range. Average elevation of the Site is 6,500 feet above sea level and annual precipitation is just over 9 inches. No perennial surface waters exist on or near the project site and the site is outside of the 100-year flood plain. Groundwater below the Site is deep, approximately 1,300 feet below ground surface.

Permitted facilities included an open pit, one heap leach pad of approximately 25 acres, a barren solution pond, a settling pond, an overflow (storm) pond, a pregnant solution sump, and carbon adsorption columns. From 1989 to 1994, the operator, Alta Gold, intermittently mined a single open pit with waste being used for haul road construction or hauled to the waste dump. Ore was transported to the leach pad area and either truck-dumped as run-of-mine ore or crushed and conveyed to the pad. Approximately 64,000 ounces of gold were recovered during the 6-year mine life utilizing conventional cyanide heap leaching, carbon adsorption columns and offsite processing of the loaded carbon.

Cyanide addition to the heap ceased in October 1996 and residual leaching and rinsing continued until June 1997. From April to September 1998, Alta Gold land applied residual rinse-down solution to an area immediately south of the heap. During this period, Alta Gold also disconnected the process ponds from the heap and commissioned a drainfield to infiltrate long-term residual leach pad effluent. There has been no activity at the Site since late 1998.

Purpose of Report

The Easy Junior site investigation and characterization work described in this document was completed in support of the U.S. Army Corps of Engineers Restoration of Abandoned Mine Sites program. Specific objectives of this report are to:

Investigate and Characterize the Site

- Evaluate and recommend treatment for high-sulfide “hot spots” on the waste dump.
- Determine the water quality of the leach pad effluent.
- Evaluate the existing heap effluent drainfield.
- Characterize the top layer of the leach pad spent ore and evaluate soil cap options, including not capping the spent ore.

- Evaluate the soil stockpile adjacent to the leach pad for suitability as a soil cap for the spent ore.
- Identify additional potential cover soil borrow sources near the leach pad.
- Characterize sludge material in the process ponds.
- Identify potentially hazardous materials remaining on the Site.

Prepare a Reclamation Plan Proposal for the Site

- Develop a reclamation proposal for the leach pad.
- Provide a template for updating the Final Permanent Closure Plan.
- Provide a prioritized cost estimate to complete reclamation of the entire Site.
- Provide basic information to be utilized in development of reclamation contracting documents.

A summary of the key findings and recommendations presented in this report are discussed below.

Recommendations for Treatment of High-Sulfide "Hot Spots" on the Waste Dump

In 1994 and 1995, Alta Gold regraded most of the waste dump slopes and revegetated approximately 50% of the waste dump area. Where cover soil was applied, the revegetation has been successful. However, small zones of sulfidic waste have developed "hot spots" where iron oxide staining is evident and revegetation is not successful. The staining is localized in small areas and there is no evidence of acid rock drainage at the waste rock dump toe.

The hot spots can typically be identified by red iron oxide staining. Soil sampling of stained areas yielded low soil pH from 2.0 to 2.5, indicating acidic conditions. In areas of the waste rock dump where no staining was observed, the soil pH from two samples was 7.4 and 7.6, indicating a neutral soil condition.

Recommended hot spot treatment is to cover the hot spot with a 12 inches of cover soil and reseed.

Leach Pad Effluent Water Quality

A sample of the leach pad effluent exceeded federal drinking water standards or secondary maximum contaminant levels for nine constituents; aluminum, antimony, arsenic, mercury, nitrate, selenium, sulfate, thallium, and total dissolved solids. Currently, the leach pad effluent flows to a leach field for subsurface infiltration. The groundwater elevation is approximately 1,300 feet below ground surface and there

are no drinking water supply wells in the area, so the potential to impact groundwater is minimal.

Existing Heap Effluent Drainfield Evaluation

The existing heap effluent drainfield manages the low effluent flows (0.4 gallons per minute on November 22, 2002) from the heap. The distribution box has settled since installation in 1998, and the flow is being channeled to the southern infiltration trenches. Leveling of the distribution box will correct this problem and provide equal flows to the four infiltration trenches.

Leach Pad Spent Ore and Cover Soil Cap Evaluation

A composite sample of the top layer of the spent ore was collected and analyzed. The lack of fine material in the spent ore material minimizes the possibility of revegetation. Therefore, a cover soil is necessary for successful revegetation. Soil samples were collected from the onsite soil stockpile adjacent to the leach pad and from four potential soil borrow areas adjacent to the Site to evaluate their suitability for use a cover soil cap to minimize infiltration of meteoric waters into the reclaimed heap leach pad. HELP modeling indicates that a 12 inch layer of material from the adjacent onsite soil stockpile would provide a 98% cover system efficiency in limiting percolation from the cover soil cap into the regraded leach pad material.

Process Pond Sludge

TCLP analyses of sludge samples from the settling and barren process ponds demonstrate the sludges are relatively benign and can be characterized as non-hazardous waste. This will enable onsite disposal of all pond sludges and liners by in-place burial.

Potentially Hazardous Materials Remaining on the Site

Small quantities of potentially hazardous wastes were cataloged during the site visit including fluorescent light bulbs, batteries, used motor oil, greases, paints and other miscellaneous items.

Reclamation Proposal for the Leach Pad

A reclamation plan for the Easy Junior leach was developed and includes the following basic steps.

- Gather remaining leaching pipe and debris and bury in the regraded heap.
- Install permanent drain protection for the two effluent off-flow points.
- Regrade the heap surfaces to mimic surrounding topography with maximum slopes of 3h:1v (horizontal to vertical).
- Utilize 40,000 cubic yards of the onsite soil cover stockpile material to build a 12-inch thick soil cap for the regraded spent ore.

- Apply an approved seed mix by broadcast methods and incorporate by on-contour harrowing.
- Level the distribution box for the effluent drainfield.

The reclamation plan proposal is presented in Appendix F.

Prioritized Cost Estimate to Complete Reclamation of the Entire Site

A prioritized reclamation cost estimate was completed in August 2003 as a separate document titled "Final Total Mine Reclamation Cost Estimate Report, Easy Junior Mine Site."

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Acroynms and Abbreviations

ARD	Acid rock drainage
BLM	Bureau of Land Management
c.y.	cubic yards
Corps	US Army Corps of Engineers
EPA	US Environmental Protection Agency
FSP	Field sampling plan
HELP	Hydrologic Evaluation of Landfill Performance
LAI	Leaf area index
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicates
MS	Matrix spike
MSD	Matrix spike duplicates
NAC	Nevada Annotated Code
PARCC	Precision, accuracy, representativeness, completeness and comparability
RAMS	Restoration of Abandoned Mine Site
RPD	Relative percent difference
SAR	Sodium Adsorption Ratio
SDG	Sample delivery group
Site	Easy Junior Mine Site
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
WES	US Army Engineer Waterways Experiment Station
WRDA	Water Resources Development Act

Section 1
Introduction

The investigation work described in this document was completed to characterize the Site and develop a reclamation proposal for the leach pad at the Easy Junior Mine Site under U.S. Army Corps of Engineers (Corps) Contract DACW05-00-D-006, delivery order number 005. This work was performed under the authority of Public Law 106-53, Section 560 of the Water Resources Development Act (WRDA) of 1999. Under WRDA, Congress has provided direction to the Corps to establish the Restoration of Abandoned Mine Sites (RAMS) program. RAMS allows the Corps to provide assistance to other federal agencies and the states in addressing abandoned mine lands issues.

1.1 Site Location and Description

The Easy Junior Mine site ("Site") is located on public lands administered by the U.S. Department of Interior, Bureau of Land Management (BLM) Ely Field Office, Ely, Nevada. The site is located approximately 45 miles west of Ely, Nevada and 15 miles south of U.S. Highway 50 in the foothills of what is considered to be a portion of the Pancake Range. The site is located in Township 15 North, Range 56 East, Sections 4, 5, 8, and 9, White Pine County, Nevada. The site is located in an area with a climate typical of the eastern portion of Nevada. Average elevation of the site is 6,500 feet above sea level. Mean annual precipitation at the site is slightly over 9 inches, while annual free water surface evaporation is 48 inches (Alta Gold Company, 1989). Figure 1-1 shows the Site location.

No perennial surface waters exist on or near the project site. The nearest surface water is Bull Creek, 8.8 miles southeast of the site and on the opposite side of the Pancake Range. The site is outside of the 100-year flood plain. The mine's water supply well was drilled approximately 5 miles southeast of the mine area. Water in this aquifer is of potable quality. Water beneath the mine site occurs at approximately 1,300 feet below ground surface (bgs)(NDEP, 1995a).

Permitted site facilities included an open pit, one heap leach pad of approximately 25 acres, a barren solution pond, a settling pond, an overflow (storm) pond, a pregnant solution sump, and carbon adsorption columns. A single pit was mined with waste being used for haul road construction or hauled to the waste dump. Ore was transported to the leach pad area and either truck-dumped as run-of-mine ore or crushed and conveyed to the pad. Figure 1-2 depicts Easy Junior's general layout of facilities.

1.2 Project History

Mining at Easy Junior began late in 1989 and continued through 1990 with Alta Gold as the operator of the project. The project was jointly owned by Alta Gold and Echo Bay at that time. The mine was inactive during 1991 and 1992; during which time Alta Gold acquired Echo Bay's interest in the property. Mining operations resumed in 1993 and continued through 1994.

Gold was extracted from ore at the Easy Junior Mine by conventional cyanide leach techniques. Leachate gravity flowed to the pregnant solution sump and was pumped through carbon adsorption columns. Barren solution was pumped back to the pad for application to the ore. Loaded carbon was transported to Alta Gold's Robinson Project for gold recovery. Leaching of ore continued through late 1996.Approximately 64,000 ounces of gold were recovered during the mine life (Wilson, 2001).

During 1994 and 1995, as mining was being completed and stockpiled ore was being loaded onto the heap, Alta Gold performed some initial reclamation work at the Site. This included building an isolation berm for the open pit, regrading all waste rock dump slopes to 3h:1v (the slope rises 1 foot vertically every 3 horizontal feet) and revegetating approximately 50% of waste dump area by applying cover soil and reseeding.

Cyanide addition to the heap ceased in October 1996 and residual leaching and rinsing continued until June 1997. During this period most of the major equipment and building structures were removed (although all foundations remain).

From April to September 1998, Alta Gold land applied approximately 5.7 million gallons of residual rinse-down solution to an area immediately south of the heap. During this period, Alta also installed a drainfield to infiltrate long-term residual pad effluent. Starting in September 1998, the heap effluent was routed to the infiltration drainfield and the heap was no longer hydraulically connected to the process ponds.

1.3 Purpose of Investigation Report

The Final Work Plan for Easy Junior required CDM to investigate and characterize the Site, develop a reclamation proposal for the leach pad, and to prepare a government-level cost estimate for total restoration of the Site.

1.3.1 Site Characterization

1.3.1.1 Water Quality and Heap Leach Pad Characterization

The water quality and leach pad characterization activities were performed to:

- determine the water quality of the effluent from the leach pad, and

- characterize the top layer of the leach pad spent ore to determine potential impacts to flora and fauna if a minimum or no soil cover option was selected to close the leach pad facility.

1.3.1.2 Soils Identification Evaluation

The purpose of the soils identification evaluation was to determine the volume and physical and chemical properties of the onsite soil stockpile adjacent to the leach pad to demonstrate the utility of using the stockpile soil as final cover. Additionally, soil maps provided by the BLM were used to determine areas where other cover soil sources may be available adjacent to the Site. Soil sample were analyzed for total organic carbon (TOC), coarse fragment analysis (>2 mm), standard grain size distribution (including hydrometer [textural] analysis for fines passing through a No. 200 sieve), phosphorous, potassium, soil pH, sodium adsorption ratio (SAR), electrical conductivity, water holding capacity, and total metals (antimony, arsenic, cadmium, copper, lead, manganese, mercury, nickel, selenium, silver, and zinc) content. The estimated volume of the onsite soil stockpile and potential soil borrow areas were determined to support total mine reclamation requirements.

1.3.1.3 Assessment of Heap Effluent Drainfield

The effluent from the leach pad is currently draining through four lines to a leach field. The structure distributing the effluent is currently not functioning as designed. The purpose of the assessment of the heap effluent drainfield was to evaluate the current design of the effluent drainfield distribution system and make recommendations for design modifications to improve proper discharge of the water.

1.3.2 Heap Leach Pad Reclamation Proposal

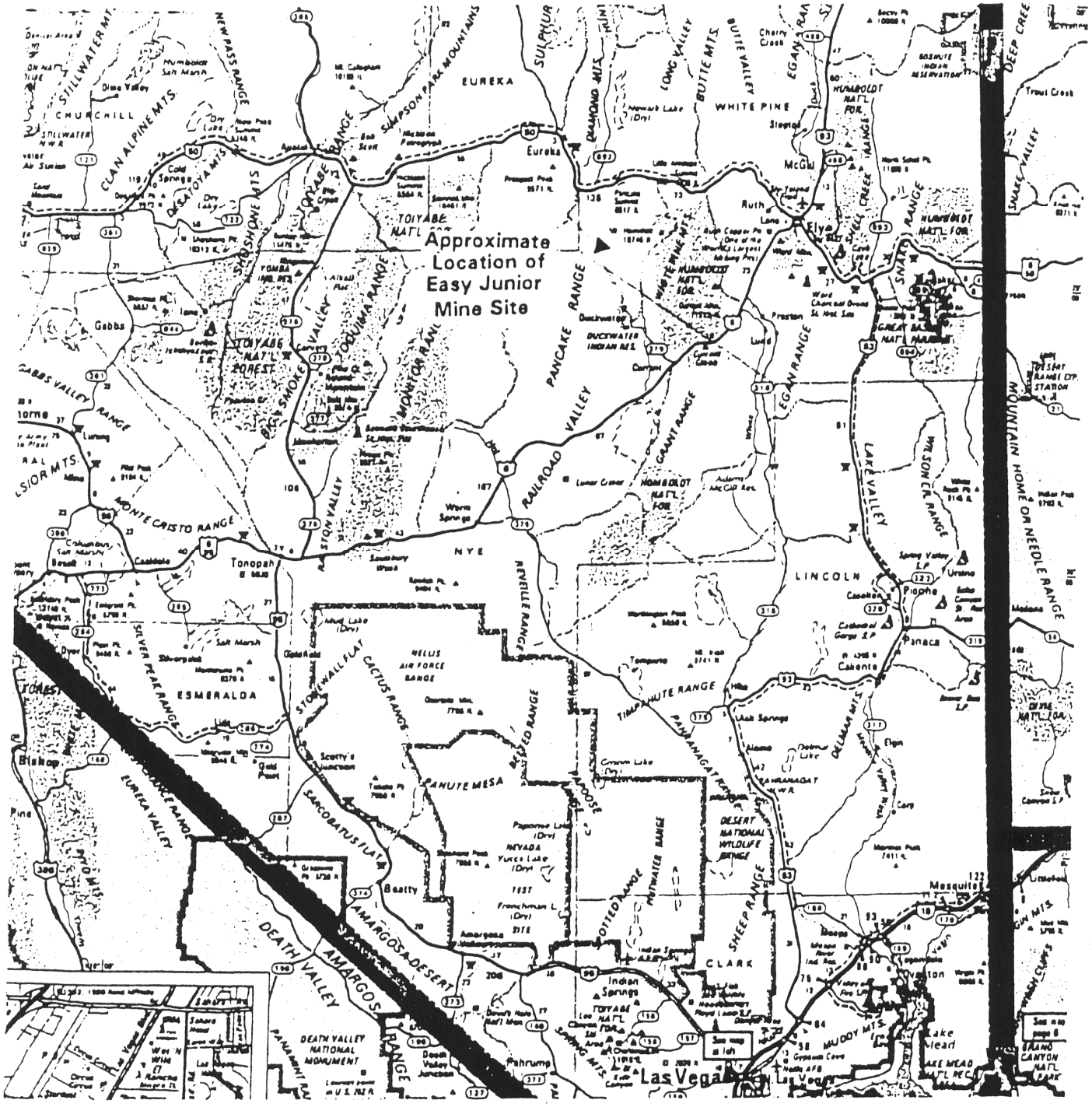
The purpose of the heap leach pad reclamation proposal was to develop a recommended regrading plan and engineered soil cover using HELP modeling. Data was also gathered as part of the Site investigation to support pushing spent ore off of leach pad containment for final reclamation. The reclamation proposal was to be completed in adequate detail for development of a construction cost estimate and associated bid documents.

1.3.3 Total Mine Reclamation Cost Estimate

The purpose of the total mine reclamation cost estimate is to provide the total estimated cost required to reclaim all facilities at the Site. The total mine reclamation cost estimate was completed on a facility component basis to provide guidance to BLM for determining restoration priorities based on the amount of existing bond monies for the mine site. The Final Total Mine Reclamation Cost Estimate Report has been completed as stand alone document and is not included as part of the Final Investigation Report.

1.4 Report Organization

This report includes the results of the field investigation and site characterization and a proposal for the heap leach pad reclamation. Section 2 provides a description of the methodology and results of the investigation and characterization activities, including: water quality and heap leach pad characterization, evaluation of the onsite soil stockpile for use as final cover, assessment of the heap leach pad effluent drainfield, assessment of the four lined ponds, characterization of the waste rock dump, and visual inspection for hazardous waste materials. Section 3 provides a description of a proposal for the reclamation of the heap leach pad. The proposed heap leach pad reclamation plan is included as Appendix F.



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APPROXIMATE LOCATION OF
EASY JUNIOR MINE SITE
WHITE PINE COUNTY, NEVADA

Figure 1-1

Reclaimed Area
Waste Rock Dump

WASTE DUMP

PIT

Haul Road Area

Onsite Cover Soil Stockpile

Fresh Water Pond

Crusher Area

PAD

LEACH

Plant, Truckshop & Office Area

OFFICE

LAB

SHOP

Infiltration Field

PROCESS BUILDING

1998 Land Application Area

Settling POND

Storm POND

Barren

FENCE

KEY:

(1) —— = LEACH PAD TRENCH

Township 15 North, Range 56 East, Sections 4, 5, 8, and 9

General Site Map

August 2003

Easy Junior Project
White Pine County, Nevada

Scale: 1 in = 500 ft

CDM

Figure 1-2

Section 2
Field Investigation and Characterization

The Easy Junior Mine Site field investigation and characterization was completed to support Work Plan requirements for the Site. The field investigation included evaluation of the heap leach pad, process ponds, waste rock dump, and other mine facilities. Additionally, an evaluation of the onsite soil stockpile and potential soil borrow areas adjacent to the Site was completed for soil quality and volume. A description of the specific investigation and characterization requirements of the Work Plan are discussed in Section 2.1.

2.1 Description of Field Investigation and Characterization Activities

The Site field investigation was completed between November 20 – 22, 2002. The field investigation began with a Site tour with personnel from the BLM – Ely Field Office to familiarize CDM with the Site and to finalize field investigation objectives. The field investigation included the following tasks:

- Visual observation of the leach pad facility to evaluate regrading requirements and collection of a composite sample of the top 24 inches of spent ore for analysis. The analytical results from the composite soil sample were used for input into the HELP model for evaluating a cover soil cap to minimize infiltration of meteoric water.

- Survey of the onsite soil stockpile using a handheld GPS unit and collection of a composite soil sample for analysis. The survey was used to estimate the volume of the onsite soil stockpile. The analytical results from the composite soil sample were used for input into the HELP model for evaluating a cover soil cap to minimize infiltration of meteoric water. Soil samples were collected from four potential soil borrow areas adjacent to the Site, using a regional soil map provided by the BLM as a guide. Soil samples were submitted for analysis to determine suitability as a cover soil for reclamation. The analytical results were used to select the two most suitable potential soil borrow areas for use as cover soil. Additional analytical work was performed on the two selected borrow areas and those results were used for input into the HELP model for evaluating each borrow area as a soil cover. The volume of one potential soil borrow area was also determined as the estimated quantity of the onsite soil stockpile was not adequate for complete reclamation of the total Site.

- Collection of a heap effluent sample from the effluent drainfield distribution box for water quality analysis. Additionally, the effluent drainfield distribution box was visually assessed for function.

- Visual evaluation of the waste rock dump and collection of soil samples from "hot spots" on the waste rock dump. The soil samples were analyzed for pH to determine if acidic conditions were present. Additionally, the visual evaluation of the waste rock dump included mapping the area that had received cover soil and was revegetated, as well as inspecting the toe of the waste rock dump for signs of acid rock drainage.

- Collection of sludge samples from the settling pond and barren pond for analysis to determine characteristics of the process pond sludges and suitability for onsite disposal.

- Visual evaluation of the process area, leach pad, and crusher area for potential hazardous materials. Caterpillar batteries, unlabeled containers with what appeared to be used motor oil, grease, gear oil, and enamel paint were identified. The estimated quantities of each of these items, and associated characterization and disposal cost, is presented in the Total Mine Reclamation Cost Estimate Report.

2.2 Water Quality and Heap Material Investigation

One solution sample of the heap effluent and one composite sample of spent ore was taken during the November 2002 field investigation to characterize the current status of the heap leach pad system. The analytical results from these samples are presented below.

2.2.1 Heap Effluent Analysis

One heap effluent solution sample was taken on November 22, 2002 from the distribution box of the heap effluent drainfield system. The sample (EJ LP EFF) was analyzed for NDEP Profile II constituents. The results of the analysis are summarized in Table 2-1, NDEP Profile II Results – Heap Effluent. Laboratory Analysis Reports and Chain of Custody forms are located in Appendix D.

As shown in Table 2-1, nine of the constituents from the heap effluent sample exceed USEPA drinking water standards or secondary maximum contaminant levels (MCLs): aluminum, antimony, arsenic, mercury, nitrate, selenium, sulfate, thallium, and total dissolved solids (TDS). The effluent from the leach pad is currently draining to a subsurface drainfield. Although the effluent quality does not meet USEPA drinking water standards, the groundwater level is approximately 1,300 feet bgs and leach pad effluent does not impact surface water. Additionally, there are no drinking water supply wells in the area that would be impacted by the leach pad effluent. Therefore, as allowed by Nevada Annotated Code (NAC) 445A.424, Limitation of Degradation of Waters; Exemptions, discharge of leach pad effluent exceeding standards for drinking water to groundwater is allowable.

Appendix B presents eight years of NDEP Profile II results for the heap leach pad pregnant solution/effluent. Also found in Appendix B are the graphical trends of this

data for aluminum, antimony, arsenic, mercury, nitrate, pH, selenium, sulfate, thallium, TDS, and WAD cyanide.

2.2.2 Spent Ore Analysis

One composite spent ore sample was created from sampling four different locations of the top 24 inches of the heap. This sample (EJ LP 1) was analyzed for several parameters which are summarized in Table 2-2, Summary of Analytical Results – Spent Ore and Soil Samples. Laboratory Analysis Reports and Chain of Custody forms are located in Appendix D.

In Table 2-2, the sample results for EJ LP 1 are compared to the Human Risk Management Criteria for soils from the Risk Management Criteria for Metals at BLM Mining Sites (December 1996) for the potential scenarios of a camper, ATV driver, worker, and surveyor. The residential scenario is not used as a comparison due to the remote location of the site and the improbability of this exposure pathway. The EJ LP 1 arsenic value (98 mg/kg) exceeds the human health management criteria for the camper (20 mg/kg) and worker (12 mg/kg) scenarios. However, the site is located in a mineralized area and the onsite soil stockpile (EJ Soil SP #1) material, which is considered background and would be used for the cover soil cap material, contains arsenic at a concentration of 32 mg/kg, which also exceeds the criteria for the camper and worker. With regard to ecological risk, according to the Risk Management Criteria for Metals at BLM Mining Sites, the majority of intake of arsenic derives from soil ingestion rather than the ingestion of plants exposed to arsenic. The spent ore on the heap leach pad will be reclaimed by covering with a minimum 12-inches of cover soil material thus eliminating the exposure pathways (ingestion and inhalation) for the camper and worker scenarios as well as the ecological risk associated with the ingestion of soil.

Results of the spent ore analysis are discussed further in Section 2.3.2, Help Model Evaluation.

2.3 Soils Identification and Evaluation

This section discusses the location, characterization, and quantity of cover soil sources for the Site, and the HELP model results that evaluated use of the potential soil sources as a cover soil cap.

2.3.1 Soil Borrow Locations and Characteristics

One composite sample consisting of four discrete samples from the onsite soil stockpile adjacent to the leach pad and discrete samples from four potential soil borrow areas adjacent to the Site were collected. Locations of the sample sites are shown on Figure 2-1. The purpose of collecting the soil samples was to evaluate their suitability for use a cover soil cap to minimize infiltration of meteoric waters into the reclaimed heap leach pad. Soil samples from the four potential soil borrow areas, including two samples (2a and 2b) from Borrow Area 2, were initially evaluated for conductivity, soil pH, and particle size distribution. The results of these analyses

were used to rank each potential soil borrow area for use as cover soil cap for the reclaimed heap leach pad. The two best borrow sources, based on their higher clay and silt content, were Soil Borrow Area #1 and Soil Borrow Area #2b. Samples from these areas were then analyzed for water holding capacity and total organic carbon. Table 2-2 shows the analytical results for the onsite stockpile and the four potential borrow areas.

2.3.2 HELP Model Evaluation

2.3.2.1 Introduction

The HELP Model was used to evaluate soils for closure of the leach pad, which will include regrading of the heap and constructing a monocover soil cap over the heap leach pad.

Three soils, one onsite stockpile soil and two borrow area soils, were evaluated for use in the proposed cap. The purpose of the analysis is to evaluate each of these soils as a potential cap material to estimate the amount of water each allows to percolate through to the leach pad, assuming various depths and amounts of vegetation. The water budget analysis was performed using the Hydrologic Evaluation of Landfill Performance (HELP) Model (v. 3.07), a model that provides estimates of average monthly and annual precipitation, runoff, evapotranspiration, and percolation through liner systems over a five-year period.

The HELP Model is a quasi-two-dimensional water balance model applicable primarily to open, partially closed, and fully closed landfills. The required inputs to the program include weather, soil, and layout data. The HELP program was originally developed as a supporting tool for the Resource Conservation and Recovery Act (RCRA, 1976) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 1980). HELP Version 3.0, released in 1994, was developed by the U.S. Army Engineer Waterways Experiment Station (WES), Vicksburg, Mississippi for the U.S. Environmental Protection Agency (EPA).

2.3.2.2 Climatological Information

The HELP Model requires information on precipitation, temperature, solar radiation, and evapotranspiration to complete its analysis. The HELP Model code includes historical precipitation data, synthetic temperature and solar radiation data, and evapotranspiration information for select 'default' cities in the United States. The default city nearest the Site is Ely, Nevada. Thus, the climatological data used in the modeling effort was from the Ely, Nevada area. Values for the maximum leaf area index (LAI) and evaporative zone depth were selected on a case-by-case basis for each modeling scenario.

2.3.2.3 Soil Information

The HELP Model requires information on soil porosity, field capacity, wilting point, and saturated hydraulic conductivity to complete its analysis. The HELP Model

includes default soil textures based on various USCS classifications. For the leach pad and the three potential cap soils, the data available for use in modeling were water holding capacity and percent sand/silt/clay. Because sand and clay content are typically reasonable indicators of a soil's permeability, these values were used to approximate USCS classifications and match them with default HELP soil textures. Table 2-3 presents the Site soil data and the selected soil classifications.

Based on the available soils information, the onsite soil stockpile and Soil Borrow #1 appear to be of the same general soil type. Because additional information is not available to assist in further distinguishing these two soils, it was assumed that their respective hydraulic performances in the cap system would be very similar. Thus, only two soils were modeled for use as a cap: onsite soil stockpile/Soil Borrow #1 and Soil Borrow #2b.

2.3.2.4 Layout Information

Other information required by the HELP Model includes soil layer classification and NRCS Curve Numbers. The leach pad itself was assumed to be an 80-foot (960 inches) deep vertical percolation layer. The soil cap was assumed to be a vertical percolation layer with the depth depending on the analysis scenario. The NRCS Curve Number was also selected depending on the analysis scenario. The site was modeled as a 1-acre area, to provide unit values of percolation (inches per acre). The entire area was assumed to be capable of generating runoff.

2.3.2.5 Analysis Scenarios

The HELP Model was used to evaluate the leach pad with no soil cap (spent ore only), and with various levels of vegetation. The two potential cap soil sources were evaluated at depths of 6, 12, 18, and 24 inches, and with various levels of vegetation. This resulted in 27 different analysis scenarios.

For scenarios with no vegetation, the leaf area index (LAI) was assumed to be 0, the evaporative zone depth was assumed to be 18 inches, and the NRCS Curve Number was assumed to be 91 (Hydrologic Group D). For scenarios with poor vegetative cover, the LAI was assumed to be 0.8, the evaporative zone depth was assumed to be 30 inches, and the NRCS Curve Number was assumed to be 88 (Hydrologic Group D). For scenarios with fair vegetative cover, the LAI was assumed to be 1.2, the evaporative zone depth was assumed to be 36 inches, and the NRCS Curve Number was assumed to be 85 (Hydrologic Group D).

Table 2-4 summarizes the analysis scenarios that were modeled with HELP.

2.3.2.6 Analysis Results

Table 2-5 presents the modeling results for a 1-acre area of the soil cap. The model inputs and monthly totals are included in Appendix C.

The results for cap soils indicate that, depending on the amount of vegetative cover, approximately 1.8 to 3.5 percent of the precipitation is shed as runoff, while 84 to 95 percent is consumed through evapotranspiration. This is to be expected for a monocover-type cap in an arid environment. The leach pad itself does not allow a significant amount of precipitation to percolate completely through, regardless of the level of vegetation. The 80-foot thickness of the leach pad allows water to be held long enough to be consumed by evapotranspiration.

The best performing cap system allowed less than 2 percent of the precipitation to percolate through to the leach pad. The worst performing cap system allowed approximately 13 percent of the precipitation to percolate through to the leach pad.

Based on the modeling results, the onsite soil stockpile/Soil Borrow #1 provides the best performance when used in a cap system at a thickness of 12 inches with minimal vegetative cover. This cap system allows less than 2 percent of the precipitation to percolate through the cap. Both types of cap soil performed poorly when used in a 6-inch cap system regardless of the level of vegetation. The 6-inch cap thickness does not allow water to be stored long enough to be consumed by evapotranspiration. Thus, much of the water entering the cap system percolates completely through the soil layer before it has the opportunity to evapotranspirate.

For vegetated scenarios, the performances of the two types of cap soils appear to decrease as cap depths increase to 18 inches and above. This is likely due to the greater volume of water stored in the soil. Though the water holding time is greater in the deeper caps, less water is ultimately consumed through evapotranspiration, thus more water percolates through to the leach pad. With the 12-inch cap, more water is consumed by evapotranspiration, resulting in less percolation. In addition, at soil depths of 18 and 24 inches, greater levels of vegetation appear to increase the amount of percolation through the soil layer. This is likely due to less precipitation running off and more entering the soil layer.

As Table 2-5 shows, the results of using Soil Borrow #2b for 12, 18, and 24 inch soil cover depths indicate that percolation through soil was higher with “Fair” vegetative cover rather than the “None” vegetative cover. The reason for this is the characteristics of the soil types themselves.

- Onsite Soil Stockpile/Soil Borrow #1: This as "low sand content, high clay content" soil. These physical characteristics are reflected in the higher field capacity and wilting point values (as compared to Soil Borrow #2b soil). Empirical equations have been developed which show that field capacity and wilting point are proportional to clay content but inversely proportional to sand content. Therefore, this soil type tends to retain water (i.e., it does not drain quickly/easily).

- Soil Borrow #2b: This is a "high sand content, low clay content" soil. These physical characteristics are reflected in the lower field capacity and wilting point values (as compared to onsite soil stockpile/Soil Borrow #1 soils). Therefore, this soil type tends to drain quickly/easily.

For the model runs completed with onsite soil stockpile/Soil Borrow #1 (does not drain quickly/easily), the precipitation tends to reside in the soil allowing more time for evapotranspiration to work. This is the reason percolation is consistently lower for "Fair" vegetation when compared to "None" vegetation.

For the runs completed with Soil Borrow #2b (drains quickly/easily), the thicker caps (i.e. 12, 18, and 24 inch) drain the precipitation rapidly so that there is not much moisture storage for evapotranspiration to draw from. Consequently, evapotranspiration totals are lower as compared to those for onsite soil stockpile/Soil Borrow #1 soils of similar cap thicknesses. Also, for the Borrow #2b scenarios, the evapotranspiration totals are about the same for the "None" through "Fair" vegetation scenarios (approximately 8.00 inches). That is, evapotranspiration is not a significant factor. Runoff for the Soil Borrow #2b scenarios, therefore, tends to dominate in the water budget and heavily influences the percolation totals. Therefore, as the vegetation goes from "None" to "Fair", there is a big reduction in runoff, and since evapotranspiration is not changing much in these scenarios, the precipitation has to go somewhere which results in greater total percolation.

The 6-inch soil cap scenario for Soil Borrow #2b is somewhat of a separate case, and therefore does not lend itself to the above explanation, as the cap is so thin that the evapotranspiration volume is primarily from evaporation and not plant transpiration.

2.3.2.7 Conclusions

A 12-inch thick soil cap using the onsite soil stockpile or Soil Borrow #1 soils would provide the best performance. The efficiency of this cap system would be approximately 98 percent. Cover system efficiency is calculated as the difference between the average annual precipitation and average annual percolation, divided by the average annual precipitation. Expressed in volumetric terms, the average annual percolation through the cap system would be 589 cubic feet/acre for a total average annual percolation volume of 16,800 cubic feet (125,700 gallons) for a regraded heap leach pad area of 28.5 acres.

2.3.3 Recommended Cover Soil Cap

Based upon the HELP modeling results presented above, the recommended cap for the heap leach pad is an uncompacted soil layer of 12 inches comprised of material from the onsite soil stockpile. Approximately 40,000 cubic yards (c.y.) of material will be required for the heap's soil cap, which will also serve as growth medium for revegetation. The onsite cover soil stockpile is the closest borrow source that meets the cover soil cap requirements and provides an adequate quantity of soil to cap the regraded heap leach pad.

2.4 Assessment of Heap Effluent Drainfield

2.4.1 Description of Existing Heap Effluent Drainfield

In 1998, while rinse/drain-down solution was land applied, the heap effluent drainfield was installed for long-term infiltration of heap effluent. An asbuilt drawing of this system was not found for inclusion in this report, but the installed system is described below and Figure 2-2 depicts the conceptual design of the heap drainfield facility as submitted to NDEP-BMRR in January 1998.

The system is comprised of two 6-inch pipes which flow from the northwest and south west corners of the leach pad. The two 6-inch pipes apparently join together subsurface upstream of the distribution box and a single 6-inch pipe discharges to the distribution box as shown below.

Distribution Box for Heap Leach Infiltration Field (looking west)

From the distribution box, four 1.25-inch diameter pipes run to a leach field west of the distribution box. The leach field was constructed similar to a septic system with perforated pipes discharging effluent into gravel-filled trenches for infiltration into the native soil. Depth to ground water at this location is in excess of 1,300 ft.

The heap effluent flow was measured on November 22, 2003. It took 43 seconds to collect one liter of effluent. This flow is summarized in the following table.

Heap Effluent flow November 22, 2002

Metric Units	0.0233 liter/sec	83.9 liter/hr	2,010 liter/day
English Units	0.37 gal/min	22.2 gal/hr	532 gal/day

As shown in the photograph, the distribution box is not level. This channels most of the effluent to the southern-most infiltration trenches.

2.4.2 Recommendations for Existing Drainfield Distribution Box

The distribution box should be leveled to equalize flows to the four infiltration trenches. It is recommended that the existing distribution box be simply re-leveled. This can be accomplished by excavating and exposing the box and all inlet and outlet pipes to provide adequate work space. The distribution box can then be leveled using shims and a grout can be poured to fill the gap between the distribution box and the underlying soil. After the grout has set, the distribution box and pipes can be backfilled with compacted fill to hold the box in place.

2.5 Fresh Water and Process Ponds

The Site has four lined ponds as shown on Figure 1-2, General Site Map. The fresh water pond, located east of the crusher area, and process storm pond, located west of the leach pad, contain minor quantities of pond sludge. This sludge is considered benign as these ponds contained either fresh water or diluted process solutions for short durations.

Settling Process Pond

Barren Process Pond

Sludge from both the settling and barren pond were sampled and analyzed to characterize the sludge. Results of this evaluation are presented in the following section.

2.5.1 Pond Sludge Analytical Results

One sludge sample each was taken from both the settling and barren process ponds and submitted for a TCLP analysis. Table 2-6 shows the analytical results for the pond sludges.

As the TCLP analysis shows, the pond sludges are relatively benign and can be characterized as non-hazardous waste. Therefore, it is recommended that the pond sludges be left onsite and buried in-place.

2.5.2 Recommended Pond Closure Method

It is recommended that the pond sludges be dewatered (if necessary) and buried in-place utilizing the existing liner containment. After sludge dewatering, the liner should be cut and folded over the sludge to form a liner cover that envelopes the sludges and minimizes water infiltration. Next, uncompacted fill material would be dozer-pushed across the folded liner using an advancing 3-foot lift. The fill would then be blended to match surrounding terrain and finish graded such that the footprint of the liner envelope is higher than surrounding topography to minimize on-flow of meteoric waters. Finally, the pond area would be cover-soiled and revegetated. This closure method could be utilized for closure of all four ponds at the Site.

2.6 Waste Rock Dump

2.6.1 Current Status

Alta Gold performed initial reclamation work on approximately 50% of the waste dump area in 1994 and 1995. Almost all of the slopes were regraded from angle-of-repose to 3h:1v. The westerly facing regraded slopes and portions of the waste dump top were then revegetated by applying cover soil and seed. These treated areas display good revegetation success. However, adjacent areas where cover soil was not applied has had minimal volunteer revegetation, probably due to the small amount of fines contained in the waste rock. Figure 1-2 shows the waste dump configuration and an approximate outline of the revegetated area.

2.6.2 Analytical Results from Hot Spots

Some of the waste material mined from the Easy Junior pit contained sulfides. When this sulfide-bearing material is exposed to oxygen, it will oxidize and has the potential to produce acid rock drainage (ARD) if adequate moisture is available. The waste rock dump was evaluated for this possible environmental hazard.

Several zones of high sulfides have been observed on the waste rock dump surface. These zones, referred to as "hot spots" or "sulfide boils," are evidenced by dark-rusty-colored surface areas and are often times accompanied by a sulfur smell. No evidence of ARD at the toe of the waste rock dump was observed, however, the hot spots can produce gases during oxidation that are toxic to vegetation in the immediate areas of the hot spots.

To characterize the hot spots, a total of nine samples were taken from the dump surface and analyzed for paste pH. Table 2-7 summarizes the results of the analyses, as well as provides the handheld GPS coordinate for each hot spot. Note that a sample was not collected for the point identified as HS 6 as no discoloring was seen in the field, but large cracks approximately 8 inches wide and 5 to 10 feet long parallel to the slope were observed. Coordinates for HS 6 are provided for reference only.

The results of the soil pH analyses shows that the hot spots, observed by soil staining and lack of vegetation, have acidified the soil and the soil pH ranges from 1.97 to 2.50. Two samples were collected to evaluate background soil pH of the waste rock dump facility. Sample EJ WD Typical was collected from a point on the dump that had been cover soiled and revegetated and has a soil pH of 7.64. Sample EJ WD Barren was taken from a point on the dump that had not been cover soiled and did not have vegetation on it. The soil pH for this sample was 7.39. Soil sample HS 7 also did not display acidic soil conditions. This point was sampled as the area was damp and warm to the touch and there was a strong sulfur smell. However, moss was growing on this site and the soil pH is 7.31.

2.6.3 Recommended Hot Spot Treatment

As there is no evidence of ARD being generated by the sulfide material in the waste rock dump, the primary environmental concern is the hot spot's acidic off-gases that prevent plant growth.

The production of acidic off-gases may decrease over time as the sulfide mineral surfaces become passivated (coated by oxidation). The BLM and NDEP have also noted that the appearance of steam and fumaroles at the hot spots appears to have decreased over the years they have visited the site.

It is recommended that 8 inches of cover soil be placed on the remaining portions of the waste rock dump that are not reclaimed. Hot spot areas should be field flagged and treated with an additional 4 inches (12 inches total) of cover soil. Hot spots in the previously reclaimed area should be covered with 12 inches of cover soil and revegetated. Lime treatment on individual hot spots to neutralize potential acid production is not recommended as it is expensive and not effective for long term treatment compared to a soil cover cap.

2.7 Potential Hazardous Waste

The field investigation in November 2002 included a visual inspection of the mine facilities to evaluate the presence of potential hazardous waste material. The following areas contained potential hazardous wastes.

- Building Adjacent to Settling Pond: 1 box - fluorescent lights.
- Generator Building: 6 each - Caterpillar batteries; 1 - five gallon bucket and 1 - partial barrel filled with liquid that appears to be used motor oil; 1 – 30 gallon barrel labeled Chevron Black Pearl Grease EP NLG10.
- Metal Building Adjacent to Barren Pond: 1 quart – Valvoline 80w90 gear oil; 3 each – one gallon buckets of enamel paint, partially full; 15 each – electrical parts that appear to be capacitors.
- Mine Boneyard: Primarily contains pallets, plastic buckets, and irrigation supplies. 1 – five gallon bucket of unidentified liquid. The bucket did not have legible labeling and the bucket could not to be opened to evaluate contents.
- South of Crusher Area: 1 – five gallon bucket with remnants of black sludge. Contents of bucket appear to have been dumped as evidenced by dark soil staining adjacent to the bucket. No odor was detected emanating from the sludge.

The materials described above were not actively leaking and the containers with liquid appeared to be in reasonably good condition. It is recommended that these materials be identified and disposed properly off-site. A cost estimate to characterize and dispose of the potential hazardous waste material was included in the Easy Junior Total Mine Reclamation Cost Estimate Report.

2.8 Data Quality and Limitations

This section discusses the data quality and limitations for data collected November 2002, at the Easy Junior Reclamation Project as part Work Plan. The analytical data reported from the laboratory was evaluated in accordance with method guidelines and or laboratory guidelines.

2.8.1 Field Sampling

As outlined in the field sampling plan (FSP) in the Work Plan, the media sampled at the site in 2002:

- Waste water – Effluent
- Soil samples – Spent Ore, Waste Rock, and Soil
- Sludge samples – Pond sludge

For the 2002 sampling event, 20 samples were collected and assigned to seven different sample delivery groups (SDGs) from the subcontract analytical laboratory. These SDGs were evaluated to assess the precision, accuracy, representativeness, completeness, and comparability (PARCC) paramers as indicators of overall data quality.

Table 2-8 lists the timeframes and number of samples collected for the various media at the site for the different sampling events.

Table 2-8. 2002 Sampling Summary

Sampling Event	Dates	Natural Samples
Waste water Sampling		
Heap Effluent	11/22/02	1
Soil Sampling		
Spent Ore	11/21/02	1
Waste Rock	11/21/02	9
Soil	11/21/02	7
Sludge Sampling		
Pond Sludge	11/21/02	2
Totals		20

2.8.2 Analytical Methods

Analytical parameters and laboratory methods varied by media and sampling investigation. Comprehensive lists of the laboratory analytes and methods can be found in the FSP. The analytical parameters for the various media and sampling events are shown in Table 2-9.

Table 2-9. 2002 Analytical Parameters

Sampling Event	Analytical Parameters	Laboratory
Waste Water Sampling - Effluent	Profile II constituents (alkalinity, pH, temperature, TDS, nitrate-N, total phosphorus, chloride, fluoride, sulfate, total recoverable metals-acid, Method EPA 200 Series) and Total Cyanide SM 4500	Sierra Environmental Monitoring, Inc.
Soil Sampling – Spent Ore	Particle size distribution, water holding capacity, nitrate-N, sulfate, pH, temperature, sulfur-total, sulfate, sulfide and residential, total recoverable metals-acid, Method EPA 200 Series	
Sludge Sampling – Pond Sludge	TCLP metals (As, Ba, Cd, Cr, Ag, Pb, Hg, and Se)	
Soil – Waste Rock	pH and temperature	
Soil Sampling	Particle size distribution, conductivity, total phosphorus, calcium, sodium absorption ratio, sieve analysis, water holding capacity, pH, temperature, organic matter, total recoverable metals-acid, Method EPA 200 Series, TOC	

2.8.3 Data Evaluation

As specified in the Work Plan, sample results would be evaluated to assess the PARCC parameters as overall indicators of data quality. All data from the seven SDGs for the 2002 sampling event were evaluated. Data evaluation was conducted and reviewed by an approved CDM staff data validator using the specific method requirements and laboratory requirements. Table 2-10 lists the SDGs from 2002 that were evaluated, the analytical laboratory, and the primary media (solid, aqueous, or both).

Table 2-10. Summary of Evaluated SDGs

SDG	Sample Collection Year	Analytical Laboratory	*Media*
50299	2002	Sierra Environmental Monitoring, Inc.	Waste Water
50320	2002		Soil - Spent Ore
51366	2002		Sludge - Pond Sludge
51365	2002		Soil - Waste Rock
51319	2002		Soil
51367	2002		Soil
51957	2002		Soil

Appendix D presents all of the analytical results and laboratory quality control summary sheets by SDG. This evaluation was conducted with the summary QC data provided by the laboratory.

2.8.4 Analytical Data Quality

The Easy Junior Reclamation Project work plan includes an evaluation of all collected data results. The data quality objectives, which were established for each field program in the FSP, require an assessment of PARCC parameters. The following sections define and discuss these PARCC parameters.

2.8.4.1 Precision

The precision of a measurement is an expression of mutual agreement among individual measurements of the same property taken under prescribed similar conditions. Precision is quantitative and most often expressed in terms of relative percent difference (RPD). Precision of the analyses was assessed by comparing original and duplicate sample results, where applicable. The RPD was calculated for each pair of applicable duplicate analyses using the following equation:

Relative Percent Difference = $|S - D| / ((S + D) / 2) \times 100$

Where:

S = First sample value (original value)

D = Second sample value (duplicate value)

Precision of reported results is a function of inherent field-related variability plus laboratory analytical variability depending on the type of QC sample.

For this project, data were evaluated for precision using the following types of samples (in order of priority): field duplicates, laboratory duplicates, laboratory control sample/laboratory control sample duplicates (LCS/LCSDs), or matrix spike/matrix spike duplicates (MS/MSDs), whichever are analyzed. No laboratory duplicates or LCSDs were analyzed with these SDGs. RPD evaluation was performed on the matrix spike and matrix spike duplicated RPD results only. The acceptable RPD limits for duplicate measurements are less than 35 percent for solid material and less than 20 percent for water and are in accordance with the laboratory-specific limits, and laboratory and analytical methodology.

Field duplicate samples were not collected during the 2002 field sampling events. Field duplicates are an assessment of the variability in the entire sample collection, shipment, and analysis procedure. The level of confidence in the data set without the field duplicates is reduced regarding precision criteria.

Table 3-7 summarizes the SDGs and analytes affected due to matrix spike, matrix spike duplicate RPD results being outside of control limits. Laboratory QC data was not provided for SDG 51957. Additionally, MS/MSD RPD results were not provided for SDGs 51367 and 51365.

There may be some degree of variability in sample results especially if the original sample concentrations were greater than four times the spike concentrations. In this case, the RPDs would be considered to be unreliable. Spike concentrations were not

provided and could not be evaluated. The 2002 analytical results in the evaluated SDGs are usable with respect to precision criteria except for the degree of uncertainty due to absent field duplicates, and the out of control RPD results shown in Table 2-11.

Table 2-11. Summary of Evaluated RPDs

SDG	Analyte/RPD Result	Laboratory Reported Notes
50299	Ca (33%)	Not Provided
50319	Hg (75%)	
50320	Hg (75%)	
	Sulfate (163%)	

2.8.4.2 Accuracy

Accuracy is the degree of agreement of a measurement with an accepted reference or true value and is a measure of the bias in a system. Accuracy is quantitative and usually expressed as the percent recovery (%R) of a sample result. Percent recovery is calculated as follows:

Where :
SSR = Spiked sample result
SR = Sample result
SA = Spike added

Ideally, it is desirable that the reported concentration equals the actual concentration present in the sample. Data may be evaluated for accuracy using (in order of priority) either LCS/LCSDs MS/MSDs, and/or surrogates (organics only). Acceptable %R limits are 75 percent to 125 percent for MS/MSDs and are defined by the laboratory or method for LCS/LCSDs. These limits are in accordance with the laboratory-specific limits, and laboratory or analytical methodology. LCS percent recovery results were obtained using aqueous samples and matrix spike and matrix spike duplicate percent recovery results were obtained using soil samples when both sample types were collected. All LCS recoveries were within the QC limits of 75-125%.

Table 3-8 summarizes the SDGs and analytes affected due to %R results being outside of control limits. Laboratory QC data was not provided for SDG 51957. Additionally, MS/MSD recovery results were not provided for SDGs 51367 and 51365.

The thallium and calcium in SDG 50299 may be biased low due to low matrix spike recoveries. The mercury, calcium, and antimony in SDG 30319; and the mercury, arsenic, and sulfate in SDG 50320 may be biased high due to high matrix spike recoveries. Recovery results would be considered to be unreliable if the sample concentrations were greater than four times the spike concentrations. According to validation criteria, no action is required when this situation occurs. Spike concentrations were not provided and could not be evaluated.

In situations where the LCS recoveries were within appropriate control limits, but the MS/MSD recoveries were outside of control limits, matrix interference is probable

due to the matrix spike analyses procedure. The 2002 analytical results in the evaluated SDGs are usable but biased high, or biased low with respect to accuracy criteria as shown in Table 2-12.

Table 2-12. Summary of Evaluated %Rs

SDG	Analyte	Laboratory Reported Notes
50299	Tl (73%)	Not Provided
	Ca (73%)	
50319	Hg (170%)	
	Ca (137%, 127%)	
	Antimony (127%)	
50320	Hg (170%)	
	Sulfate (880%)	
	As (127%)	

2.8.4.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent:

- The characteristic being measured
- Parameter variations at a sampling point
- An environmental condition

Representativeness is a qualitative and quantitative parameter that is most concerned with the proper sampling design and the absence of cross-contamination of samples. Acceptable representativeness is achieved through:

- Careful, informed selection of sampling sites
    - Selection of testing parameters and methods that adequately define and characterize the extent of possible contamination and meet the required parameter reporting limits
    - Proper gathering and handling of samples to avoid interferences and prevent contamination and loss
- Collection of a sufficient number of samples to allow characterization

The representativeness for this project was assessed qualitatively by reviewing the selection of sampling sites, testing methods, sensitivity, and number of samples; and, quantitatively by reviewing the holding times, preservation, and blank samples. If an analyte is detected in a method, preparation, trip, or rinsate blank, any associated positive result less than five times (evaluation standard) (10 times for common laboratory contaminants) may be considered a false positive. Holding times, cooler

temperature, and sample preservation were evaluated to determine if analytical results are representative of sample concentrations.

Rinsate samples were not collected because disposable equipment was used to collect each water sample and cross contamination of samples due to equipment decontamination procedures was not an issue.

After review of the sampling site locations, test methods, sensitivity parameters, and the number of samples collected, the specific project goals have been achieved for these sampling events.

Table 2-13 summarizes the SDGs and analytes that had exceedances of holding times. Holding times were exceeded for a number of samples as scope changes were being negotiated to include additional analyses for pond sludge samples, soil borrow area samples, and waste rock dump soil pH samples. For holding times that were outside of appropriate limits, none were considered extreme so no sample results are considered compromised. The cooler temperature of 7 degrees C was recorded for the waste water sample. Cooler temperatures ranged from 16 degrees C to 18 degrees C for the soil and sludge samples. No sample results are considered biased due to cooler temperatures as none of the reported temperatures were extremely outside of criteria. All laboratory method blank results were nondetect for all analytes in each SDG. From the results of the method blanks, no false positives are suspected. The 2002 analytical results in the evaluated SDGs are usable but false positives may exist as rinsate sample results were not able to be evaluated.

Table 2-13. Summary of Evaluated Holding Times

SDG	Analyte	Notes
50299	CN Total	One sample analyzed one day outside holding time
	CN WAD	One sample analyzed three day outside of holding time
50320	Nitrate-N	One samples analyzed 18 days outside of holding time
51957	TOC	Two samples analyzed 86 days outside of holding time
51367	Conductivity	Five samples analyzed 42 days outside of holding time

The results for TOC in samples EJ Soil Borrow #2 and EJ Soil Borrow #2b in SDG 51957 were subcontracted to another laboratory. As a result, the 28 day holding time was grossly exceeded by approximately four months. The 48 hour holding time for nitrate-N in the soil sample EJ LP 1 from SDG 50320 was grossly exceeded. Additionally, the 28 day holding time for conductivity in the five samples from SDG 51367 was grossly exceeded. The three analyses for these samples reported positive results. These results would be qualified as estimated and usable. Only non-detected sample results would be qualified as rejected.

2.8.4.4 Completeness

Completeness is a measure of the amount of usable data obtained from a measurement system compared to the amount that was expected to be obtained under correct normal conditions. All data that that are not rejected are considered

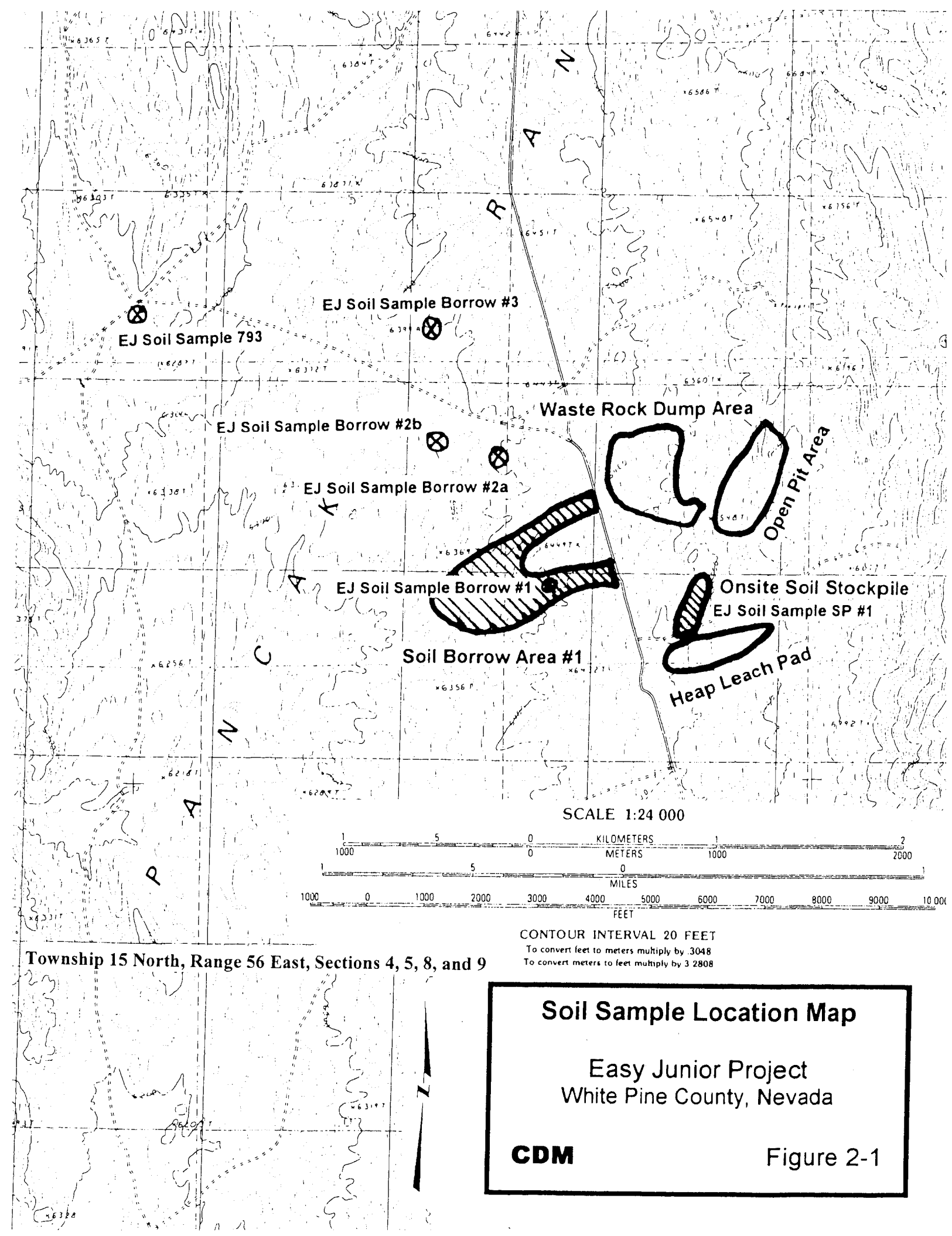
usable. A completeness goal of 90 percent was established for this entire project. Completeness is calculated using the following equation:

% Completeness = (DO/DP)x100
Where: DO = Data obtained and usable
DP = Data planned to be obtained

The data set developed during the 2002 Easy Junior Reclamation Project sampling events is considered complete because 100 percent of the sample results are usable based on the data evaluation assessment.

2.8.4.5 Comparability

Comparability of data among sites and between sampling episodes depends on consistency in the acquisition, handling, and analysis of samples. Data developed under this investigation were collected and analyzed using standard analytical methods and QC techniques utilized by the BLM and are therefore considered comparable to previously obtained results from the Easy Junior Reclamation

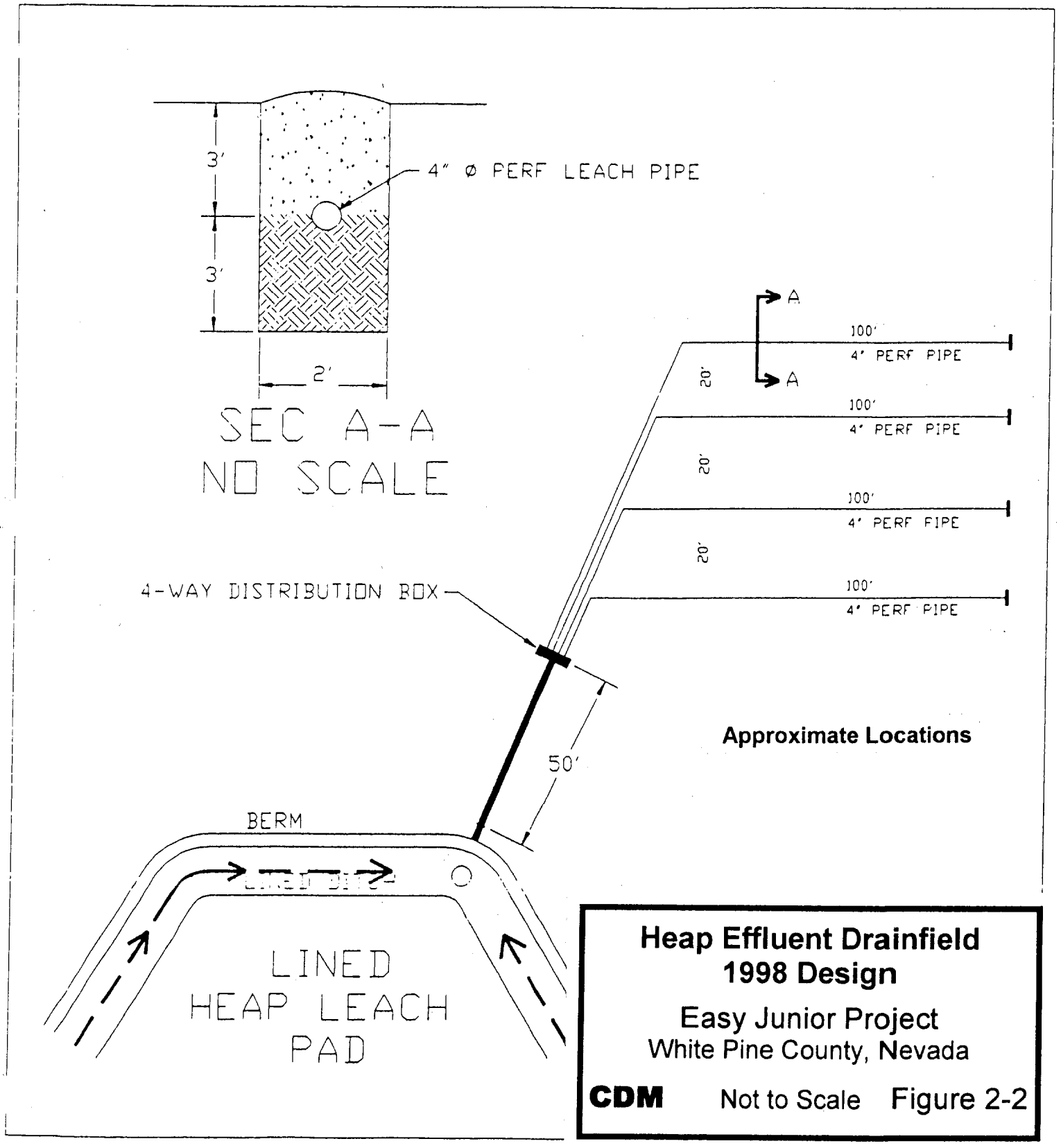


Soil Sample Location Map

Easy Junior Project
White Pine County, Nevada

CDM

Figure 2-1



Heap Effluent Drainfield
1998 Design

Easy Junior Project
White Pine County, Nevada

CDM Not to Scale Figure 2-2

Table 2-1. NDEP Profile II Results - Heap Effluent

Easy Junior Project

	Method	EJ LP EFF, 11/22/2002 (ppm)	Standard (ppm)	% above Standard
Alkalinity	SM 2320 B			
Alkalinity, Total	SM 2320 B	59	-	
Alkalinity, Bicarbonate	SM 2320 B	59		
Alkalinity, Carbonate	SM 2320 B	<1		
Alkalinity, Hydroxide	SM 2320 B	<1		
Aluminum, ICP-OES	EPA 200.7	0.3	0.05 - 0.2	50%
Antimony, ICP-MS	EPA 200.8	0.007	0.006	17%
Arsenic, ICP-MS	EPA 200.8	0.15	0.005	2900%
Barium, ICP-MS	EPA 200.8	0.023	2	
Beryllium, ICP-MS	EPA 200.8	<0.005	0.004	
Bismuth, ICP-OES	EPA 200.7	0.1	-	
Boron, ICP-OES	EPA 200.7	0.13	-	
Cadmium, ICP-MS	EPA 200.8	<0.005	0.005	
Calcium, ICP-OES	EPA 200.7	380	-	
Chloride, Ion Chromatography	EPA 300.0	80	250 - 400	
Chromium, ICP,MS	EPA 200.8	0.022	0.1	
Cobalt, ICP-MS	EPA 200.8	0.39	-	
Copper	EPA 200.8	0.022	1.3	
Fluoride, Ion Chromatography	EPA 300.0	1.8	2 - 4	
Gallium, ICP-OES	EPA 200.7	<0.1	-	
Iron, ICP-OES	EPA 200.7	0.29	0.3 - 0.6	
Lanthanum, ICP-OES	EPA 200.7	<0.05	-	
Lead, ICP-MS	EPA 200.8	<0.005	0.015	
Lithium, ICP-OES	EPA 200.7	<0.1	-	
Magnesium, ICP-OES	EPA 200.7	13	125 - 150	
Manganese, ICP-MS	EPA 200.8	0.018	0.05 - 0.10	
Mercury, AA Cold Vapor	EPA 245.1	0.0059	0.002	195%
Molybdenum, ICP-MS	EPA 200.8	0.043	-	
Nickel, ICP-MS	EPA 200.8	0.029	0.1	
Nitrate N, Ion Chromatography	EPA 300.0	230	10	2200%
pH	SM 4500 H+B	8.03	6.5 - 8.5	
Phosphorus, Total	EPA 365.3	0.06	-	
Potassium, ICP-OES	EPA 200.7	27	-	
Scandium, ICP-OES	EPA 200.7	<0.05	-	
Selenium, ICP-MS	EPA 200.8	0.12	0.05	140%
Silver, ICP-MS	EPA 200.8	<0.005	0.1	
Sodium, ICP-OES	EPA 200.7	680	-	
Strontium, ICP-OES	EPA 200.7	0.36	-	
Sulfate, Ion Chromatography	EPA 300.0	1500	250 - 500	200%
Thallium, ICP-MS	EPA 200.8	0.011	0.002	450%
Tin, ICP-OES	EPA 200.7	<0.05	-	
Titanium, ICP-OES	EPA 200.7	<0.05	-	
Total Dissolved Solids	SM 2540 C	3800	500-1000	280%
Vanadium, ICP-MS	EPA 200.8	0.013	-	
Cyanide				
Cyanide, Total	SM 4500 CN C	0.710	-	
Cyanide, WAD	SM 4500 CN I	0.098	0.2	
Zinc, ICP-MS	EPA 200.8	<0.05	5	

Table 2-2. Sumary of Analytical Results - Spent Ore and Soil Samples

Easy Junior Reclamation Project

BLM Risk Management Criteria for Metals at BLM Mining Sites Human Risk Management Criteria				Sample Name		EJ LP 1	EJ Soil SP #1	EJ Soil Borrow #1	EJ Soil Borrow #2a	EJ Soil Borrow #2b	EJ Soil Borrow #3	EJ Soil 793
				Sample Type		Spent Ore	Soil	Soil	Soil	Soil	Soil	Soil
Camper	ATV Driver	Worker	Surveyor	Date Sampled		21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02
				Grain Size, Hydrometer	ASTM D 422	Yes	Yes	Yes	Yes	Yes	Yes	Yes
				Sand %		57.0%	56.0%	54.3%	85.7%	64.0%	88.3%	60.3%
				Silt %		22.0%	31.0%	30.7%	8.3%	26.0%	6.7%	28.7%
				Clay %		21.0%	13.0%	15.0%	6.0%	10.0%	5.0%	11.0%
				Total %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
				Grain Size, Sieve	ASTM C 136-84a	No	Yes	Yes	n/a	n/a	n/a	n/a
				Water Holding Capacity	ASTM	19.6%	22.5%	29.9%	n/a	24.1%	n/a	n/a
				Elec Conduct (umhos/cm)	SM 2510 B	n/a	690	110	74	170	62	120
				pH - Saturated Paste	SW-846 9045A	8.1	7.13	8.21	8.55	8.69	8.52	8.16
				Total Organic Carbon (TOC)	EPA 9060	n/a	n/a	n/a	10,000	5,100	n/a	n/a
				Organic Matter	SM 2540	n/a	4.6%	n/a	n/a	n/a	n/a	n/a
				Calcium, ICP-OES	EPA 200.7	n/a	640	n/a	n/a	n/a	n/a	n/a
				Magnesium, ICP-OES	EPA 200.7	n/a	65	n/a	n/a	n/a	n/a	n/a
				Nitrate-N, Ion Chroma (ppm N)	EPA 300.0	260	n/a	n/a	n/a	n/a	n/a	n/a
				Phosphorus, Total (ppm)	EPA 365.3	n/a	39	n/a	n/a	n/a	n/a	n/a
				Potassium, ICP-OES	EPA 200.7	n/a	44	n/a	n/a	n/a	n/a	n/a
				Sodium, ICP-OES	EPA 200.7	n/a	62	n/a	n/a	n/a	n/a	n/a
				Sodium Absorb Ratio (SAR)	ASTM	n/a	0.2	n/a	n/a	n/a	n/a	n/a
				Sulfate, Ion Chroma (ppm)	EPA 300.0	1500	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur, Leco Furnace	LECO	Yes	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Total	LECO	1.980%	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Sulfate	LECO	<0.010%	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Sulfide	LECO	0.887%	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Residual	LECO	1.090%	n/a	n/a	n/a	n/a	n/a	n/a
				Total Recoverable Metals, Acid	EPA 200.2	Yes	Yes	n/a	n/a	n/a	n/a	n/a
50	750	100	600	Antimony, ICP-MS (ppm)	EPA 200.8	4	<1	n/a	n/a	n/a	n/a	n/a
20	300	12	100	Arsenic, ICP-MS (ppm)	EPA 200.8	**98**	**32**	n/a	n/a	n/a	n/a	n/a
70	950	100	800	Cadmium, ICP-MS (ppm)	EPA 200.8	<1	<1	n/a	n/a	n/a	n/a	n/a
700	9,600	1,000	8,000	Silver, ICP-MS (ppm)	EPA 200.8	<1	<1	n/a	n/a	n/a	n/a	n/a
5,000	70,000	7,400	59,000	Copper, ICP-MS (ppm)	EPA 200.8	25	16	n/a	n/a	n/a	n/a	n/a
1,000	1,000	2,000	2,000	Lead, ICP-MS (ppm)	EPA 200.8	2	6	n/a	n/a	n/a	n/a	n/a
19,000	250,000	28,000	220,000	Manganese, ICP-MS (ppm)	EPA 200.8	92	200	n/a	n/a	n/a	n/a	n/a
40	550	60	480	Mercury, AA Cold Vapor (ppm)	EPA 245.5	4	0.4	n/a	n/a	n/a	n/a	n/a
2,700	38,000	4,000	32,000	Nickel, ICP-MS (ppm)	EPA 200.8	19	25	n/a	n/a	n/a	n/a	n/a
700	9,600	1,000	8,000	Selenium, ICP-MS (ppm)	EPA 200.8	<1	<1	n/a	n/a	n/a	n/a	n/a
40,000	550,000	60,000	480,000	Zinc, ICP-MS (ppm)	EPA 200.8	53	55	n/a	n/a	n/a	n/a	n/a

n/a - Not Analyzed

Analytical Results in Bold Indicate Exceedance of BLM Risk Management Criteria

Table 2-3. HELP Model Soil Data and Selected Soil Classifications
Easy Junior Project

Available Laboratory Test Data	Leach Pad (no cap)	Cap Soil		
		Onsite Soil Stockpile	Soil Borrow #1	Soil Borrow #2b
Water Holding Capacity	19.6%	22.5%	29.9%	24.1%
Sand	57%	56%	54.3%	64%
Silt	22%	31%	30.7%	26%
Clay	21%	13%	15%	10%
Organic Matter	N/A	4.6%	1%	0.5%
Apparent USCS Classification	**SM-SC**	**SM**	**SM**	**SM**
Selected HELP3 Soil Classification	6 (SM)[1]	5 (SM)[2]	5 (SM)[2]	4 (SM)[3]
Total Porosity (vol/vol)	0.453	0.457	0.457	0.437
Field Capacity (vol/vol)	0.19	0.131	0.131	0.105
Wilting Point (vol/vol)	0.085	0.058	0.058	0.047
Sat. Hydraulic Conductivity (cm/sec)	**7.2E-04**	**1.0E-03**	**1.0E-03**	**1.7E-03**

[1]Based on water holding capacity and USCS classification. Highest clay content of all samples.

[2]Based on low clay content and USCS classification.

[3]Based on high sand content and USCS classification. Lowest clay content of all samples.

Table 2-4. HELP Model Analysis Scenarios
Easy Junior Project

Scenario	Soil Layer Depth (in)	Cap Soil Source	Vegetation	LAI	Evaporative Zone Depth (in)	NRCS CN
LP00CN91	960	N/A (no cap)	None	0	18	91
LP00CN88	960	N/A (no cap)	Poor	0.8	30	88
LP00CN85	960	N/A (no cap)	Fair	1.2	36	85
B106CN91	6	Borrow #1 (or stockpile)	None	0	18	91
B106CN88	6	Borrow #1 (or stockpile)	Poor	0.8	30	88
B106CN85	6	Borrow #1 (or stockpile)	Fair	1.2	36	85
B112CN91	12	Borrow #1 (or stockpile)	None	0	18	91
B112CN88	12	Borrow #1 (or stockpile)	Poor	0.8	30	88
B112CN85	12	Borrow #1 (or stockpile)	Fair	1.2	36	85
B118CN91	18	Borrow #1 (or stockpile)	None	0	18	91
B118CN88	18	Borrow #1 (or stockpile)	Poor	0.8	30	88
B118CN85	18	Borrow #1 (or stockpile)	Fair	1.2	36	85
B124CN91	24	Borrow #1 (or stockpile)	None	0	18	91
B124CN88	24	Borrow #1 (or stockpile)	Poor	0.8	30	88
B124CN85	24	Borrow #1 (or stockpile)	Fair	1.2	36	85
B206CN91	6	Borrow #2b	None	0	18	91
B206CN86	6	Borrow #2b	Poor	0.8	30	88
B206CN85	6	Borrow #2b	Fair	1.2	36	85
B212CN91	12	Borrow #2b	None	0	18	91
B212CN88	12	Borrow #2b	Poor	0.8	30	88
B212CN85	12	Borrow #2b	Fair	1.2	36	85
B218CN91	18	Borrow #2b	None	0	18	91
B218CN88	18	Borrow #2b	Poor	0.8	30	88
B218CN85	18	Borrow #2b	Fair	1.2	36	85
B224CN91	24	Borrow #2b	None	0	18	91
B224CN88	24	Borrow #2b	Poor	0.8	30	88
B224CN85	24	Borrow #2b	Fair	1.2	36	85

Table 2-5. HELP Modeling Results
Easy Junior Project

				Average Annual Totals (inches per acre, 5-year simulation period)			
Analysis Scenario	Cap Soil Source	Soil Layer Depth (in)	Vegetative Cover	Precip.	Runoff	ET	Percolation Through Soil Layer
LP00CN91	None (no cap)	960	None	8.78	0.27	8.47	0.06
LP00CN88	None (no cap)	960	Poor	8.78	0.16	8.77	0.00
LP00CN85	None (no cap)	960	Fair	8.78	0.16	8.78	0.00
B106CN91	Borrow #1 (or stockpile)	6	None	8.78	0.30	7.56	0.90
B106CN88	Borrow #1 (or stockpile)	6	Poor	8.78	0.25	7.55	0.98
B106CN85	Borrow #1 (or stockpile)	6	Fair	8.78	0.23	7.66	0.88
B112CN91	Borrow #1 (or stockpile)	12	None	8.78	0.28	8.12	0.26
B112CN88	Borrow #1 (or stockpile)	12	Poor	8.78	0.21	8.33	0.16
B112CN85	Borrow #1 (or stockpile)	12	Fair	8.78	0.20	8.33	0.18
B118CN91	Borrow #1 (or stockpile)	18	None	8.78	0.28	7.97	0.29
B118CN88	Borrow #1 (or stockpile)	18	Poor	8.78	0.20	8.21	0.27
B118CN85	Borrow #1 (or stockpile)	18	Fair	8.78	0.18	8.19	0.29
B124CN91	Borrow #1 (or stockpile)	24	None	8.78	0.28	7.97	0.29
B124CN88	Borrow #1 (or stockpile)	24	Poor	8.78	0.17	8.20	0.38
B124CN85	Borrow #1 (or stockpile)	24	Fair	8.78	0.16	8.31	0.25
B206CN91	Borrow #2b	6	None	8.78	0.30	7.35	1.13
B206CN88	Borrow #2b	6	Poor	8.78	0.24	7.43	1.11
B206CN85	Borrow #2b	6	Fair	8.78	0.23	7.46	1.09
B212CN91	Borrow #2b	12	None	8.78	0.28	7.95	0.43
B212CN88	Borrow #2b	12	Poor	8.78	0.21	8.09	0.41
B212CN85	Borrow #2b	12	Fair	8.78	0.20	8.10	0.44
B218CN91	Borrow #2b	18	None	8.78	0.28	8.02	0.29
B218CN88	Borrow #2b	18	Poor	8.78	0.20	7.97	0.55
B218CN85	Borrow #2b	18	Fair	8.78	0.19	7.98	0.51
B224CN91	Borrow #2b	24	None	8.78	0.28	8.02	0.30
B224CN88	Borrow #2b	24	Poor	8.78	0.17	7.87	0.73
B224CN85	Borrow #2b	24	Fair	8.78	0.16	7.94	0.65

Table 2-6. Pond Sludge Analysis Results
Easy Junior Project

Sample Name		TCLP	EJ Settling	EJ Barren
Sample Type		**Regulatory**	Pond Sludge	Pond Sludge
Date Sampled		**Limit (mg/L)**	21-Nov-02	21-Nov-02
TCLP Extract	SW-846 1311			
Arsenic, ICP-MS (ppm)	SW-846 6020	5	1.1	1.1
Barium, ICP-MS (ppm)	SW-846 6020	100	0.37	0.48
Cadmium, ICP-MS (ppm)	SW-846 6020	1	<0.1	<0.1
Chromium, ICP-MS (ppm)	SW-846 6020	5	<0.1	<0.1
Silver, ICP-MS (ppm)	SW-846 6020	5	<0.1	<0.1
Lead, ICP-MS (ppm)	SW-846 6020	5	<0.1	<0.1
Mercury, AA Cold Vapor (ppm)	SW-846 7470	0.2	0.16	0.023
Selenium, ICP-MS (ppm)	SW-846 6020	1	<0.1	<0.1

Table 2-7. Waste Rock Dump Soil pH Analysis Results

Easy Junior Project

Sample Name		EJ WD HS1	EJ WD HS 2	EJ WD HS 3	EJ WD HS 4	EJ WD HP 5	EJ WD HS 6	EJ WD Barren	EJ WD HS 7	EJ WD HS 8	EJ WD Typical
Sample Type		Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock
Date Sampled		21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02
Coordinate											
x - 39 d (minutes shown in table)	GPS	10.992	10.948	10.962	10.493	10.954	10.955	10.920	10.931	10.825	10.798
y - 115 d (minutes shown in table)	GPS	40.595	40.636	40.600	40.568	40.741	40.740	40.750	40.744	40.605	40.478
z - feet asl	GPS	6560	6580	6566	6561	6561	6563	6561	6558	6530	6517
ph - Saturated Paste	**SW-846 9045A**	**2.50**	**2.31**	**1.60**	**2.35**	**1.97**	**NS**	**7.39**	**7.31**	**1.97**	**7.64**

GPS coordinate system is set to 1927 North American Datum for use with the the USGS Green Springs NW, Nevada Quadrangle.
NS - Not sampled

Section 3

3.1 Updated NDEP BMRR Closure Plan

On February 22, 1996, Alta Gold submitted a closure plan, "Final Permanent Closure Plan for the Easy Junior Mine Water Pollution Control Permit NEV89051", to the NDEP Bureau of Mining Regulation and Reclamation. This Closure Plan outlined steps for closure of the heap and other process and mining facilities at Easy Junior.

In 1998 Alta Gold land applied approximately 5.7 million gallons of rinsate/drain down solution to eliminate the solution inventory contained in the process ponds. During the land application, Alta Gold disconnected the heap from the process ponds and installed a leach field to infiltrate heap effluent for the long-term drainage of the heap. This system of the draining heap leach pad and effluent infiltration is referred to collectively as the Combined Heap Leach Pad and Effluent Drainfield System.

Appendix E contains a basis for the creation of an updated Final Permanent Closure Plan for Easy Junior's Combined Heap Leach Pad and Effluent Drainfield System.

3.2 Sample Heap Leach Pad Reclamation Proposal

Appendix F contains a description of the heap leach pad and recommended reclamation plan. This information forms a Project Description for use in preparing contracting documents for heap leach pad reclamation.

Also included in Appendix F is description of a potential Design/Build contracting strategy and associated performance parameters for a reclamation contractor. This appendix is intended to provide the BLM with basic information for the development of contracting documents for Easy Junior's reclamation.

Appendix A

Field Notes

PROJECT _____ DATE CHECKED _____ DATE 11/20/02

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Easy Junior
Field work
Wednesday, Nov 20, 2002

Conditions Sunny, warm, breezy

Lynn Bjorklund, Bill Wilson - BLM-Ely
Kevin Ryan, Peggy Bloisa - CDM

Kevin & Peggy met w/ Lynn & Bill at about 12:30 pm at the turn off to the Easy Junior mine. We proceeded to the mine site and were given a tour of the facilities by Lynn and Bill. CDM received copies of the 1999 Alta Gold reclamation plans, soil type map and soil descriptions, and several maps of EJ from Alta Gold. CDM will make copies of these documents and return to BLM.

Lynn requested additional soil sampling from potential borrow areas to evaluate cover design. Since that was not scoped, Kevin suggested not using backhoe to collect samples as planned, and to use the money for additional analyses, pending USACE approval.

All parties left the site at approximately 4:30 as darkness had set in.

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ASY JUNIOR

FIELD WORK

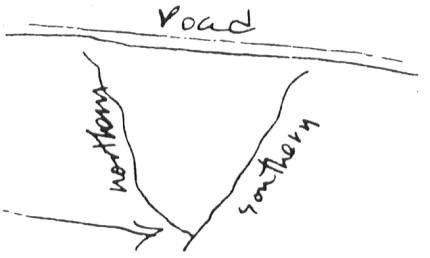
Thurs, Nov 21, 2002

CONDITIONS - Sunny, warm, clear

Kevi-Lyon, Peggy Bloisa

Soil ~~Stockpit~~ Borrow Areas

#1 up to 4 ft in center of area
small stream incised into area ~ 3 ft deep
confluence w/ next southern stream



✓N 39° 10.604'
✓W 115° 40.872'
elev 6394 ft

picture 13 looking east up northernmost stream

picture 14 looking east just upstream of confluence in southern ~~creek~~ stream

EJ
Collected Soil Borrow 1 from confluence of 2 streams
~ 4-6 ft of fine grained material useable for borrow material in bottom
observed excavation of material along side slope of "bottom"
reached very rocky material ~~w/in~~ at surface

collected sample

Dug EJ Soil Borrow 2 ~ 12 inches of reasonably nice soil
~ 12-18 inches bgs still fine grained but more

N 39° 10.986'
W 115° 41.082'
elev 6387

This area appears to have already been used as a borrow area for the mine

picture 10 looking ~~west~~ east towards waste pile from soil borrow 2

@ "End" of previous mines borrow area

N 39° 10.887'
W 115° 41.372'
elev 6354

picture 8 "end" of mine ~~bor~~ borrow area looking south

Stockpile 260ft long 35ft wide ~ 4ft average height
@ along southside of previously borrowed area
2nd stockpile to east of previous one: 300ft x 20 x 4 deep (av.)

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Delineation of Soil Stockpile located NW of leach pad

①	Wy Pt 13	N 39° 10.414	W 115° 40.592	6481	
	↑ 465ft ↓				
②	Wy Pt 14	N 39° 10.414	W 115° 40.591	6485	big pick rk
	↑ 98ft ↓				
③	Wy Pt 15	N 39° 10.443	W 115° 40.499	6508	
	118ft ↕				
④	Wy Pt 16	N 39° 10.456	W 115° 40.486	6509	
	↕ .12 miles				
⑤	Wy Pt 17	N 39° 10.475	W 115° 40.480	6486	
	↕ 160ft				
⑥	Wy Pt 18	N 39° 10.570	W 115° 40.436	6475	
	↕ 435				
⑦	Wy Pt 19	N 39° 10.577	W 115° 40.468	6493	edge of rky material w/ to? soil
	no dist				
⑧	Wy Pt 20	N 39° 10.490	W 115° 40.574	6467	
	↕ 164ft				
⑨	Wy Pt 21	N 39° 10.469	W 115° 40.575	6471	
	↕ 167 ft				
⑩	Wy Pt 22	N 39° 10.450	W 115° 40.660	6491	
	↕ 72ft				
⑪	Wy Pt 23	N 39° 10.422	W 115° 40.603	6476	same as Wy Pt 13

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Soil

Borrow ~~area~~ 3

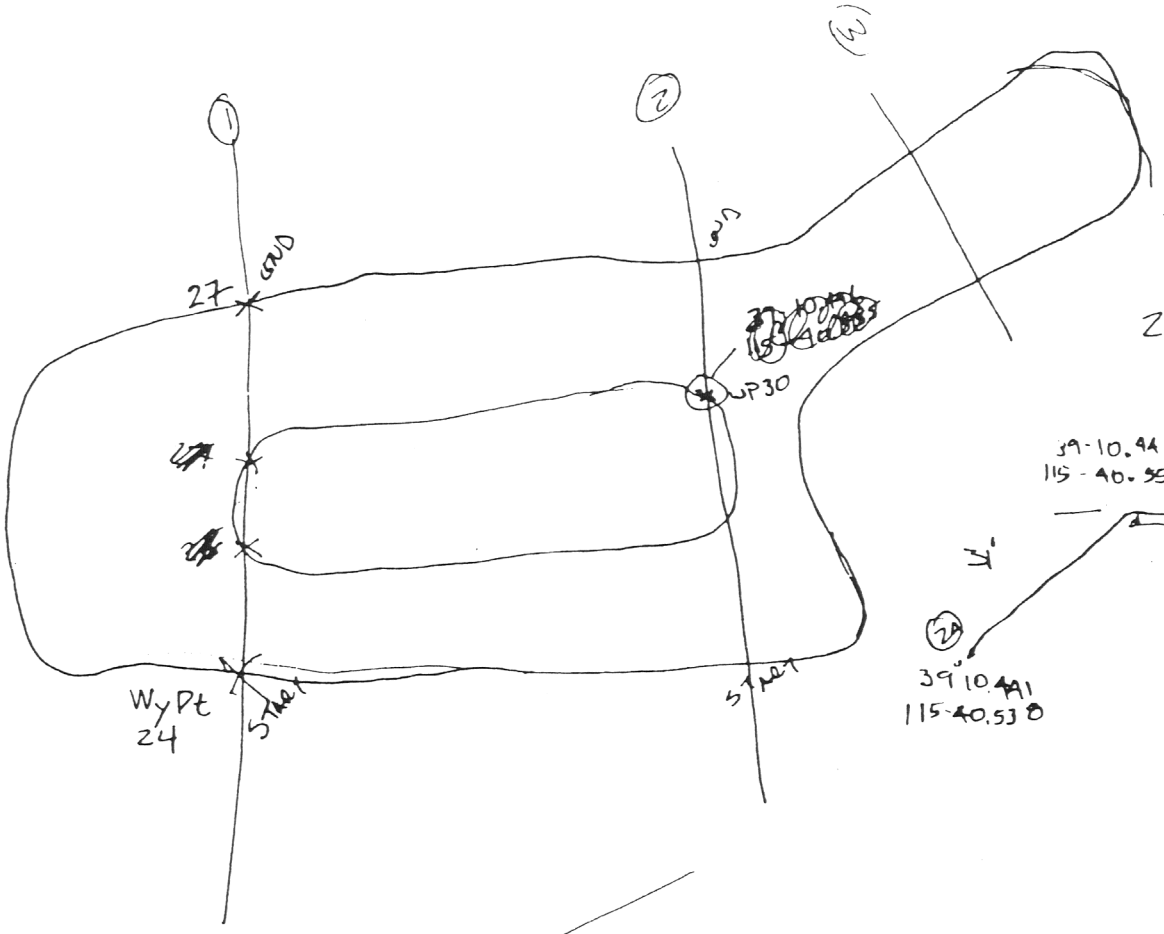
N 39° 11.047'

W 115° 41.103'

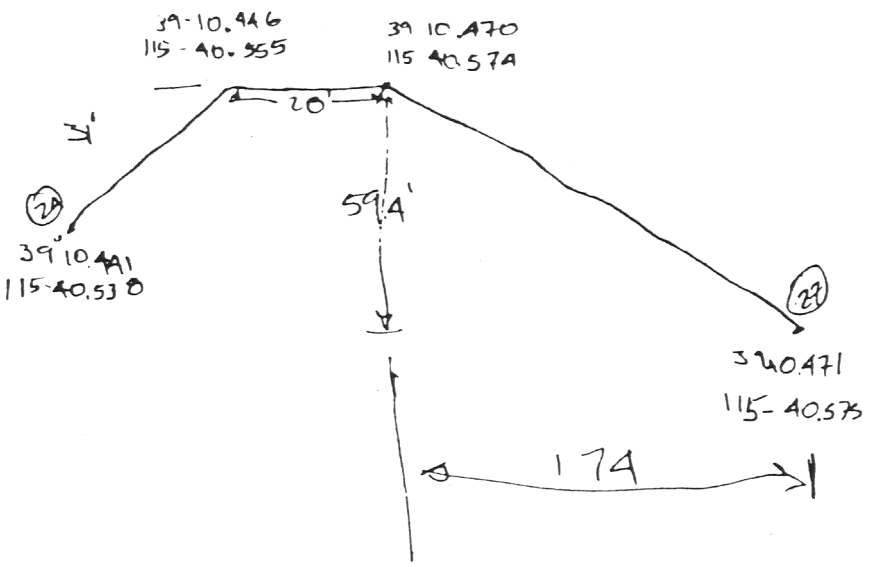
elev 6384

collected sample

dug approx 16 inches + 16 inches of material above this point so estimate 24 to 32 inches of material



27 39 10.471 115 40.575 59.4ft



distance

WyPt 24	39°10.441	115 40.538	0	elevdiff
no distance			~~31 ft~~	→ OK
26	39 10.443	115 40.555	31 ft	
23ft 27	39 10.443	115 40.555	~~23ft~~ 31ft	
28	39 10.443	115 40.555		

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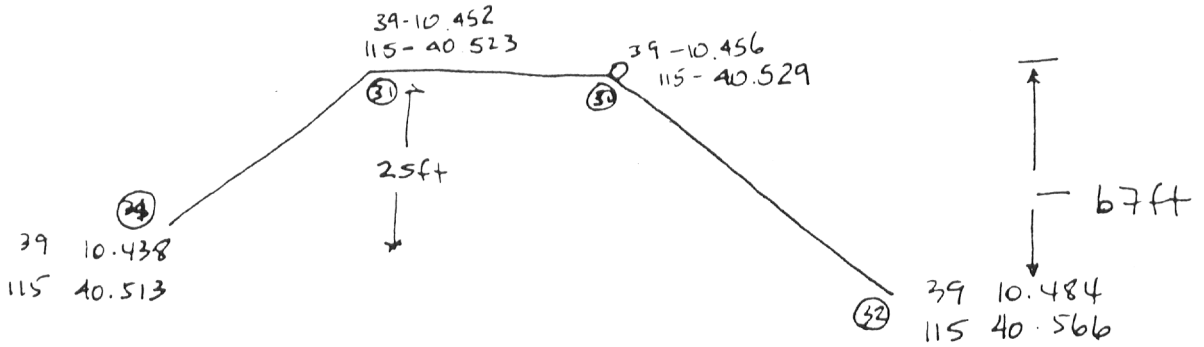
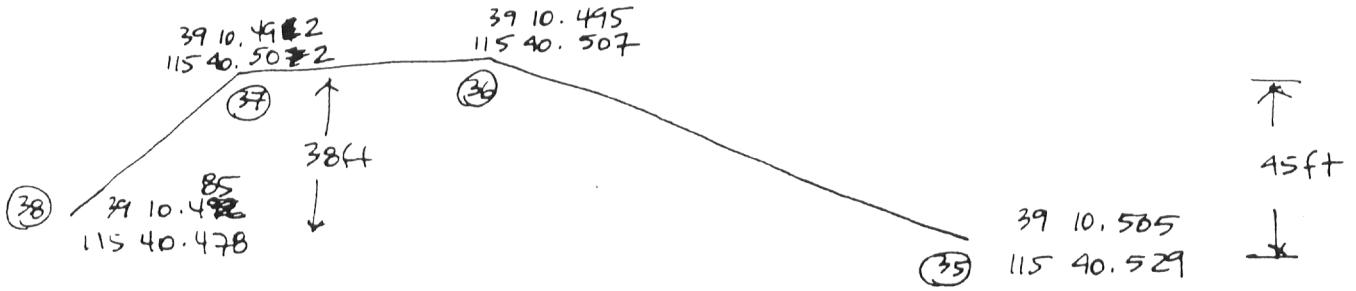
X-S #2



X-S #3



STAPLES

COMPOSITE SOIL SAMPLE LOCATIONS

location 1	39 10.450 115 40.524	6518 elev.
2	39 10.449 115 40.535	~~6527~~ 6518
3	39 10.491 115 40.505	6503
4	39 10.454 115 40.501	6496

collected @ 1320

LEACH PAD

COMPOSITE SOIL SAMPLE LOCATIONS:

(1)	39 10.394 115 40.453	~~6587~~ 6576 elev.
(2)	39 10.407 115 40.379	6581
(3)	39 10.433 115 40.320	6583
(4)	39 10.452 115 40.285	6570

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Waste Rock Pile

Coordinates along area not covered by topsoil

Wy Pt 41	39 10.796	115.40.~~8~~468	6598	
Wy Pt 42	39 10.793	115.40.490	6519	465 ft
Wy Pt 43	10.787	40.588	6520	113 ft
Wy Pt 44	10.794	40.613	6530	.13 miles
Wy Pt 45	10.900	40.673	6555	.13 miles
WD hot spt 1 Wy Pt 46	10.992	40.595	6560	looks like hot spot - discolored soil - orange on brown soil
WD Hot spt 2 Wy Pt 47	10.948	40.636	6580	discolored spot dark brown
WD Hot spt 3 WyPt 48	~~10.948~~ 10.962	40.600	6566	crusty orange & white - various sulfur xls on surface
WD HP 4 WP 49	10.993	40.568	6561	blk carbonaceous shale on surface; evidence of seepage out of dump of ARD; very strong S smell and can feel heat
WD HP5 WP50	10.954	40.741	6572	on w side of dump - area w/ no topsoil. soil is discolored (looks wet)
WD HS6 WP51	10.955	40.740	6563	no sample - not discolored; large cracks (5" wide, 5-10 ft long) parallel to slope
WD HS Barren WP52	10.920	10.750	6561	large barren spot ~150 ft x 100 ft few areas of fumaroles/discoloration

WD HS7 WP53	10.931	40.744	6558	wea woar tree trunk w/abundant mat of v. healthy moss - and is warm - v. strong sulfuer smell
WDHS 8 WP54	10.825	40.605	6130	large discolored area on east facing slope of v
WP55	10.828	40.597	6520	
WP56	10.844	40.591	6521	
WP57	10.844	40.583	6504	
WP58	10.849	40.580	6500	
WP59	10.855	40.600	6535	

collected sample from approx 04 x

WD ~~background~~ Typical WP	10.798	40.478	6517

1550 Collected sample of sludge from bottom of small pond (settling pond)
TCLP EJ-Set Pond Sludge

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Delineation of SOIL BORROW AREA # 2.

WP63	39 11.009	115 40.990	6434	
WP64	39 11.010	115 41.998	6363	
WP65	39 11.014	115 41.217	6403	500ft
WP66	39 10.986	115 41.316	6378	.12 miles (soil sample location)

EJ SOIL BORROW 2 #2 ←

WP67 39 11.377 115 42.542 6340

collected EJ SOIL 793

LEAST JUNIOR SITE TRIP
FRIDAY NOV 22, 2002

Peggy Blair, Kevin Ryan

8:00 am Looked at potential borrow areas to the south of the ponds and leachpad. Appears Alta Gold used a site near overflow pond as a borrow source

N 39° 10. 184'
W 115 40. 776'
elev 6473
photos 4-2, #2

Borrow source further down gradient had approx 4-5' channel excised with fine grained to gravelly soil exposed

N 39° 10. 153'
W 115° 40. 807'
elev 6461
Photo 1, #2

8:25 Took water sample from LP effluent box - Flow rate 43secs/liter

The box feeds 4 buried pipes used to distribute the LP effluent to an underground leach field. The box appears to be out of level as the flow appears to mostly feed the southeast outlets. Possible solutions are to level the box or build a single outlet manifold to feed the four outlets.

The steel tank sump has approx 1' foot of sludge in it. Tank diameter is approx 20'. Secondary containment (concrete) est @ 28'x28' w/ 3.5' containment walls

Shack next to settling pond had concrete floor. Parts are scattered around the floor, (plastic fittings, nuts, bolts, electrical parts), but no evidence of liquids or hazmats. One box of fluorescent lights on shelves

The generator building (concrete floor w/ iron framework) has 6 car batteries, one five gallon bucket and 1/8 55 gal barrel filled w/ unid. liquid that appears to be used motor oil. Also - 1 - 30 gal bbl of Chevron Black Pearl Grease EP NLGI 0 - mostly full, sealed top. Soils around building show evidence of hydrocarbon staining, but area is only about 8' x 8'

Corrugated metal building adjacent to barren pond has concrete floor with some scattered parts. One quart of Valvoline 80w90 Gear Oil and 3 partial full gallon buckets of enamel paint. Approx 15 unknown electrical parts, but appear to be ~~battery~~ capacitors

Barren & overflow ponds appear to be size described in Alta Gold report (resp dimensions). Depth of barren pond estimated @ approx 20' (using hand level). Depth of overflow pond also about 20'. Both liners in good condition, no obvious rips or separations.
Overflow pond liner pulled away from esp in places, sludge in bottom - 1'-2" depth
Dimensions 90' x 80'. Depth est @ ± 10'

Mine Boneyard N 39° 10.312'
W 115° 40.632'
dw 6449

Mostly pallets, plastic buckets, irrigation supplies. One 5-gal bucket of unid'd liquid. Unable to open, but mostly full.

One 5-gallon bucket w/ black sludge is south of crusher. Appears unl may have been dumped, dark spot in soil adjacent to bucket

9:30 - 10:10 - Walked perimeter toe of WD. There was no evidence of acid drainage, seepage of any kind. Reclamation looked good where slopes had been revegetated.

Tire Dump - Approx 100 lt truck tires and about 100 hvl work, heavy equip tires

Appendix B

Heap Effluent Water Quality Trends
1995 – 2002

NDEP Profile II Water Quality Data
Alta Gold, 1Q95 – 1Q00

Heap Effluent NDEP Profile II Results

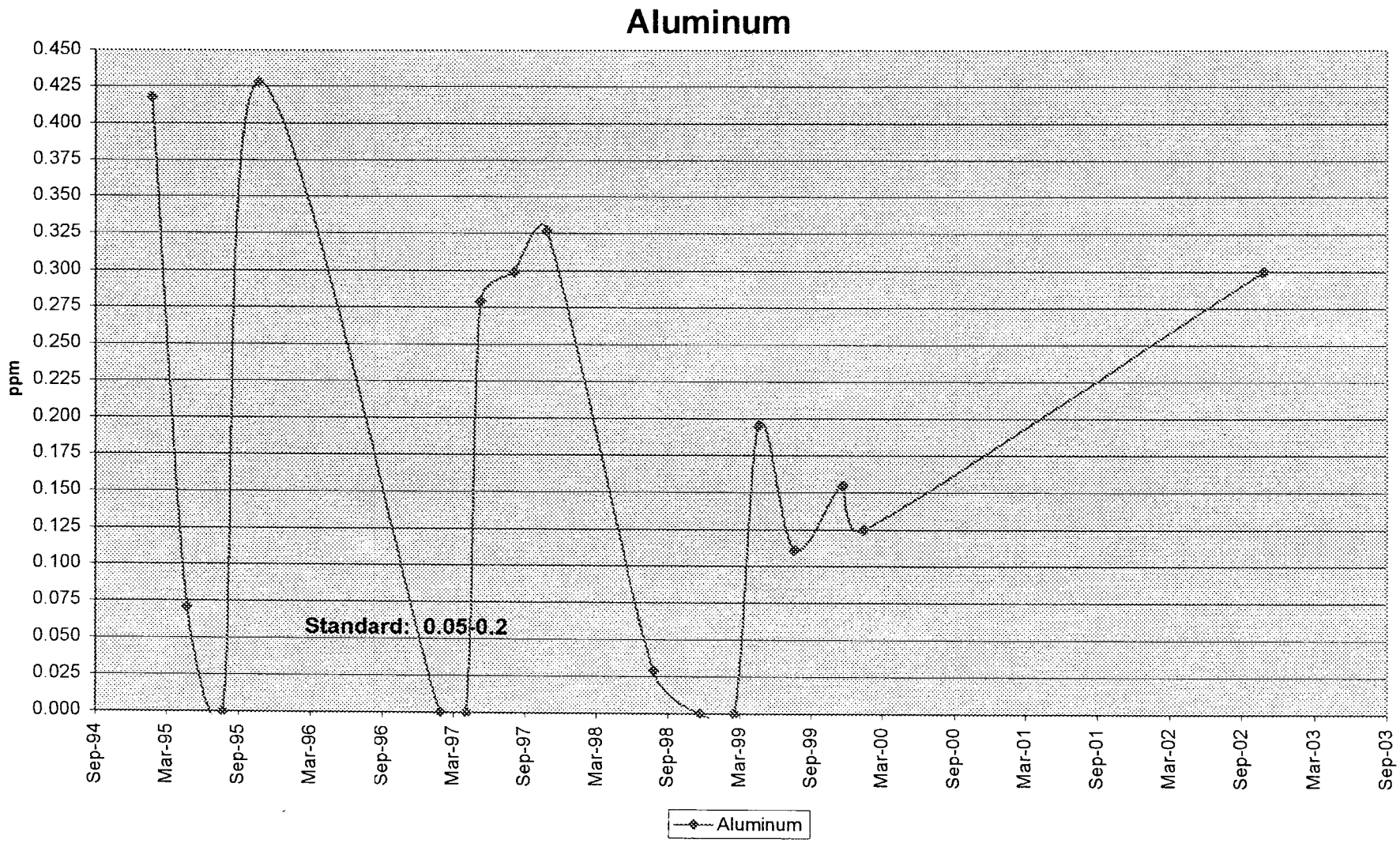
1995 - 2002

Easy Junior Project

	Std (mg/L)	Operational Preg Solution				Land Applied Rinse/Draindown Solution						Infiltrated Pad Effluent						
Reporting Penod Sample Date		1Q95 2/15/95	2Q95 5/15/95	3Q95 8/15/95	4Q95 11/15/95	1Q97 2/19/97	2Q97 4/28/97	2Q97 6/3/97	3Q97 8/27/97	4Q97 11/19/97	3Q98 8/19/98	4Q98 12/17/98	1Q99 3/14/99	2Q99 5/16/99	3Q99 8/16/99	4Q99 12/16/99	1Q00 2/9/00	4Q02 11/22/02
Alkalinity (total as CaCO3)	-	209 2	139 5	140 3	150	15 66	44	40	36	80	66	46	62	56	50 6	64	64	59
Aluminum	0 05 - 0 2	0 418	0 071	<0 065	0 428	<0 025	<0 025	0 279	0 299	0 327	0 029	<0 025	<0 025	0 195	0 111	0 155	0 125	0 3
Antimony	0 006	<0 050	<0 050	<0 050	0 074	<0 003	<0 003	0 007	<0 003	<0 003	<0 003	0 005	<0 003	0 009	0 005	0 006	0 005	0 007
Arsenic	0 05	0 043	0 066	0 032	<0 025	0 192	0 13	0 106	0 147	0 068	0 202	0 183	0 248	0 18	0 127	0 173	0 173	0 15
Barium	2	0 051	0 014	0 006	0 022	0 025	0 009	0 013	0 018	<0 005	<0 050	<0 050	<0 050	<0 050	0 233	<0 050	0 336	0 023
Beryllium	0 004	<0 001	<0 001	<0 001	<0 001	<0 002	<0 002	<0 002	<0 002	<0 002	<0 004	<0 004	<0 004	<0 004	<0 002	<0 002	<0 002	<0 005
Bismuth	-	<0 050	<0 005	<0 050	0 097	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	0 154	0 1
Boron	-					0 018	<0 200	<0 200	<0 200	0 34	<0 200	0 29	0 204	0 516	0 464	0 494	0 336	0 13
Cadmium	0 005	0 023	<0 005	<0 005	<0 005	<0 002	<0 002	<0 002	0 053	<0 002	<0 003	<0 003	<0 003	<0 003	<0 003	<0 003	<0 003	<0 005
Calcium	-	57 02	64 73	64 6	59 5	145 3	137	190 4	238	319	214 5	255	288	295	331	392	385	380
Chloride	250 - 400	173 7	168 4	120 5	156	125 6	77 99	67 4	95 72	85 08	131	95	76 7	70	66 7	66	61 2	80
Chromium	0 1	<0 010	<0 010	0 024	<0 010	<0 010	0 011	<0 010	0 021	<0 010	<0 010	<0 010	0 014	0 014	0 02	0 017	0 019	0 022
Cobalt	-	0 316	0 354	0 379	0 398	0 484	0 385	0 385	0 463	0 471	0 408	0 393	0 36	0 33	0 333	0 392	0 385	0 39
Copper	1 3	5 217	7 519	4 431	4 625	0 066	0 134	0 044	0 013	<0 010	0 01	<0 010	0 03	0 028	0 059	0 022	0 018	0 022
Fluonde	2 - 4	5 88	3 38	5 7	4 02	1 9	1 56	1 21	1 78	1 2	2 3	2	4	1 9	1 8	1 5	1 2	1 8
Gallium	-	<0 050	<0 050	<0 050	<0 050	<0 200	<0 200	<0 200	<0 200	<0 200	<0 250	<0 250	<0 250	<0 250	<0 250	<0 250	<0 200	<0 1
Iron	0 3 - 0 6	<0 005	0 074	0 123	0 036	0 135	0 053	0 079	2 466	0 26	<0 020	0 17	0 125	0 055	0 114	0 184	0 18	0 29
Lead	0 015	<0 015	<0 015	<0 015	<0 015	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	0 008	<0 007	<0 007	<0 005
Lithium	-	<0 010	<0 010	<0 010	<0 010	0 137	0 06	0 126	<0 010	<0 050	<0 010	<0 010	<0 010	0 049	<0 010	<0 010	<0 010	<0 1
Magnesium	125 - 150	0 454	0 486	0 332	0 558	1 776	2 801	4 751	4 295	10 1	10	8 7	19 5	11 7	10 4	12 5	12 7	13
Manganese	0 05 - 0 10	<0 005	<0 005	<0 005	<0 005	<0 005	0 006	0 016	0 093	0 02	<0 010	0 02	0 01	0 01	<0 010	0 015	0 013	0 018
Mercury	0 002	5	4 733	4 489	0 3735	0 0069	0 01	0 008	0 005	0 0056	<0 001	<0 002	<0 002	<0 002	<0 001	<0 001	0 003	0 0059
Molybdenum	-	1 991	0 153	<0 010	0 4841	<0 250	<0 250	<0 250	<0 250	0 25	<0 250	<0 250	<0 250	<0 250	<0 250	<0 250	<0 250	0 043
Nickel	0 1	0 64	1 341	1 196	0 999	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	0 029
Nitrate/Nitrite	10	30 08	29 25	34 31	34 69	321	55	78 8	148 15	125	215	790	228	191	195	199	174	230
pH (0 1 units)	6 5 - 8 5	9 95	9 82	9 75	9 83	9 13	8 41	8 05	7 78	7 88	8 97	7 83	8 22	8 61	8 4	7 69	7 68	8 03
Phosphorus	-	3 656	4 162	0 28	0 828	2 145	<0 250	0 48	<0 250	<0 250	<0 250	<0 250	0 25	<0 250	<0 250	<0 250	<0 250	0 06
Potassium	-	12 36	13 41	21 24	19	15 07	13 71	26 42	25 98	19 5	32 8	27	19 5	24 3	30 3	18 4	22 6	27
Scandium	-	<0 005	<0 005	<0 005	0 025	<0 050	<0 050	<0 050	<0 050	<0 050	<0 100	<0 100	0 1	<0 100	<0 100	<0 100	<0 050	<0 05
Selenium	0 05	0 012	0 006	0 012	<0 002	0 053	0 06	0 029	0 093	0 031	0 119	0 117	0 141	0 085	0 09	0 144	0 094	0 12
Silver	0 1	<0 025	0 096	0 146	0 092	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 005
Sodium	-	221 1	274 5	374 8	324 6	505 8	395 6	645 4	626 3	500 3	785	641	641	633	846	819	777	680
Strontium	-	0 015	0 057	0 065	0 068	<0 200	0 975	<0 200	0 143	0 396	0 406	0 0304	0 316	0 35	0 37	0 349	0 342	0 36
Sulfate	250 - 500	526 6	497 4	610	669 8	1239	815	943	1090	1500	1874	1117	1317	1042	1093	1220	1010	1500
Thallium	0 002	<0 100	<0 100	<0 100	<0 100	0 194	0 174	0 014	0 013	0 007	<0 001	0 007	0 001	0 008	0 007	0 01	0 009	0 011
Tin	-	<0 050	<0 050	<0 050	0 13	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 05
Titanium	-	0 042	<0 010	0 018	<0 010	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 05
Total Dissolved Solids	500-1000	1080	1190	1750	1390	2367	2373	2501	2991	2978	3892	3208	3340	3355	3705	3988	3452	3800
Vanadium	-	0 024	<0 010	0 047	0 021	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	0 013
WAD Cyanide	0 2	71 42	62 32	22 92	30 12	0 21	<0 02	0 11	<0 02	0 38	<0 02	0 28	0 23	0 22	0 26	0 19	0 14	0 098
Zinc	5	3 359	3 135	0 224	0 992	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 05

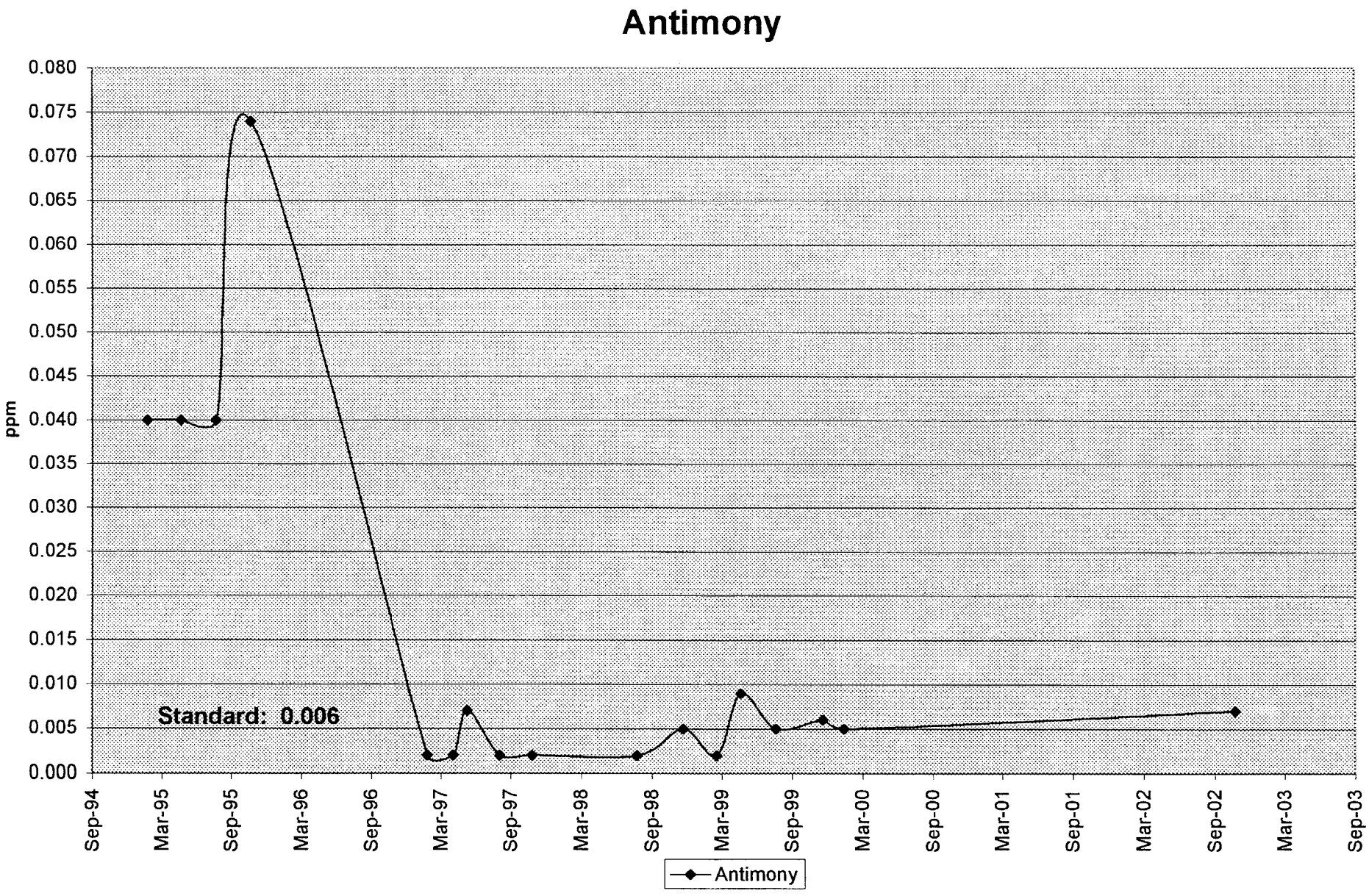
Heap Effluent Water Quality

Easy Junior Project



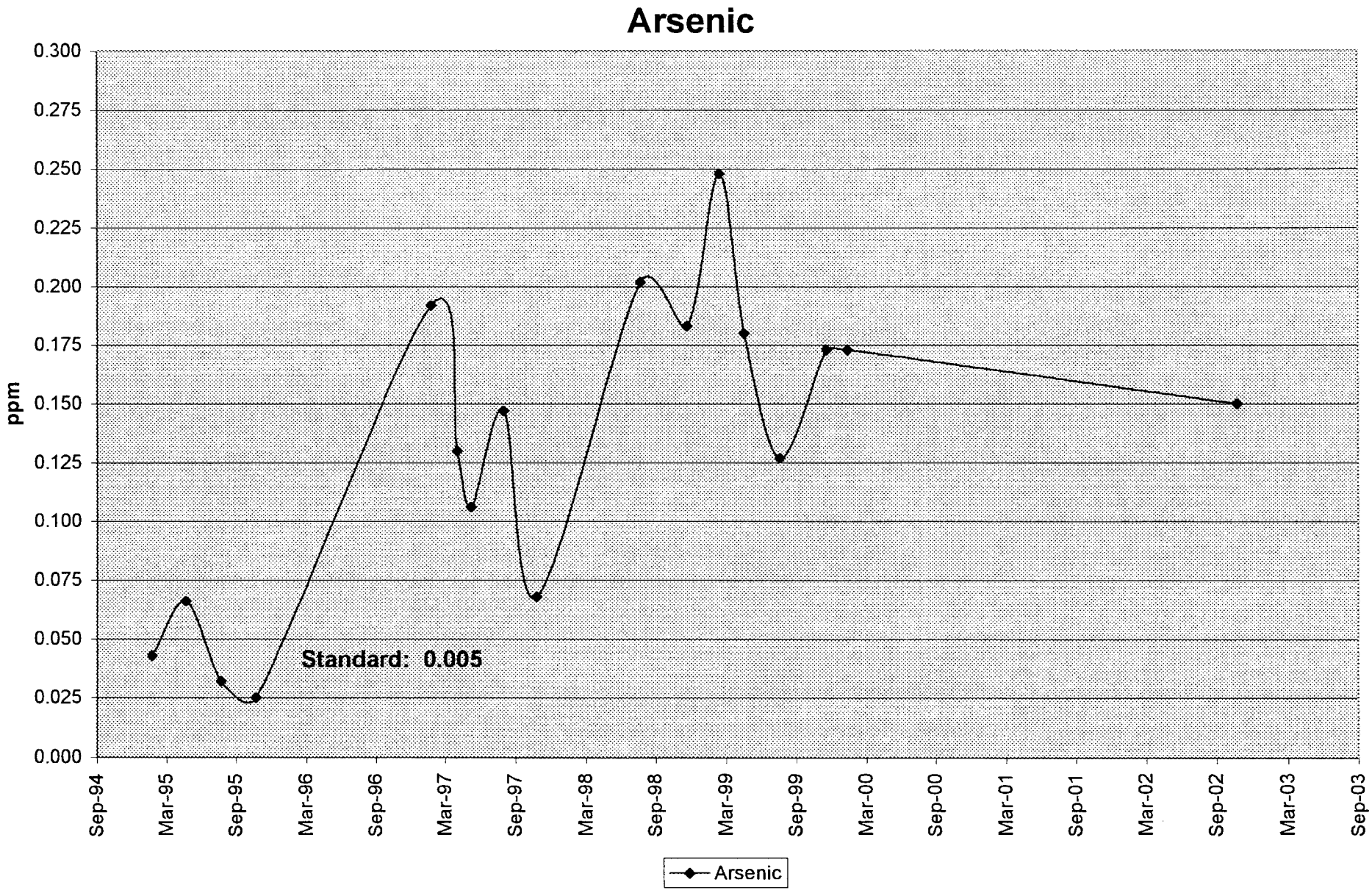
Heap Effluent Water Quality

Easy Junior Project



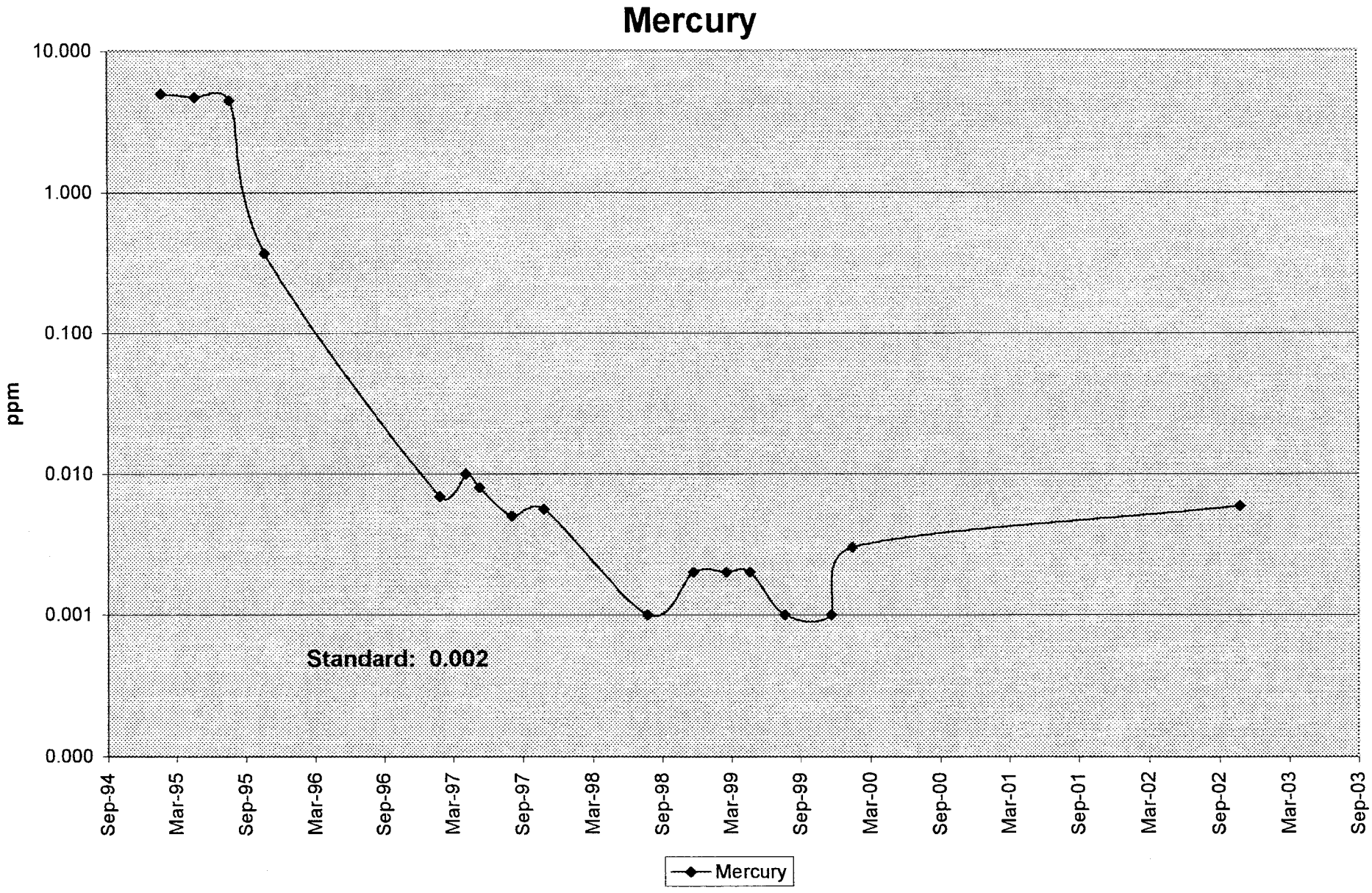
Heap Effluent Water Quality

Easy Junior Project



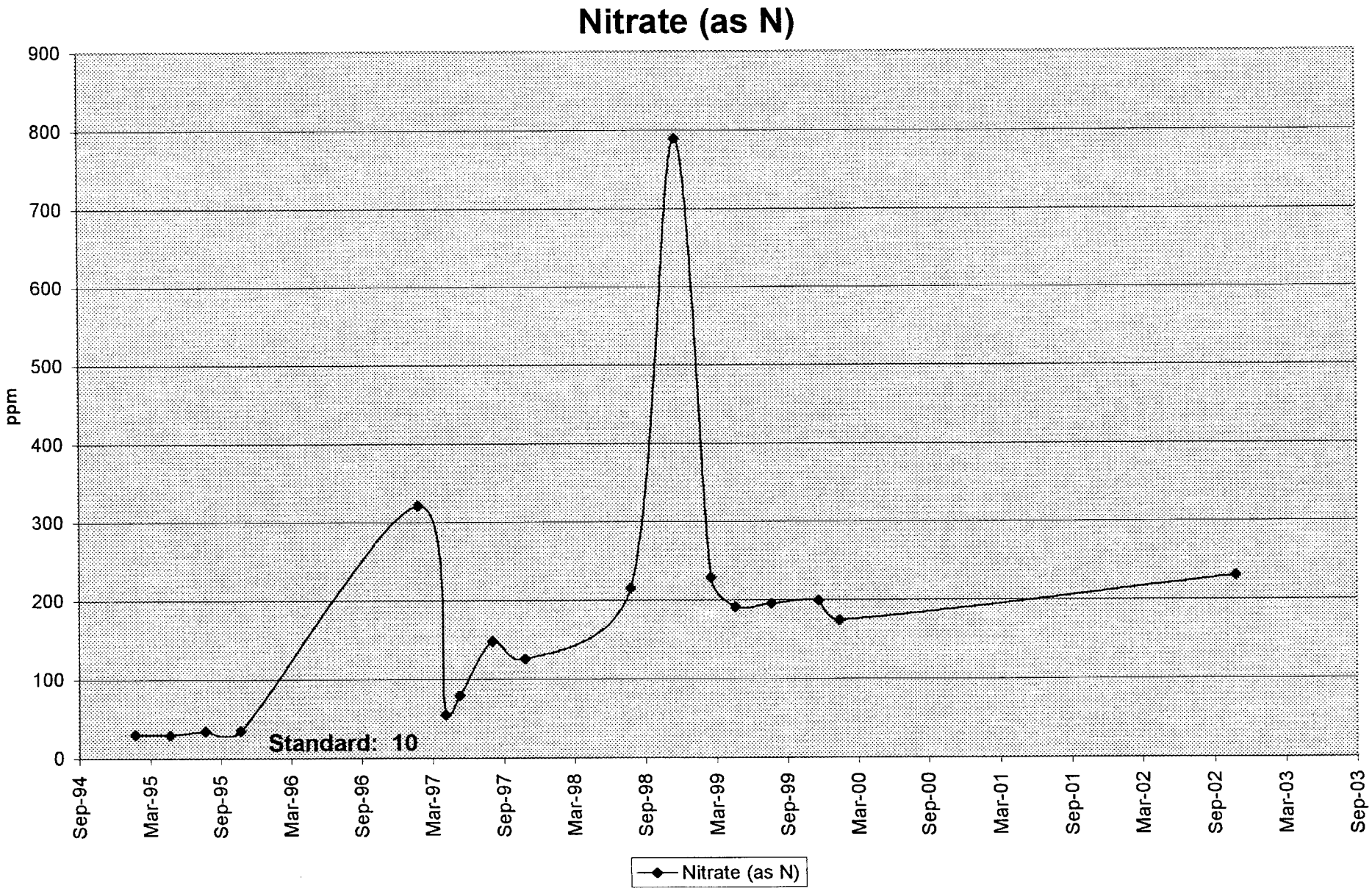
Heap Effluent Water Quality

Easy Junior Project



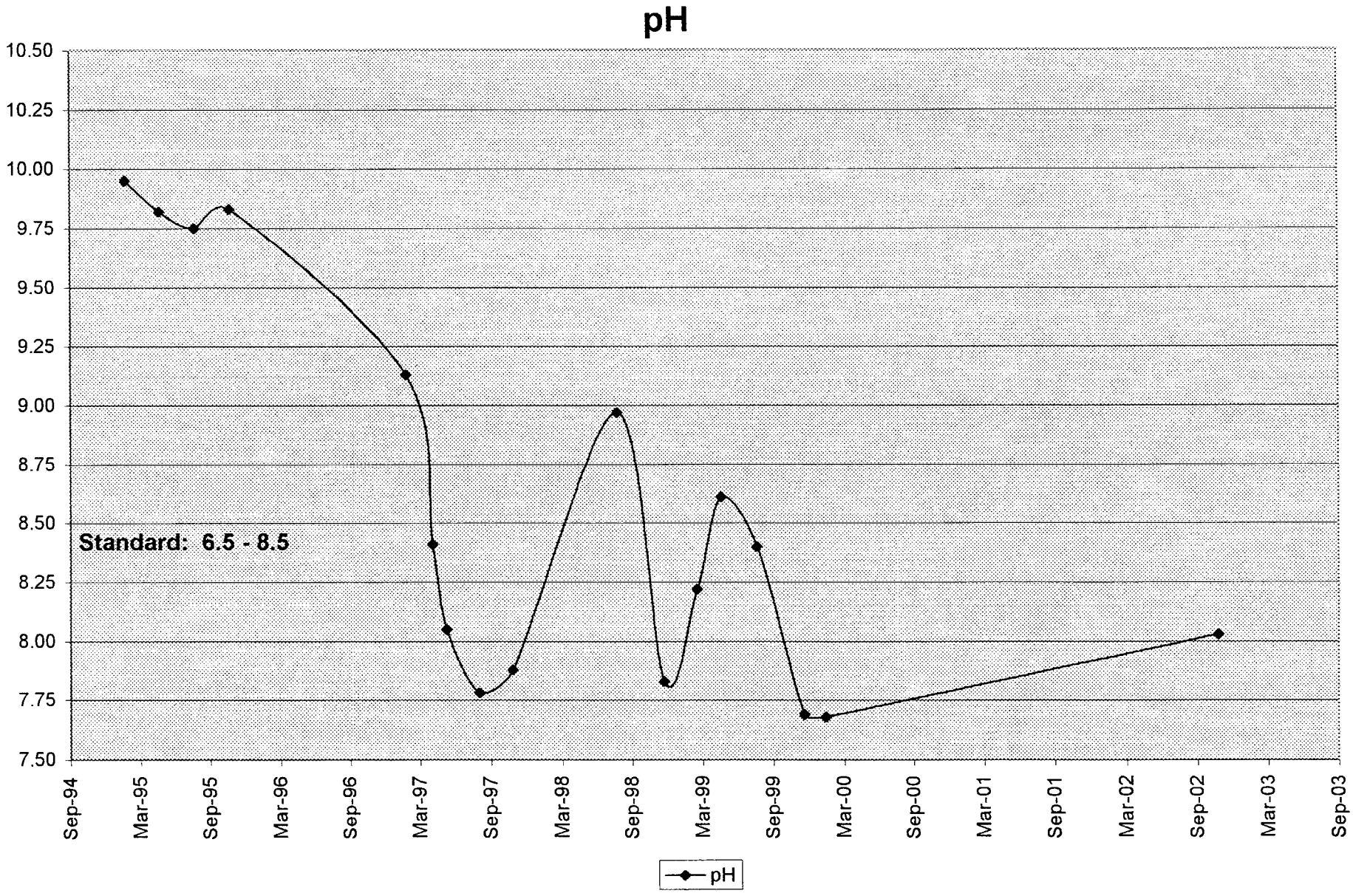
Heap Effluent Water Quality

Easy Junior Project



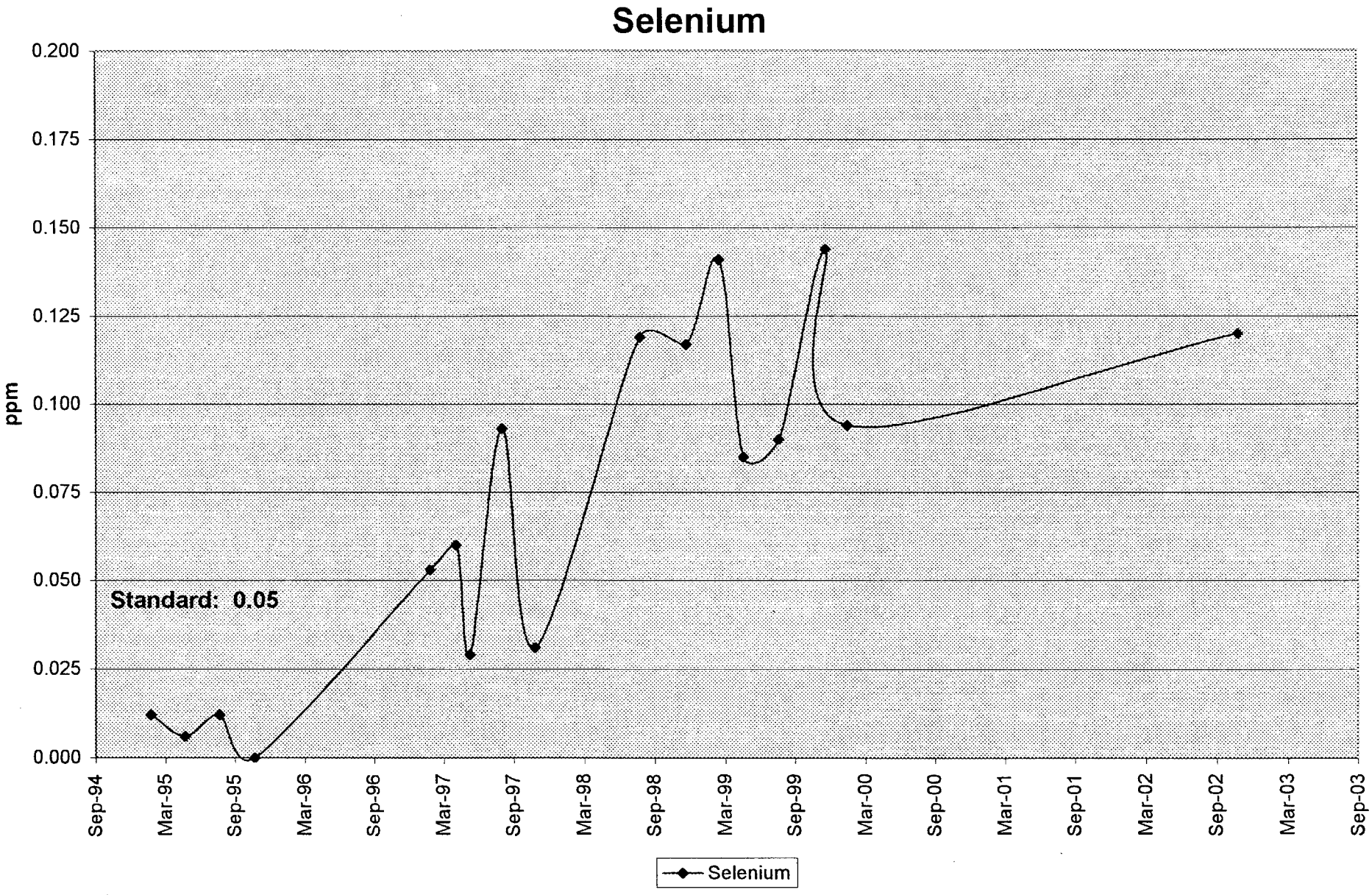
Heap Effluent Water Quality

Easy Junior Project



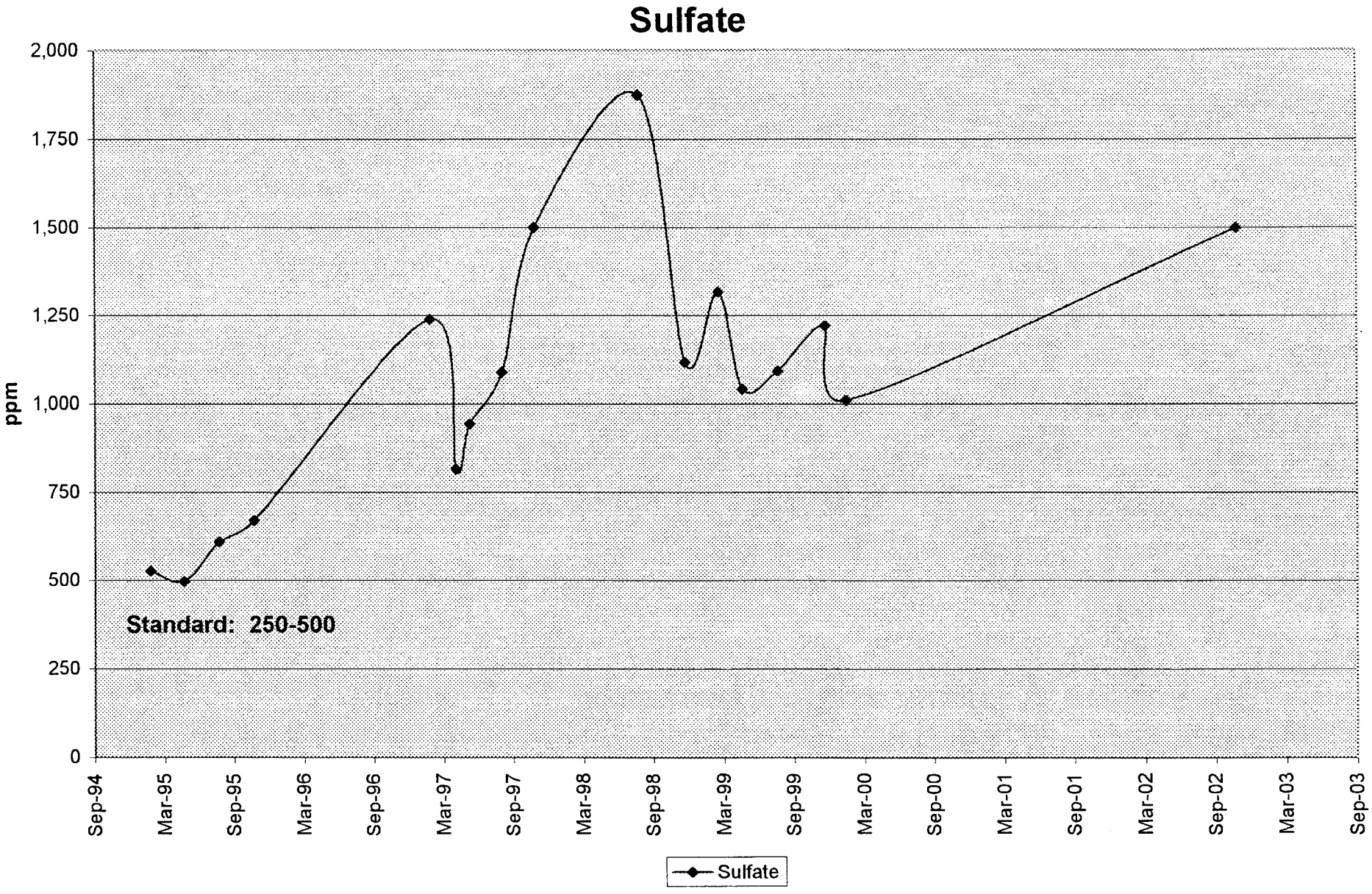
Heap Effluent Water Quality

Easy Junior Project



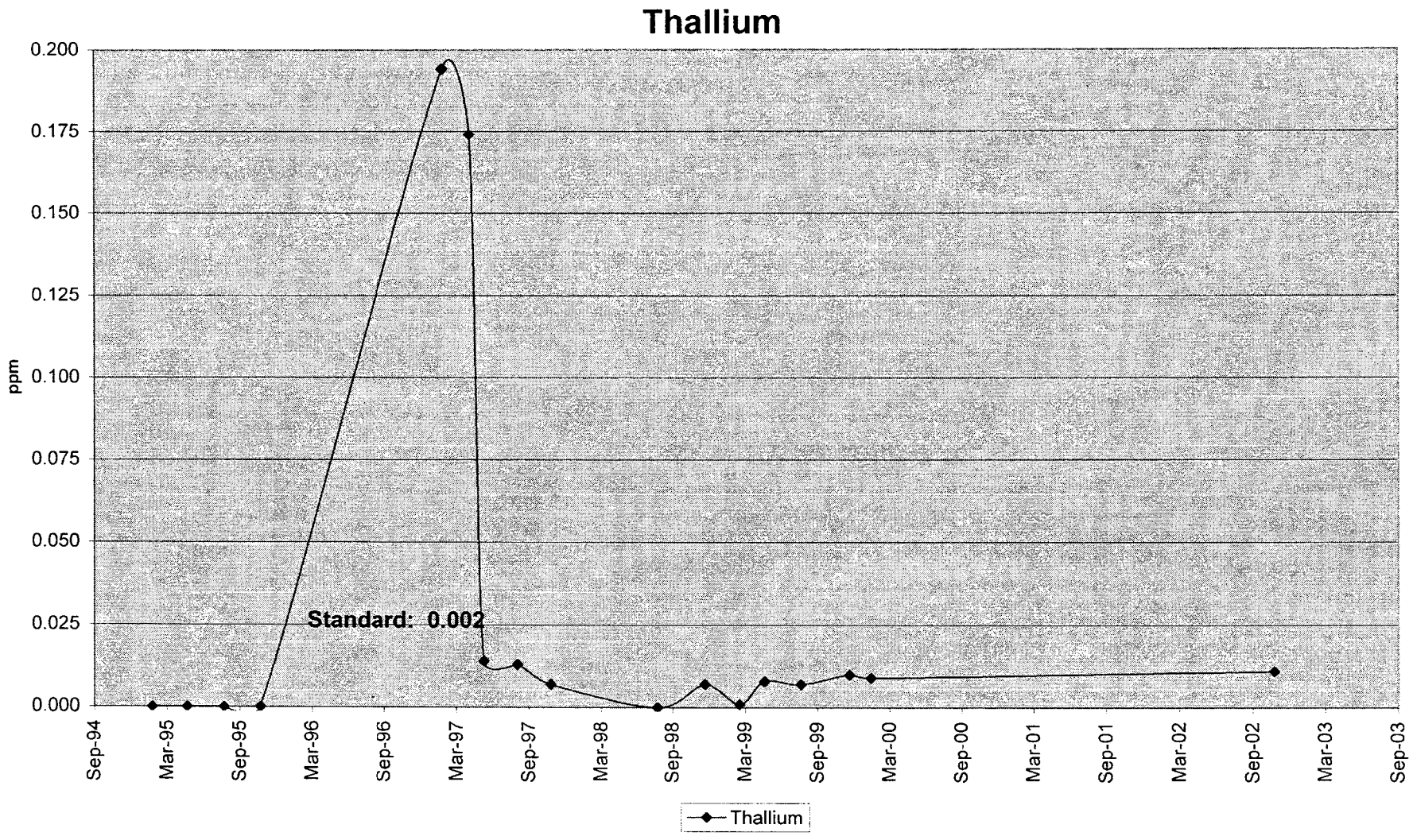
Heap Effluent Water Quality

Easy Junior Project



Heap Effluent Water Quality

Easy Junior Project



Heap Effluent Water Quality

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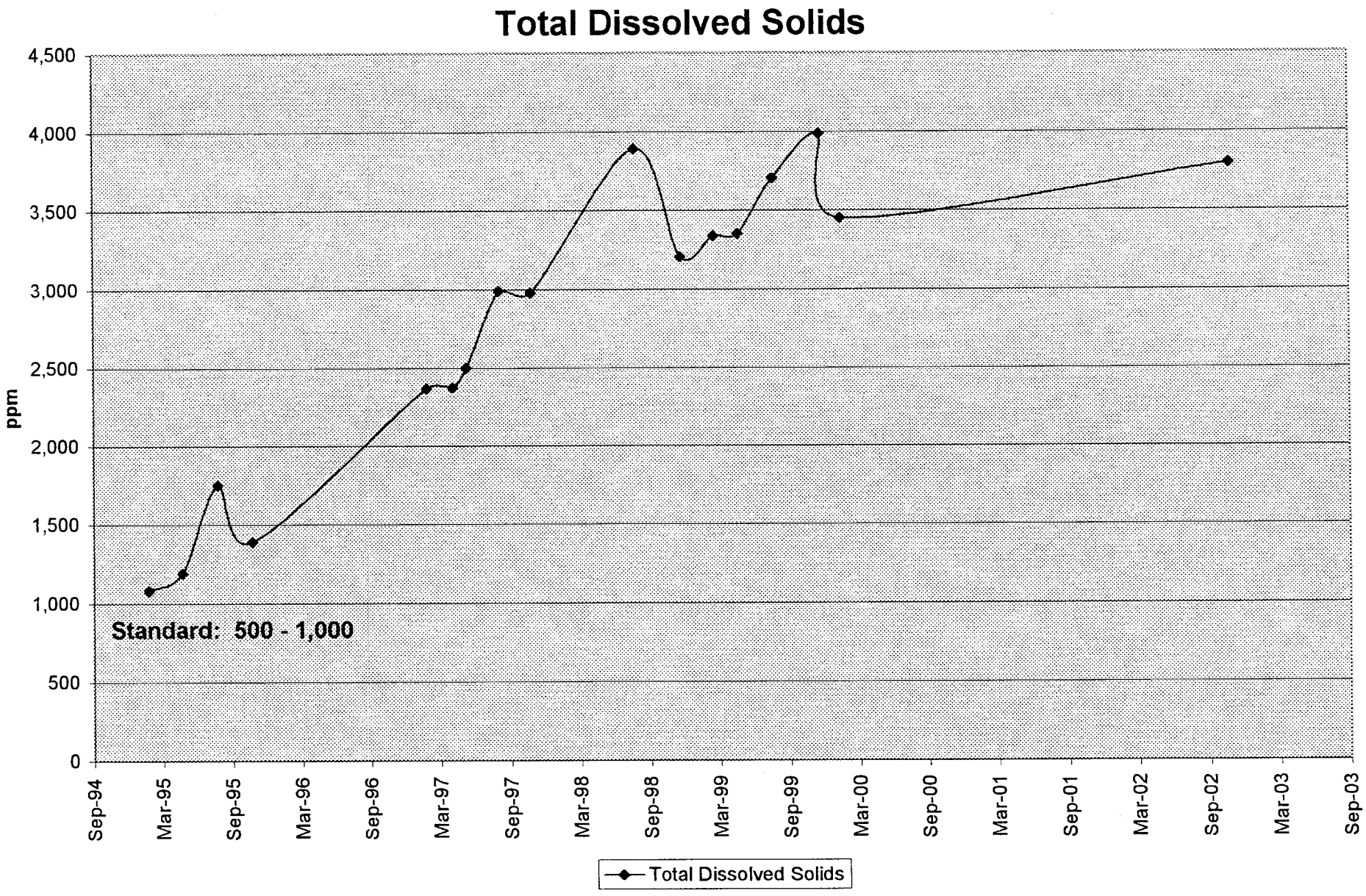
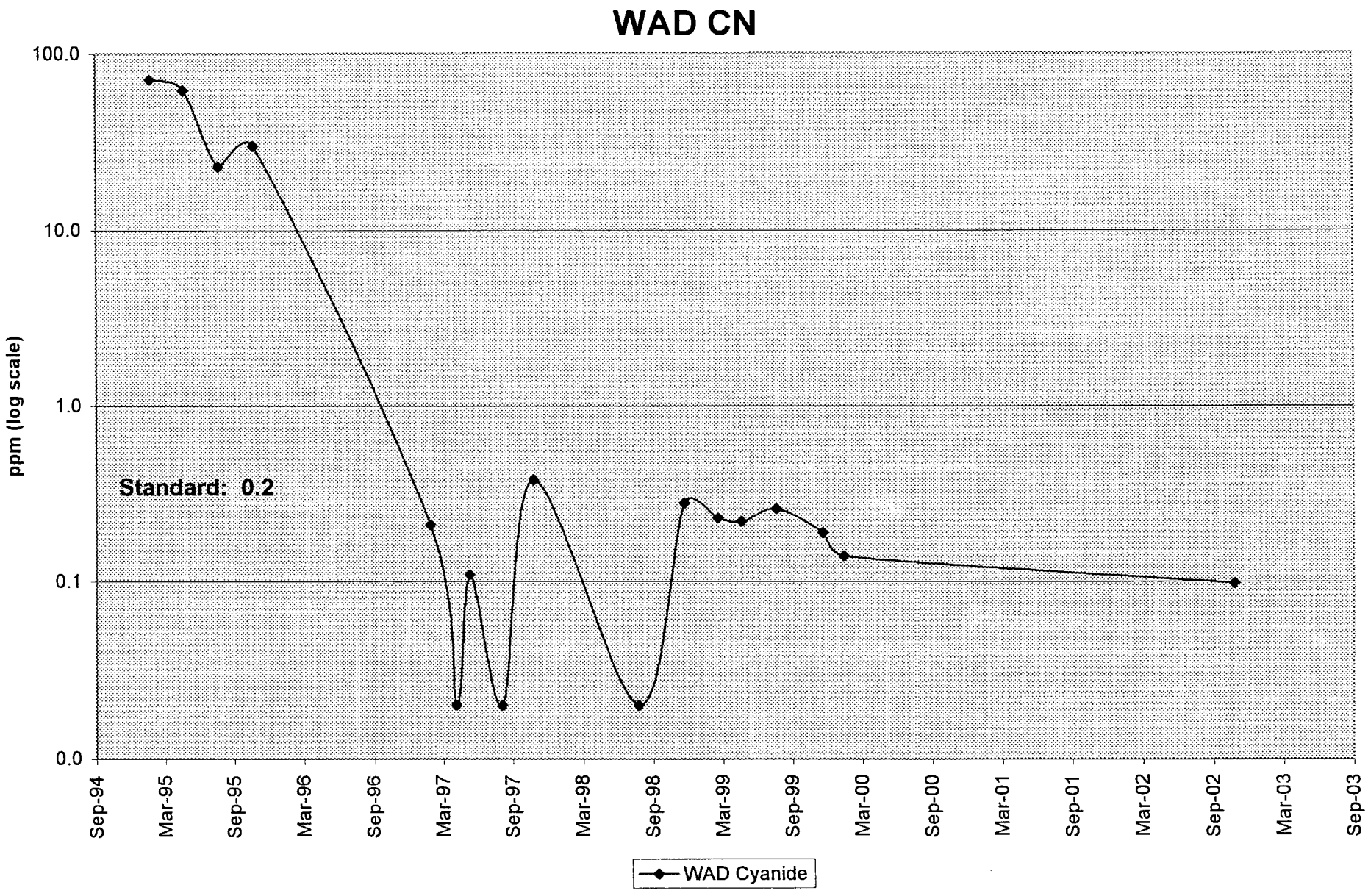


Heap Effluent Water Quality

Easy Junior Project



Company Name: Alta Gold Company
Laboratory Number: P045-02
Date: February 28, 2000

Purchase Order Number: 18883 EJ
Calendar Year 2000

NDEP Profile II

Sample Date: 2-9-00 Sample Location: Easy Junior Pad Effluent	*Standards (mg/l)	RESULTS (mg/l)
Alkalinity (Total as $CaCO_3$)	-	64
Aluminum	0.05 - 0.2	0.125
Antimony	0.006	0.005
Arsenic	0.05	0.173
Barium	2.0	0.336
Beryllium	0.004	<0.002
Bismuth	-	0.154
Boron	-	0.336
Cadmium	0.005	<0.003
Calcium	-	385
Chloride	250 - 400	61.2
Chromium	0.1	0.019
Cobalt	-	0.385
Copper	1.3	0.018
Fluoride	2 - 4	1.2
Gallium	-	<0.200
Iron	0.3 - 0.6	0.180
Lead	0.015	<0.007
Lithium	-	<0.010
Magnesium	125 - 150	12.7
Manganese	0.05 - 0.10	0.013
Mercury	0.002	0.003
Molybdenum	-	<0.250
Nickel	0.1	<0.025
Nitrate (NO_3 + NO_2 as N)	10	174
**pH (± 0.1 units)	6.5 - 8.5	7.68
Phosphorous	-	<0.250
Potassium	-	22.6
Scandium	-	<0.050
Selenium	0.05	0.094
Silver	0.10	<0.035
Sodium	-	777
Strontium	-	0.342
Sulfate	250 - 500	1010
Thallium	0.002	0.009
Tin	-	<0.100
Titanium	-	<0.100
Total Dissolved Solids	500 - 1000	3452
Vanadium	-	<0.100
W.A.D. Cyanide	0.2	0.14
Zinc	5.0	<0.050

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
Director of Laboratory Services

Company Name: Alt [redacted]old Company
Laboratory Number: N341-02
Purchase Order Number: 18821 EJ

Page: 3 of 3

Date: December 16, 1999

NDEP Profile II

Calendar Year 1999 Sample Date: 12-2-99 Sample Location: Easy Junior Pad Effluent (4th QTR 1999)	*Standards (mg/l)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Alkalinity (Total as $CaCO_3$)	-	62	56	50.6	64.0
Aluminum	0.05 - 0.2	<0.025	0.195	0.111	0.155
Antimony	0.006	<0.003	0.009	0.005	0.006
Arsenic	0.05	0.248	0.180	0.127	0.173
Barium	2.0	<0.050	<0.050	0.233	<0.050
Beryllium	0.004	<0.004	<0.004	<0.002	<0.002
Bismuth	-	<0.050	<0.050	<0.050	<0.050
Boron	-	0.204	0.516	0.464	0.494
Cadmium	0.005	<0.003	<0.003	<0.003	<0.003
Calcium	-	288	295	331	392
Chloride	250 - 400	76.7	70.0	66.7	66
Chromium	0.1	0.014	0.014	0.020	0.017
Cobalt	-	0.360	0.330	0.333	0.392
Copper	1.3	0.030	0.028	0.059	0.022
Fluoride	2 - 4	4.0	1.9	1.8	1.5
Gallium	-	<0.250	<0.250	<0.250	<0.250
Iron	0.3 - 0.6	0.125	0.055	0.114	0.184
Lead	0.015	<0.007	<0.007	0.008	<0.007
Lithium	-	<0.010	0.049	<0.010	<0.010
Magnesium	125 - 150	19.5	11.7	10.4	12.5
Manganese	0.05 - 0.10	0.010	0.010	<0.010	0.015
Mercury	0.002	<0.002	<0.002	<0.001	<0.001
Molybdenum	-	<0.250	<0.250	<0.250	<0.250
Nickel	0.1	<0.025	<0.025	<0.025	<0.025
Nitrate (NO_3 + NO_2 as N)	10	228	191	195	199
**pH (± 0.1 units)	6.5 - 8.5	8.22	8.61	8.40	7.69
Phosphorous	-	0.250	<0.250	<0.250	<0.250
Potassium	-	19.5	24.3	30.3	18.4
Scandium	-	0.100	<0.100	<0.100	<0.100
Selenium	0.05	0.141	0.085	0.090	0.114
Silver	0.10	<0.035	<0.035	<0.035	<0.035
Sodium	-	641	633	848	819
Strontium	-	0.316	0.350	0.370	0.349
Sulfate	250 - 500	1317	1042	1093	1220
Thallium	0.002	0.001	0.008	0.007	0.010
Tin	-	<0.100	<0.100	<0.100	<0.100
Titanium	-	<0.100	<0.100	<0.100	<0.100
Total Dissolved Solids	500 - 1000	3340	3355	3705	3988
Vanadium	-	<0.100	<0.100	<0.100	<0.100
W.A.D. Cyanide	0.2	0.23	0.22	0.26	0.19
Zinc	5.0	<0.050	<0.050	<0.050	<0.050

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
Director of Laboratory Services

Company Name: AL .GOLD COMPANY

Laboratory Number: M356-01 Purchase Order Number: 17633 EJ

Date: January 7, 1999 Calendar Year: 1998

NDEP Profile II

Sample Date: 12-17-98 Sample Location: Easy Junior Pad Effluent	*Standards (mg/l)	RESULTS (mg/l)
Alkalinity (Total as $CaCO_3$)	-	46
Aluminum	0.05 - 0.2	<0.025
Antimony	0.006	0.005
Arsenic	0.05	[redacted] 0.183
Barium	2.0	<0.050
Beryllium	0.004	<0.004
Bismuth	-	<0.050
Boron	-	0.29
Cadmium	0.005	<0.003
Calcium	-	255
Chloride	250 - 400	85.0
Chromium	0.1	<0.010
Cobalt	-	0.393
Copper	1.3	<0.010
Fluoride	2 - 4	2.0
Gallium	-	<0.250
Iron	0.3 - 0.6	0.170
Lead	0.015	<0.007
Lithium	-	<0.010
Magnesium	125 - 150	8.7
Manganese	0.05 - 0.10	0.020
Mercury	0.002	<0.002
Molybdenum	-	<0.250
Nickel	0.1	<0.025
Nitrate (NO_3 + NO_2 as N)	10	[redacted] 190
**pH (± 0.1 units)	6.5 - 8.5	7.83
Phosphorous	-	<0.250
Potassium	-	27.0
Scandium	-	<0.100
Selenium	0.05	[redacted] 0.117
Silver	0.10	<0.035
Sodium	-	641
Strontium	-	0.304
Sulfate	250 - 500	[redacted] 1117
Thallium	0.002	[redacted] 0.007
Tin	-	<0.100
Titanium	-	<0.100
Total Dissolved Solids	500 - 1000	[redacted] 3208
Vanadium	-	<0.100
W.A.D. Cyanide	0.2	[redacted] 0.28
Zinc	5.0	<0.050

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
Director of Laboratory Services

COL•TECH EnviroLabs, Inc.

1855 Deming Way, Sparks, Nevada 89431 PH 800-774-3676 702-331-7602 FAX 775-331-7954

Company Name: AL(GOLD COMPANY
Laboratory Number: M233-01
Date: September 11, 1998

Purchase Order Number: 16462 AEJ

NDEP Profile II

Calendar Year 1998

Sample Date: 8-19-98 Sample Location: Easy Junior Barren Pond Solution	*Standards (mg/l)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Alkalinity (Total as $CaCO_3$)	-	NO	NO	68	
Aluminum	0.05 - 0.2	SAMPLE	SAMPLE	0.029	
Antimony	0.006			<0.003	
Arsenic	0.05			[redacted]	0.202
Barium	2.0			<0.050	
Beryllium	0.004			<0.004	
Bismuth	-			<0.050	
Boron	-			<0.200	
Cadmium	0.005			<0.003	
Calcium	-			214.5	
Chloride	250 - 400			131	
Chromium	0.1			<0.010	
Cobalt	-			0.408	
Copper	1.3			0.010	
Fluoride	2 - 4			2.3	
Gallium	-			<0.250	
Iron	0.3 - 0.6			<0.020	
Lead	0.015			<0.007	
Lithium	-			<0.010	
Magnesium	125 - 150			10.0	
Manganese	0.05 - 0.10			<0.010	
Mercury	0.002			<0.001	
Molybdenum	-			<0.250	
Nickel	0.1			<0.025	
Nitrate (NO_3 + NO_2 as N)	10			[redacted]	215
**pH (± 0.1 units)	6.5 - 8.5			[redacted]	8.97
Phosphorous	-			<0.250	
Potassium	-			32.8	
Scandium	-			<0.100	
Selenium	0.05			[redacted]	0.119
Silver	0.10			<0.035	
Sodium	-			785.	
Strontium	-			0.406	
Sulfate	250 - 500			[redacted]	1874
Thallium	0.002			<0.001	
Tin	-			<0.100	
Titanium	-			<0.100	
Total Dissolved Solids	500 - 1000			[redacted]	3592
Vanadium	-			<0.100	
W.A.D. Cyanide	0.2			<0.02	
Zinc	5.0			<0.050	

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
General Manager

COL•TECH EnviroLabs, Inc.
[illegible] Nevada 89431 PH 800 774 3636 702 331 3600 FAX 702 331 7264

Cal Year 1997
Description: EJ Pregnant Sol.
Cert. Lab: CT EL. #0031
Sample Date:
Sampled By:

	Std. (mg/L)	1997 2/19/1997 1st Qtr.	1997 4/28/1997 2nd Qtr.	1997 6/3/1997 2nd Qtr.	1997 8/27/1997 3rd Qtr.	1997 11/19/1997 4th Qtr.
Alkalinity (total as CaCO3)	-	15.66	44	40	36	80
Aluminum	0.05 - 0.2	<0.025	<0.025	0.279	0.299	0.327
Antimony	0.006	<0.003	<0.003	0.007	<0.003	<0.003
Arsenic	0.05	0.192	0.13	0.106	0.147	0.068
Barium	2	0.025	0.009	0.013	0.018	<0.005
Beryllium	0.004	<0.002	<0.002	<0.002	<0.002	<0.002
Bismuth	-	<0.050	<0.050	<0.050	<0.050	<0.050
Boron	-	0.018	<0.200	<0.200	<0.200	0.34
Cadmium	0.005	<0.002	<0.002	<0.002	0.053	<0.002
Calcium	-	145.3	137	190.4	238	319
Chloride	250-400	125.6	77.99	67.4	95.72	85.08
Chromium	0.1	<0.010	0.011	<0.010	0.021	<0.010
Cobalt	-	0.484	0.385	0.385	0.463	0.471
Copper	1.3	0.066	0.134	0.044	0.013	<0.010
Fluoride	2.0-4.0	1.9	1.56	1.21	1.78	1.2
Gallium	-	<0.200	<0.200	<0.200	<0.200	<0.200
Iron	0.3-0.6	0.135	0.053	0.079	2.466	0.26
Lead	0.015	<0.007	<0.007	<0.007	<0.007	<0.007
Lithium	-	0.137	0.06	0.126	<0.010	<0.050
Magnesium	125-150	1.776	2.801	4.751	4.295	10.1
Manganese	0.05-0.10	<0.005	0.006	0.016	0.093	0.02
Mercury	0.002	0.0069	0.01	0.008	0.005	0.0056
Molybdenum	-	<0.250	<0.250	<0.250	<0.250	0.25
Nickel	0.1	<0.025	<0.025	<0.025	<0.025	<0.025
Nitrate/Nitrite	10	321	55	78.8	148.15	125
pH (0.1 units)	6.5-8.5	9.13	8.41	8.05	7.78	7.88
Phosphorus	-	2.145	<0.250	0.48	<0.250	<0.250
Potassium	-	15.07	13.71	26.42	25.98	19.5
Scandium	-	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium	0.05	0.053	0.06	0.029	0.093	0.031
Silver	0.1	<0.035	<0.035	<0.035	<0.035	<0.035
Sodium	-	505.8	395.6	645.4	626.3	500.3
Strontium	-	<0.200	0.975	<0.200	0.143	0.396
Sulfate	250-500	1239	812-5	943	1090	1500
Thallium	0.002	0.194	0.174	0.014	0.013	0.007
Tin	-	<0.100	<0.100	<0.100	<0.100	<0.100
Titanium	-	<0.100	<0.100	<0.100	<0.100	<0.100
Total Dissolved Solids	500-1000	2367	2373	2501	2991	2978
Vanadium	-	<0.100	<0.100	<0.100	<0.100	<0.100
WAD Cyanide	0.2	0.21	<0.02	0.11	<0.02	0.38
Zinc	5	<0.050	<0.050	<0.050	<0.050	<0.050

Company Name: ALTA GOLD COMPANY
Laboratory Number: J320-02
Date: December 14, 1995

Purchase Order Number: 8254 EJ

NDEP Profile II

Calendar Year 1995 Sample Date 11-15-95 Sample Location EJ Preg	*Standards (mg/l)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Alkalinity (Total $CaCO_3$)	-	209.2	139.5	140.3	150
Aluminum	-	0.418	0.071	<0.065	0.428
Antimony	-	<0.050	<0.050	<0.050	0.074
Arsenic	0.05	0.043	0.066	0.032	<0.025
Barium	1.0	0.051	0.014	0.006	0.022
Beryllium	-	<0.001	<0.001	<0.001	<0.001
Bismuth	-	<0.050	<0.005	<0.050	0.097
Cadmium	0.01	0.023	<0.005	<0.005	<0.005
Calcium	-	57.02	64.73	64.80	59.50
Chloride	-	173.7	168.4	120.5	156.0
Chromium	0.05	<0.010	<0.010	0.024	<0.010
Cobalt	-	0.316	0.354	0.379	0.398
Copper	1.0	5.217	7.519	4.431	4.625
Fluoride	2	5.88	3.38	5.70	4.02
Gallium	-	<0.050	<0.050	<0.050	<0.050
Iron	0.3 - 0.6	<0.005	0.074	0.123	0.036
Lead	0.015	<0.015	<0.015	<0.015	<0.015
Lithium	-	<0.010	<0.010	<0.010	<0.010
Magnesium	125 - 150	0.454	0.486	0.552	0.558
Manganese	0.05 - 0.10	<0.005	<0.005	<0.005	<0.005
Mercury	0.002	5.000	4.733	4.489	0.3735
Molybdenum	-	1.991	0.153	<0.010	0.481
Nickel	-	0.640	1.341	1.196	0.999
Nitrate (as N)	10	30.08	29.25	34.31	34.69
**pH (± 0.1 units)	6.5 - 8.5	9.95	9.82	9.75	9.83
Phosphorous	-	3.656	4.162	0.280	0.828
Potassium	-	12.36	13.41	21.24	19.00
Scandium	-	<0.005	<0.005	<0.005	0.025
Selenium	0.01	0.012	0.006	0.012	<0.002
Silver	0.05	<0.025	0.096	0.146	0.092
Sodium	-	221.1	274.5	374.8	324.6
Strontium	-	0.015	0.057	0.065	0.068
Sulfate	250	526.6	497.4	610.0	669.8
Thallium	-	<0.100	<0.100	<0.100	<0.100
Tin	-	<0.050	<0.050	<0.050	0.130
Titanium	-	0.042	<0.010	0.018	<0.010
Total Dissolved Solids	500 - 1000	1080	1190	1750	1390
Vanadium	-	0.024	<0.010	0.047	0.021
W.A.D. Cyanide	0.2	71.42	62.32	22.92	30.12
Zinc	5.0	3.359	3.135	0.224	0.992

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
General Manager

Appendix C

HELP Model Results

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B106CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B106CN85.OUT


TIME:  13:14     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                    =      6.00   INCHES
          POROSITY                     =      0.4570 VOL/VOL
          FIELD CAPACITY               =      0.1310 VOL/VOL
          WILTING POINT                =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0787 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.472	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	2.742	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.348	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.472	INCHES
TOTAL INITIAL WATER	=	0.472	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

****

MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.025	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.229	0.276	0.670	0.241	0.192	0.338
	0.289	0.021	0.010	0.644	0.893	0.157
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0039
LAYER 1	0.0000	0.0000	0.0000	0.1863	0.0457	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.025	89.142	0.58
EVAPOTRANSPIRATION	3.960	14375.253	93.84
PERC./LEAKAGE THROUGH LAYER 1	0.235961	856.538	5.59
CHANGE IN WATER STORAGE	-0.001	-2.338	-0.02
SOIL WATER AT START OF YEAR	0.472	1714.671	
SOIL WATER AT END OF YEAR	0.472	1712.333	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.005	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.115	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.735	0.760	1.658	1.342	0.409
	1.115	0.457	0.621	0.388	0.315	0.441
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0098	0.2005	0.1396	0.0000
LAYER 1	0.0000	0.0000	0.0008	0.0013	0.0580	0.0117

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.115	417.206	1.18
EVAPOTRANSPIRATION	8.983	32606.635	91.94
PERC./LEAKAGE THROUGH LAYER 1	0.421617	1530.468	4.32
CHANGE IN WATER STORAGE	0.251	910.805	2.57
SOIL WATER AT START OF YEAR	0.472	1712.333	
SOIL WATER AT END OF YEAR	0.723	2623.138	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.368	0.091	0.000	0.000	0.000
	0.000	0.000	0.000	0.009	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.560	0.808	1.013	0.507	0.374
	1.314	0.499	0.398	0.984	0.115	0.022
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0016	0.3107	0.0968	0.0001	0.0017
LAYER 1	0.0000	0.0000	0.0000	0.7484	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.467	1696.095	5.66
EVAPOTRANSPIRATION	6.975	25319.135	84.55
PERC./LEAKAGE THROUGH LAYER 1	1.159225	4207.987	14.05
CHANGE IN WATER STORAGE	-0.351	-1275.718	-4.26
SOIL WATER AT START OF YEAR	0.723	2623.138	
SOIL WATER AT END OF YEAR	0.371	1347.420	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.008	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.029
EVAPOTRANSPIRATION	0.390	0.092	0.604	0.324	2.295	0.391
	0.625	1.590	0.246	0.284	0.213	0.594
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.9283	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.032	117.022	0.35
EVAPOTRANSPIRATION	7.648	27762.959	83.22
PERC./LEAKAGE THROUGH LAYER 1	0.928347	3369.898	10.10
CHANGE IN WATER STORAGE	0.581	2109.823	6.32
SOIL WATER AT START OF YEAR	0.371	1347.420	
SOIL WATER AT END OF YEAR	0.872	3165.901	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.014	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.002	0.210	0.064	0.235	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.668	0.798	1.953	2.772	0.677	0.001
	0.045	0.244	0.978	0.296	1.435	0.878
PERCOLATION/LEAKAGE THROUGH	0.0000	0.1950	0.1071	0.6907	0.0000	0.0000
LAYER 1	0.0000	0.0000	0.2481	0.0386	0.3904	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.511	1855.562	4.10
EVAPOTRANSPIRATION	10.746	39007.820	86.17
PERC./LEAKAGE THROUGH LAYER 1	1.670026	6062.196	13.39
CHANGE IN WATER STORAGE	-0.457	-1659.478	-3.67
SOIL WATER AT START OF YEAR	0.872	3165.901	
SOIL WATER AT END OF YEAR	0.495	1797.765	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.115	0.054	0.048	0.000	0.000
	0.000	0.000	0.000	0.002	0.000	0.006
STD. DEVIATIONS	0.011	0.168	0.052	0.105	0.000	0.000
	0.000	0.000	0.000	0.004	0.000	0.013
EVAPOTRANSPIRATION						
TOTALS	0.481	0.492	0.959	1.202	1.003	0.303
	0.678	0.562	0.451	0.519	0.594	0.418
STD. DEVIATIONS	0.215	0.302	0.561	1.049	0.836	0.171
	0.536	0.605	0.369	0.298	0.559	0.342
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0393	0.0855	0.1976	0.2136	0.0011
	0.0000	0.0000	0.0498	0.1949	0.0988	0.0023
STD. DEVIATIONS	0.0000	0.0870	0.1337	0.2878	0.4041	0.0017
	0.0000	0.0000	0.1109	0.3187	0.1651	0.0052

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.230	(0.2397)	835.01	2.620
EVAPOTRANSPIRATION	7.662	(2.5214)	27814.36	87.271
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.88304	(0.57648)	3205.418	10.05735
CHANGE IN WATER STORAGE	0.005	(0.4281)	16.62	0.052

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.190	690.6262
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.507770	1843.20667
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2798
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	0.4953	0.0825
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B106CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B106CN88.OUT


TIME:  13:12     DATE:   4/24/2003



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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                  LAYER  1
                                  --------

                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER   5
          THICKNESS                     =      6.00   INCHES
          POROSITY                      =      0.4570 VOL/VOL
          FIELD CAPACITY                =      0.1310 VOL/VOL
          WILTING POINT                 =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0793 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.476	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	2.742	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.348	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.476	INCHES
TOTAL INITIAL WATER	=	0.476	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.025	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.006	0.000	0.000
EVAPOTRANSPIRATION	0.226	0.274	0.668	0.237	0.189	0.261
	0.326	0.082	0.010	0.646	0.909	0.156
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0001	0.0000	0.0000	0.0002
LAYER 1	0.0000	0.0000	0.0000	0.1629	0.0445	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.030	110.046	0.72
EVAPOTRANSPIRATION	3.984	14462.012	94.41
PERC./LEAKAGE THROUGH LAYER 1	0.207669	753.839	4.92
CHANGE IN WATER STORAGE	-0.002	-7.296	-0.05
SOIL WATER AT START OF YEAR	0.476	1726.740	
SOIL WATER AT END OF YEAR	0.474	1719.444	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.116	0.000	0.011	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.734	0.760	1.321	1.341	0.376
	1.122	0.410	0.691	0.300	0.311	0.441
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0058	0.2032	0.4751	0.0000
LAYER 1	0.0004	0.0000	0.0000	0.0621	0.0683	0.0122

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.127	461.471	1.30
EVAPOTRANSPIRATION	8.546	31021.041	87.47
PERC./LEAKAGE THROUGH LAYER 1	0.827085	3002.318	8.47
CHANGE IN WATER STORAGE	0.270	980.263	2.76
SOIL WATER AT START OF YEAR	0.474	1719.444	
SOIL WATER AT END OF YEAR	0.744	2699.706	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.023	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.369	0.091	0.000	0.000	0.000
	0.000	0.000	0.000	0.052	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.560	0.815	1.026	0.489	0.345
	1.517	0.355	0.275	1.013	0.112	0.022
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0017	0.3005	0.0951	0.0001	0.0000
LAYER 1	0.0009	0.0000	0.0000	0.7997	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.513	1860.668	6.21
EVAPOTRANSPIRATION	6.910	25081.994	83.75
PERC./LEAKAGE THROUGH LAYER 1	1.197887	4348.329	14.52
CHANGE IN WATER STORAGE	-0.370	-1343.485	-4.49
SOIL WATER AT START OF YEAR	0.744	2699.706	
SOIL WATER AT END OF YEAR	0.374	1356.222	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.000	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.010	0.000
	0.000	0.000	0.000	0.000	0.000	0.029
EVAPOTRANSPIRATION	0.390	0.093	0.605	0.325	2.306	0.354
	0.628	1.611	0.232	0.280	0.212	0.594
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.9097	0.0088
LAYER 1	0.0000	0.0037	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.042	154.000	0.46
EVAPOTRANSPIRATION	7.628	27689.205	83.00
PERC./LEAKAGE THROUGH LAYER 1	0.922242	3347.740	10.04
CHANGE IN WATER STORAGE	0.597	2168.764	6.50
SOIL WATER AT START OF YEAR	0.374	1356.222	
SOIL WATER AT END OF YEAR	0.891	3233.645	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.007	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.002	0.215	0.066	0.238	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.668	0.798	1.897	2.786	0.683	0.011
	0.040	0.215	0.976	0.300	1.442	0.878
PERCOLATION/LEAKAGE THROUGH	0.0000	0.1733	0.1305	0.7220	0.0029	0.0000
LAYER 1	0.0000	0.0000	0.2796	0.0394	0.3747	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.521	1892.270	4.18
EVAPOTRANSPIRATION	10.694	38820.992	85.76
PERC./LEAKAGE THROUGH LAYER 1	1.722271	6251.845	13.81
CHANGE IN WATER STORAGE	-0.468	-1698.996	-3.75
SOIL WATER AT START OF YEAR	0.891	3233.645	
SOIL WATER AT END OF YEAR	0.503	1825.990	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.005	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.117	0.055	0.048	0.004	0.000
	0.000	0.000	0.000	0.012	0.000	0.006
STD. DEVIATIONS	0.011	0.169	0.053	0.106	0.006	0.000
	0.000	0.000	0.000	0.023	0.000	0.013
EVAPOTRANSPIRATION						
TOTALS	0.481	0.492	0.949	1.139	1.001	0.269
	0.726	0.534	0.437	0.508	0.597	0.418
STD. DEVIATIONS	0.215	0.302	0.536	1.029	0.843	0.151
	0.596	0.615	0.389	0.321	0.565	0.342
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0350	0.0874	0.2041	0.2775	0.0018
	0.0003	0.0007	0.0559	0.2128	0.0975	0.0024
STD. DEVIATIONS	0.0000	0.0773	0.1315	0.3014	0.4087	0.0039
	0.0004	0.0017	0.1250	0.3335	0.1577	0.0055

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.247	(0.2495)	895.69	2.810
EVAPOTRANSPIRATION	7.552	(2.4501)	27415.05	86.018
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.97543	(0.55262)	3540.814	11.10969
CHANGE IN WATER STORAGE	0.005	(0.4432)	19.85	0.062

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.191	693.4675
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.567574	2060.29272
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2928
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	0.5030	0.0838
SNOW WATER	0.000	

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**                                                                           **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B106CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B106CN91.OUT


TIME:  13:10     DATE:   4/24/2003



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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                  LAYER  1
                                  --------

                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER   5
          THICKNESS                     =      6.00   INCHES
          POROSITY                      =      0.4570 VOL/VOL
          FIELD CAPACITY                =      0.1310 VOL/VOL
          WILTING POINT                 =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0806 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.100000005000E-02 CM/SEC
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.483	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	2.742	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.348	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.483	INCHES
TOTAL INITIAL WATER	=	0.483	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.025	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.040	0.000	0.000
EVAPOTRANSPIRATION	0.221	0.272	0.666	0.228	0.180	0.159
	0.158	0.144	0.130	0.744	0.863	0.151
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002
LAYER 1	0.0000	0.0000	0.0000	0.2098	0.0315	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.065	235.620	1.54
EVAPOTRANSPIRATION	3.917	14218.282	92.82
PERC./LEAKAGE THROUGH LAYER 1	0.241566	876.884	5.72
CHANGE IN WATER STORAGE	-0.003	-12.191	-0.08
SOIL WATER AT START OF YEAR	0.483	1754.746	
SOIL WATER AT END OF YEAR	0.480	1742.555	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.119	0.000	0.038	0.000
	0.001	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.732	0.756	1.696	1.150	0.314
	1.356	0.208	0.441	1.202	0.133	0.434
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0019	0.1891	0.0552	0.0001
LAYER 1	0.0156	0.0000	0.0000	0.2028	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.157	569.410	1.61
EVAPOTRANSPIRATION	9.164	33263.656	93.79
PERC./LEAKAGE THROUGH LAYER 1	0.464582	1686.432	4.76
CHANGE IN WATER STORAGE	-0.015	-54.411	-0.15
SOIL WATER AT START OF YEAR	0.480	1742.555	
SOIL WATER AT END OF YEAR	0.465	1688.145	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.028	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.357	0.087	0.000	0.000	0.000
	0.000	0.000	0.000	0.152	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.558	0.605	1.239	0.304	0.254
	1.159	0.708	0.204	1.049	0.107	0.022
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0046	0.2913	0.0000	0.0000
LAYER 1	0.0822	0.0394	0.0000	0.7346	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.596	2165.248	7.23
EVAPOTRANSPIRATION	6.588	23913.289	79.85
PERC./LEAKAGE THROUGH LAYER 1	1.151982	4181.696	13.96
CHANGE IN WATER STORAGE	-0.086	-312.725	-1.04
SOIL WATER AT START OF YEAR	0.465	1688.145	
SOIL WATER AT END OF YEAR	0.379	1375.419	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	-0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.087	0.000
	0.000	0.030	0.000	0.000	0.000	0.031
EVAPOTRANSPIRATION	0.390	0.091	0.607	0.329	2.179	0.450
	0.307	1.641	0.230	0.264	0.205	0.594
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.8183	0.0026
LAYER 1	0.0000	0.2808	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.152	550.732	1.65
EVAPOTRANSPIRATION	7.286	26449.496	79.29
PERC./LEAKAGE THROUGH LAYER 1	1.101692	3999.144	11.99
CHANGE IN WATER STORAGE	0.650	2360.333	7.08
SOIL WATER AT START OF YEAR	0.379	1375.419	
SOIL WATER AT END OF YEAR	0.949	3444.412	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	0.010	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.003	0.215	0.068	0.246	0.000	0.000
	0.000	0.000	0.003	0.000	0.017	0.000
EVAPOTRANSPIRATION	0.726	0.818	1.967	2.651	0.889	0.001
	0.026	0.157	0.976	0.307	1.456	0.870
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0688	0.1635	0.6134	0.0216	0.0000
LAYER 1	0.0000	0.0000	0.3293	0.0520	0.2759	0.0241

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.552	2003.363	4.43
EVAPOTRANSPIRATION	10.844	39364.512	86.96
PERC./LEAKAGE THROUGH LAYER 1	1.548730	5621.891	12.42
CHANGE IN WATER STORAGE	-0.475	-1723.670	-3.81
SOIL WATER AT START OF YEAR	0.949	3444.412	
SOIL WATER AT END OF YEAR	0.554	2012.083	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.011	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.006	0.114	0.055	0.050	0.025	0.000
	0.000	0.006	0.001	0.038	0.003	0.006
STD. DEVIATIONS	0.011	0.165	0.053	0.110	0.038	0.000
	0.000	0.014	0.001	0.066	0.008	0.014
EVAPOTRANSPIRATION						
TOTALS	0.492	0.494	0.920	1.228	0.941	0.235
	0.601	0.572	0.396	0.713	0.553	0.414
STD. DEVIATIONS	0.231	0.307	0.588	1.006	0.801	0.168
	0.611	0.642	0.344	0.424	0.593	0.341
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0138	0.0340	0.2188	0.1790	0.0006
	0.0195	0.0640	0.0659	0.2398	0.0615	0.0048
STD. DEVIATIONS	0.0000	0.0308	0.0724	0.2538	0.3581	0.0011
	0.0356	0.1224	0.1473	0.2915	0.1207	0.0108

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.304	(0.2495)	1104.87	3.467
EVAPOTRANSPIRATION	7.560	(2.6292)	27441.85	86.102
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.90171	(0.53576)	3273.209	10.27005
CHANGE IN WATER STORAGE	0.014	(0.4046)	51.47	0.161

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.186	673.8373
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.506969	1840.29797
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2904
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	0.5543	0.0924
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B112CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B112CN85.OUT


TIME:  13:14     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
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                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                    =     12.00   INCHES
          POROSITY                     =      0.4570 VOL/VOL
          FIELD CAPACITY               =      0.1310 VOL/VOL
          WILTING POINT                =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0836 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.003	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	5.484	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.696	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.003	INCHES
TOTAL INITIAL WATER	=	1.003	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.239	0.282	0.675	0.250	0.204	0.284
	0.450	0.020	0.010	0.584	0.883	0.309
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0021	0.0037	0.0094	0.0105	0.0128
LAYER 1	0.0047	0.0000	0.0000	0.0019	0.0040	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.022	79.576	0.52
EVAPOTRANSPIRATION	4.188	15204.166	99.25
PERC./LEAKAGE THROUGH LAYER 1	0.049237	178.730	1.17
CHANGE IN WATER STORAGE	-0.040	-143.875	-0.94
SOIL WATER AT START OF YEAR	1.003	3641.708	
SOIL WATER AT END OF YEAR	0.964	3497.834	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.094	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.738	0.762	1.477	1.505	0.499
	1.520	0.450	0.626	0.289	0.308	0.437
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0022	0.0104	0.0002	0.0001
LAYER 1	0.0152	0.0010	0.0060	0.0009	0.0034	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.094	341.326	0.96
EVAPOTRANSPIRATION	9.352	33947.355	95.72
PERC./LEAKAGE THROUGH LAYER 1	0.039448	143.195	0.40
CHANGE IN WATER STORAGE	0.285	1033.230	2.91
SOIL WATER AT START OF YEAR	0.964	3497.834	
SOIL WATER AT END OF YEAR	1.248	4531.063	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.009	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.325	0.055	0.000	0.000	0.000
	0.000	0.000	0.000	0.006	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.559	0.774	1.303	0.533	0.474
	1.566	0.511	0.659	1.293	0.280	0.018
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0002	0.0000	0.0001
LAYER 1	0.0221	0.0012	0.0012	0.0001	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.386	1399.925	4.67
EVAPOTRANSPIRATION	8.350	30309.773	101.21
PERC./LEAKAGE THROUGH LAYER 1	0.024891	90.356	0.30
CHANGE IN WATER STORAGE	-0.510	-1852.560	-6.19
SOIL WATER AT START OF YEAR	1.248	4531.063	
SOIL WATER AT END OF YEAR	0.738	2678.503	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.012	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.028
EVAPOTRANSPIRATION	0.390	0.087	0.610	0.338	2.277	0.717
	1.075	1.587	0.232	0.245	0.190	0.588
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0013	0.0429	0.1009
LAYER 1	0.0289	0.0026	0.0010	0.0008	0.0014	0.0020

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.031	112.419	0.34
EVAPOTRANSPIRATION	8.337	30263.885	90.72
PERC./LEAKAGE THROUGH LAYER 1	0.181833	660.053	1.98
CHANGE IN WATER STORAGE	0.640	2323.337	6.96
SOIL WATER AT START OF YEAR	0.738	2678.503	
SOIL WATER AT END OF YEAR	1.298	4710.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.022	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.176	0.073	0.225	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.667	0.767	1.759	2.831	0.660	0.490
	0.341	0.318	0.946	0.444	1.322	0.879
PERCOLATION/LEAKAGE THROUGH	0.0002	0.0000	0.0036	0.3204	0.1538	0.0539
LAYER 1	0.0305	0.0019	0.0001	0.0190	0.0013	0.0035

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.475	1724.342	3.81
EVAPOTRANSPIRATION	11.423	41466.520	91.61
PERC./LEAKAGE THROUGH LAYER 1	0.588195	2135.147	4.72
CHANGE IN WATER STORAGE	-0.016	-59.885	-0.13
SOIL WATER AT START OF YEAR	1.298	4710.500	
SOIL WATER AT END OF YEAR	1.361	4941.955	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.015	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.100	0.044	0.046	0.000	0.000
	0.000	0.000	0.000	0.001	0.000	0.006
STD. DEVIATIONS	0.010	0.147	0.043	0.100	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.012
EVAPOTRANSPIRATION						
TOTALS	0.483	0.487	0.916	1.240	1.036	0.493
	0.990	0.577	0.495	0.571	0.597	0.446
STD. DEVIATIONS	0.211	0.295	0.476	1.047	0.844	0.154
	0.578	0.596	0.371	0.425	0.489	0.320
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0004	0.0019	0.0683	0.0415	0.0336
	0.0203	0.0013	0.0017	0.0045	0.0020	0.0011
STD. DEVIATIONS	0.0001	0.0009	0.0018	0.1410	0.0652	0.0436
	0.0106	0.0010	0.0025	0.0081	0.0016	0.0016

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.202	(0.2131)	731.52	2.295
EVAPOTRANSPIRATION	8.330	(2.6346)	30238.34	94.876
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.17672	(0.23848)	641.496	2.01276
CHANGE IN WATER STORAGE	0.072	(0.4264)	260.05	0.816

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.179	651.0829
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.071688	260.22653
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2317
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.3614	0.1135
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B112CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B112CN88.OUT


TIME:  13:12     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER   5
          THICKNESS                     =     12.00   INCHES
          POROSITY                      =      0.4570 VOL/VOL
          FIELD CAPACITY                =      0.1310 VOL/VOL
          WILTING POINT                 =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0842 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.010	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	5.484	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.696	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.010	INCHES
TOTAL INITIAL WATER	=	1.010	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.000
EVAPOTRANSPIRATION	0.237	0.281	0.673	0.246	0.199	0.232
	0.475	0.066	0.010	0.568	0.888	0.306
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0020	0.0091	0.0089	0.0076
LAYER 1	0.0143	0.0009	0.0000	0.0007	0.0026	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.025	89.843	0.59
EVAPOTRANSPIRATION	4.181	15175.748	99.07
PERC./LEAKAGE THROUGH LAYER 1	0.046279	167.994	1.10
CHANGE IN WATER STORAGE	-0.032	-114.991	-0.75
SOIL WATER AT START OF YEAR	1.010	3666.573	
SOIL WATER AT END OF YEAR	0.978	3551.583	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.005	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.095	0.000	0.008	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.737	0.761	1.579	1.298	0.425
	1.359	0.862	0.239	0.913	0.410	0.438
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0024	0.0171	0.0031	0.0198
LAYER 1	0.0041	0.0019	0.0000	0.0050	0.0124	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.103	374.569	1.06
EVAPOTRANSPIRATION	9.762	35436.121	99.92
PERC./LEAKAGE THROUGH LAYER 1	0.065847	239.026	0.67
CHANGE IN WATER STORAGE	-0.161	-584.599	-1.65
SOIL WATER AT START OF YEAR	0.978	3551.583	
SOIL WATER AT END OF YEAR	0.817	2966.983	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.303	0.048	0.000	0.000	0.000
	0.000	0.000	0.000	0.039	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.558	0.602	1.121	0.405	0.391
	1.520	0.723	0.660	1.326	0.208	0.018
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0074	0.0045	0.0035
LAYER 1	0.0042	0.0012	0.0002	0.0120	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.390	1414.517	4.72
EVAPOTRANSPIRATION	7.912	28719.072	95.90
PERC./LEAKAGE THROUGH LAYER 1	0.032995	119.771	0.40
CHANGE IN WATER STORAGE	-0.084	-305.852	-1.02
SOIL WATER AT START OF YEAR	0.817	2966.983	
SOIL WATER AT END OF YEAR	0.733	2661.131	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.007	0.000
	0.000	0.000	0.000	0.000	0.000	0.028
EVAPOTRANSPIRATION	0.390	0.088	0.613	0.331	2.338	0.721
	0.881	1.720	0.226	0.248	0.188	0.588
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0005	0.0031	0.0694
LAYER 1	0.0462	0.0473	0.0006	0.0016	0.0011	0.0008

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.038	138.991	0.42
EVAPOTRANSPIRATION	8.329	30235.254	90.63
PERC./LEAKAGE THROUGH LAYER 1	0.170612	619.321	1.86
CHANGE IN WATER STORAGE	0.652	2366.122	7.09
SOIL WATER AT START OF YEAR	0.733	2661.131	
SOIL WATER AT END OF YEAR	1.305	4735.913	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.026	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.178	0.074	0.228	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.666	0.763	1.817	2.785	0.849	0.401
	0.287	0.340	0.903	0.476	1.122	1.042
PERCOLATION/LEAKAGE THROUGH	0.0005	0.0000	0.0008	0.2501	0.1576	0.0524
LAYER 1	0.0258	0.0016	0.0008	0.0018	0.0043	0.0003

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.481	1745.382	3.86
EVAPOTRANSPIRATION	11.452	41572.457	91.84
PERC./LEAKAGE THROUGH LAYER 1	0.495980	1800.407	3.98
CHANGE IN WATER STORAGE	0.041	147.852	0.33
SOIL WATER AT START OF YEAR	1.305	4735.913	
SOIL WATER AT END OF YEAR	1.426	5175.106	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.008	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.096	0.043	0.046	0.003	0.000
	0.000	0.000	0.000	0.008	0.000	0.006
STD. DEVIATIONS	0.010	0.139	0.043	0.101	0.004	0.000
	0.000	0.000	0.000	0.017	0.000	0.013
EVAPOTRANSPIRATION						
TOTALS	0.483	0.485	0.893	1.212	1.018	0.434
	0.904	0.742	0.408	0.706	0.563	0.478
STD. DEVIATIONS	0.212	0.294	0.520	1.040	0.851	0.177
	0.536	0.630	0.363	0.421	0.421	0.379
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0001	0.0000	0.0010	0.0568	0.0354	0.0306
	0.0189	0.0106	0.0003	0.0042	0.0041	0.0002
STD. DEVIATIONS	0.0002	0.0000	0.0011	0.1082	0.0683	0.0290
	0.0177	0.0205	0.0003	0.0046	0.0049	0.0004

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.207	(0.2126)	752.66	2.362
EVAPOTRANSPIRATION	8.327	(2.7015)	30227.73	94.843
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.16234	(0.19423)	589.304	1.84900
CHANGE IN WATER STORAGE	0.083	(0.3264)	301.71	0.947

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.169	614.3635
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.057256	207.83989
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2316
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.4256	0.1188
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B112CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B112CN91.OUT


TIME:  13:10     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                    =     12.00   INCHES
          POROSITY                     =      0.4570 VOL/VOL
          FIELD CAPACITY               =      0.1310 VOL/VOL
          WILTING POINT                =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0870 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.044	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	5.484	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.696	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.044	INCHES
TOTAL INITIAL WATER	=	1.044	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.039	0.000	0.000
EVAPOTRANSPIRATION	0.230	0.280	0.669	0.233	0.188	0.159
	0.154	0.136	0.111	0.708	0.853	0.292
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0008	0.0019	0.0060
LAYER 1	0.0039	0.0055	0.0095	0.0014	0.0090	0.0002

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.061	221.756	1.45
EVAPOTRANSPIRATION	4.012	14563.007	95.07
PERC./LEAKAGE THROUGH LAYER 1	0.038192	138.637	0.91
CHANGE IN WATER STORAGE	0.109	395.192	2.58
SOIL WATER AT START OF YEAR	1.044	3791.271	
SOIL WATER AT END OF YEAR	1.153	4186.463	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.008	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.099	0.000	0.058	0.000
	0.001	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.733	0.759	1.572	1.294	0.334
	1.384	0.339	0.457	1.138	0.408	0.456
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0020	0.0003	0.0026	0.0000
LAYER 1	0.0011	0.0000	0.0000	0.0004	0.0001	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.158	573.307	1.62
EVAPOTRANSPIRATION	9.614	34900.418	98.41
PERC./LEAKAGE THROUGH LAYER 1	0.006315	22.923	0.06
CHANGE IN WATER STORAGE	-0.009	-31.539	-0.09
SOIL WATER AT START OF YEAR	1.153	4186.463	
SOIL WATER AT END OF YEAR	1.145	4154.924	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.007	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.311	0.049	0.000	0.000	0.000
	0.000	0.000	0.000	0.167	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.564	0.718	1.197	0.389	0.258
	1.108	0.479	0.550	1.352	0.311	0.026
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0003
LAYER 1	0.0001	0.0000	0.0000	0.4667	0.1079	0.0050

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.527	1913.720	6.39
EVAPOTRANSPIRATION	7.333	26619.465	88.89
PERC./LEAKAGE THROUGH LAYER 1	0.580059	2105.614	7.03
CHANGE IN WATER STORAGE	-0.190	-691.287	-2.31
SOIL WATER AT START OF YEAR	1.145	4154.924	
SOIL WATER AT END OF YEAR	0.954	3463.637	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.080	0.000
	0.000	0.035	0.000	0.000	0.000	0.032
EVAPOTRANSPIRATION	0.390	0.096	0.605	0.444	2.280	0.556
	0.308	1.725	0.449	0.287	0.210	0.595
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0032	0.0019	0.0356	0.0115	0.0142
LAYER 1	0.0305	0.0209	0.0239	0.0521	0.0286	0.0042

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.150	546.040	1.64
EVAPOTRANSPIRATION	7.946	28843.068	86.46
PERC./LEAKAGE THROUGH LAYER 1	0.226544	822.353	2.47
CHANGE IN WATER STORAGE	0.867	3148.252	9.44
SOIL WATER AT START OF YEAR	0.954	3463.637	
SOIL WATER AT END OF YEAR	1.741	6320.548	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.184	0.076	0.235	0.000	0.000
	0.000	0.000	0.003	0.000	0.019	0.000
EVAPOTRANSPIRATION	0.733	0.829	2.028	2.686	0.942	0.285
	0.238	0.200	0.980	0.461	1.445	0.870
PERCOLATION/LEAKAGE THROUGH	0.0028	0.0078	0.0009	0.1705	0.1677	0.0477
LAYER 1	0.0256	0.0129	0.0041	0.0000	0.0023	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.519	1883.287	4.16
EVAPOTRANSPIRATION	11.697	42459.836	93.80
PERC./LEAKAGE THROUGH LAYER 1	0.442302	1605.558	3.55
CHANGE IN WATER STORAGE	-0.188	-682.580	-1.51
SOIL WATER AT START OF YEAR	1.741	6320.548	
SOIL WATER AT END OF YEAR	1.633	5929.309	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.008	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.099	0.045	0.048	0.028	0.000
	0.000	0.007	0.001	0.041	0.004	0.006
STD. DEVIATIONS	0.010	0.143	0.045	0.105	0.039	0.000
	0.001	0.016	0.001	0.072	0.008	0.014
EVAPOTRANSPIRATION						
TOTALS	0.495	0.500	0.956	1.227	1.019	0.318
	0.638	0.576	0.509	0.789	0.645	0.448
STD. DEVIATIONS	0.230	0.308	0.602	0.981	0.831	0.147
	0.566	0.656	0.311	0.449	0.510	0.317
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0006	0.0022	0.0009	0.0415	0.0367	0.0137
	0.0122	0.0079	0.0075	0.1041	0.0296	0.0019
STD. DEVIATIONS	0.0012	0.0034	0.0010	0.0737	0.0733	0.0199
	0.0146	0.0090	0.0100	0.2039	0.0452	0.0025

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.283	(0.2223)	1027.62	3.224
EVAPOTRANSPIRATION	8.120	(2.8528)	29477.16	92.488
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.25868	(0.25017)	939.017	2.94627
CHANGE IN WATER STORAGE	0.118	(0.4377)	427.61	1.342

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.173	627.2294
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.069988	254.05702
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2414
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0608

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.6334	0.1361
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B118CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B118CN85.OUT


TIME:  13:14     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                    =     18.00   INCHES
          POROSITY                     =      0.4570 VOL/VOL
          FIELD CAPACITY               =      0.1310 VOL/VOL
          WILTING POINT                =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0811 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.460	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	8.226	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.044	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.460	INCHES
TOTAL INITIAL WATER	=	1.460	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.021	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.232	0.265	0.663	0.216	0.175	0.257
	0.614	0.021	0.009	0.533	0.798	0.285
PERCOLATION/LEAKAGE THROUGH	0.0064	0.0170	0.0095	0.0229	0.0151	0.0000
LAYER 1	0.0397	0.0007	0.0008	0.0167	0.0344	0.0176

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.021	77.165	0.50
EVAPOTRANSPIRATION	4.068	14766.959	96.40
PERC./LEAKAGE THROUGH LAYER 1	0.180887	656.620	4.29
CHANGE IN WATER STORAGE	-0.050	-182.151	-1.19
SOIL WATER AT START OF YEAR	1.460	5299.363	
SOIL WATER AT END OF YEAR	1.410	5117.211	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.088	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.738	0.721	1.312	1.407	0.489
	1.754	0.534	0.220	0.812	0.381	0.444
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0207	0.1167	0.0187	0.0038
LAYER 1	0.0419	0.0108	0.0000	0.0054	0.0387	0.0046

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.088	319.297	0.90
EVAPOTRANSPIRATION	9.553	34676.125	97.78
PERC./LEAKAGE THROUGH LAYER 1	0.261341	948.668	2.67
CHANGE IN WATER STORAGE	-0.132	-478.989	-1.35
SOIL WATER AT START OF YEAR	1.410	5117.211	
SOIL WATER AT END OF YEAR	1.278	4638.222	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.282	0.034	0.000	0.000	0.000
	0.000	0.000	0.000	0.010	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.561	0.603	1.158	0.374	0.402
	1.666	0.463	0.296	1.210	0.315	0.025
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0021	0.0007	0.0571	0.0588	0.0563
LAYER 1	0.0714	0.0145	0.0002	0.1009	0.0546	0.0070

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.326	1181.691	3.95
EVAPOTRANSPIRATION	7.453	27053.686	90.34
PERC./LEAKAGE THROUGH LAYER 1	0.423488	1537.261	5.13
CHANGE IN WATER STORAGE	0.048	174.857	0.58
SOIL WATER AT START OF YEAR	1.278	4638.222	
SOIL WATER AT END OF YEAR	1.326	4813.079	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.012	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.025
EVAPOTRANSPIRATION	0.390	0.094	0.615	0.437	2.145	0.748
	1.182	1.564	0.224	0.271	0.187	0.581
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0071	0.0024	0.0762	0.0402	0.0824
LAYER 1	0.0884	0.0270	0.0086	0.0074	0.0032	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.029	104.310	0.31
EVAPOTRANSPIRATION	8.438	30630.822	91.82
PERC./LEAKAGE THROUGH LAYER 1	0.342936	1244.857	3.73
CHANGE IN WATER STORAGE	0.380	1379.696	4.14
SOIL WATER AT START OF YEAR	1.326	4813.079	
SOIL WATER AT END OF YEAR	1.626	5901.434	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.031	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.158	0.072	0.218	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.665	0.721	1.543	2.519	1.025	0.500
	0.984	0.269	0.785	0.425	0.967	1.041
PERCOLATION/LEAKAGE THROUGH	0.0001	0.0001	0.0245	0.0096	0.0025	0.0528
LAYER 1	0.0817	0.0062	0.0082	0.0291	0.0487	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.448	1627.451	3.60
EVAPOTRANSPIRATION	11.444	41543.281	91.78
PERC./LEAKAGE THROUGH LAYER 1	0.263420	956.213	2.11
CHANGE IN WATER STORAGE	0.314	1139.160	2.52
SOIL WATER AT START OF YEAR	1.626	5901.434	
SOIL WATER AT END OF YEAR	2.020	7331.935	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.088	0.039	0.044	0.000	0.000
	0.000	0.000	0.000	0.002	0.000	0.005
STD. DEVIATIONS	0.009	0.128	0.040	0.097	0.000	0.000
	0.000	0.000	0.000	0.005	0.000	0.011
EVAPOTRANSPIRATION						
TOTALS	0.481	0.476	0.829	1.129	1.025	0.479
	1.240	0.570	0.307	0.650	0.530	0.475
STD. DEVIATIONS	0.213	0.286	0.402	0.906	0.798	0.179
	0.476	0.590	0.288	0.370	0.335	0.378
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0013	0.0053	0.0116	0.0565	0.0270	0.0391
	0.0646	0.0118	0.0036	0.0319	0.0359	0.0059
STD. DEVIATIONS	0.0029	0.0072	0.0107	0.0429	0.0223	0.0358
	0.0226	0.0099	0.0044	0.0397	0.0200	0.0072

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.182	(0.1935)	661.98	2.077
EVAPOTRANSPIRATION	8.191	(2.7406)	29734.17	93.294
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.29441	(0.09214)	1068.724	3.35324
CHANGE IN WATER STORAGE	0.112	(0.2250)	406.51	1.275

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.162	588.1454
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.044555	161.73528
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1938
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	2.0198	0.1122
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B118CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B118CN88.OUT


TIME:  13:12     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                    =     18.00   INCHES
          POROSITY                     =      0.4570 VOL/VOL
          FIELD CAPACITY               =      0.1310 VOL/VOL
          WILTING POINT                =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0818 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.472	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	8.226	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.044	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.472	INCHES
TOTAL INITIAL WATER	=	1.472	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.021	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.000
EVAPOTRANSPIRATION	0.229	0.264	0.661	0.214	0.170	0.204
	0.529	0.168	0.009	0.531	0.791	0.281
PERCOLATION/LEAKAGE THROUGH	0.0068	0.0164	0.0102	0.0222	0.0164	0.0000
LAYER 1	0.0419	0.0134	0.0007	0.0291	0.0258	0.0179

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.024	87.587	0.57
EVAPOTRANSPIRATION	4.052	14708.158	96.02
PERC./LEAKAGE THROUGH LAYER 1	0.201016	729.687	4.76
CHANGE IN WATER STORAGE	-0.057	-206.837	-1.35
SOIL WATER AT START OF YEAR	1.472	5343.921	
SOIL WATER AT END OF YEAR	1.415	5137.084	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.004	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.088	0.000	0.015	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.737	0.723	1.307	1.406	0.405
	1.271	0.914	0.675	0.266	0.293	0.432
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0219	0.0943	0.0430	0.0444
LAYER 1	0.0224	0.0247	0.0183	0.0106	0.0009	0.0067

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.103	374.703	1.06
EVAPOTRANSPIRATION	9.170	33288.469	93.86
PERC./LEAKAGE THROUGH LAYER 1	0.287200	1042.536	2.94
CHANGE IN WATER STORAGE	0.209	759.403	2.14
SOIL WATER AT START OF YEAR	1.415	5137.084	
SOIL WATER AT END OF YEAR	1.624	5896.487	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.309	0.041	0.000	0.000	0.000
	0.000	0.000	0.000	0.050	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.558	0.746	1.198	0.483	0.354
	1.578	0.769	0.258	1.222	0.311	0.025
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0016	0.0045	0.0072	0.0220	0.0133
LAYER 1	0.0396	0.0257	0.0000	0.0660	0.0597	0.0031

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.400	1450.327	4.84
EVAPOTRANSPIRATION	7.882	28611.848	95.54
PERC./LEAKAGE THROUGH LAYER 1	0.242765	881.235	2.94
CHANGE IN WATER STORAGE	-0.274	-995.915	-3.33
SOIL WATER AT START OF YEAR	1.624	5896.487	
SOIL WATER AT END OF YEAR	1.350	4900.571	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.013	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.005	0.000
	0.000	0.000	0.000	0.000	0.000	0.026
EVAPOTRANSPIRATION	0.390	0.094	0.616	0.431	2.117	0.703
	0.790	2.036	0.212	0.259	0.184	0.581
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0035	0.0028	0.1188	0.0298	0.0669
LAYER 1	0.0726	0.0464	0.0168	0.0121	0.0050	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.034	124.729	0.37
EVAPOTRANSPIRATION	8.413	30539.221	91.55
PERC./LEAKAGE THROUGH LAYER 1	0.374818	1360.589	4.08
CHANGE IN WATER STORAGE	0.368	1335.145	4.00
SOIL WATER AT START OF YEAR	1.350	4900.571	
SOIL WATER AT END OF YEAR	1.638	5944.375	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.032	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.160	0.073	0.221	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.665	0.722	1.531	2.532	0.924	0.405
	1.022	0.405	0.732	0.397	1.207	0.995
PERCOLATION/LEAKAGE THROUGH	0.0003	0.0000	0.0300	0.0037	0.0000	0.0362
LAYER 1	0.1005	0.0337	0.0074	0.0168	0.0050	0.0204

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.454	1647.160	3.64
EVAPOTRANSPIRATION	11.538	41881.477	92.52
PERC./LEAKAGE THROUGH LAYER 1	0.254039	922.161	2.04
CHANGE IN WATER STORAGE	0.225	815.311	1.80
SOIL WATER AT START OF YEAR	1.638	5944.375	
SOIL WATER AT END OF YEAR	1.942	7051.026	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.000	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.094	0.040	0.045	0.004	0.000
	0.000	0.000	0.000	0.011	0.000	0.005
STD. DEVIATIONS	0.009	0.139	0.041	0.098	0.007	0.000
	0.000	0.000	0.000	0.022	0.000	0.012
EVAPOTRANSPIRATION						
TOTALS	0.481	0.475	0.855	1.137	1.020	0.414
	1.038	0.858	0.377	0.535	0.557	0.463
STD. DEVIATIONS	0.214	0.286	0.381	0.913	0.770	0.181
	0.408	0.721	0.313	0.400	0.432	0.362
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0014	0.0043	0.0139	0.0492	0.0222	0.0322
	0.0554	0.0288	0.0086	0.0269	0.0193	0.0096
STD. DEVIATIONS	0.0030	0.0069	0.0117	0.0535	0.0160	0.0263
	0.0310	0.0122	0.0086	0.0230	0.0246	0.0091

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.203	(0.2073)	736.90	2.312
EVAPOTRANSPIRATION	8.211	(2.7127)	29805.83	93.519
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.27197	(0.06523)	987.242	3.09758
CHANGE IN WATER STORAGE	0.094	(0.2568)	341.42	1.071

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.175	635.6013
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.033868	122.94221
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1944
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.9424	0.1079
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B118CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B118CN91.OUT


TIME:  13:11     DATE:   4/24/2003



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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                  LAYER  1
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                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                     =     18.00   INCHES
          POROSITY                      =      0.4570 VOL/VOL
          FIELD CAPACITY                =      0.1310 VOL/VOL
          WILTING POINT                 =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0841 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.100000005000E-02 CM/SEC
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.514	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	8.226	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.044	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.514	INCHES
TOTAL INITIAL WATER	=	1.514	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.040	0.000	0.000
EVAPOTRANSPIRATION	0.223	0.265	0.658	0.205	0.160	0.133
	0.136	0.122	0.108	0.668	0.810	0.282
PERCOLATION/LEAKAGE THROUGH	0.0070	0.0138	0.0098	0.0217	0.0090	0.0000
LAYER 1	0.0058	0.0088	0.0000	0.0051	0.0252	0.0010

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.062	226.034	1.48
EVAPOTRANSPIRATION	3.769	13680.873	89.31
PERC./LEAKAGE THROUGH LAYER 1	0.107125	388.865	2.54
CHANGE IN WATER STORAGE	0.282	1022.827	6.68
SOIL WATER AT START OF YEAR	1.514	5494.052	
SOIL WATER AT END OF YEAR	1.795	6516.879	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.097	0.000	0.066	0.000
	0.002	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.733	0.740	1.440	1.227	0.326
	1.337	0.334	0.440	1.087	0.391	0.452
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0153	0.0569	0.0504	0.0004
LAYER 1	0.0237	0.0113	0.0108	0.0964	0.1001	0.0151

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.165	599.700	1.69
EVAPOTRANSPIRATION	9.248	33571.887	94.66
PERC./LEAKAGE THROUGH LAYER 1	0.380404	1380.865	3.89
CHANGE IN WATER STORAGE	-0.024	-87.340	-0.25
SOIL WATER AT START OF YEAR	1.795	6516.879	
SOIL WATER AT END OF YEAR	1.771	6429.539	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.297	0.037	0.000	0.000	0.000
	0.000	0.000	0.000	0.175	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.562	0.699	1.102	0.373	0.249
	1.009	0.672	0.357	1.393	0.319	0.027
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0020	0.0079	0.0633	0.0216	0.0026
LAYER 1	0.0248	0.0134	0.0320	0.0055	0.0876	0.0137

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.509	1847.557	6.17
EVAPOTRANSPIRATION	7.143	25927.355	86.58
PERC./LEAKAGE THROUGH LAYER 1	0.274496	996.419	3.33
CHANGE IN WATER STORAGE	0.324	1176.165	3.93
SOIL WATER AT START OF YEAR	1.771	6429.539	
SOIL WATER AT END OF YEAR	2.095	7605.704	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.010	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.004	0.079	0.000
	0.000	0.037	0.000	0.000	0.000	0.034
EVAPOTRANSPIRATION	0.390	0.096	0.607	0.448	2.288	0.562
	0.314	1.716	0.456	0.289	0.211	0.595
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0094	0.0054	0.0482	0.0829	0.0255
LAYER 1	0.0032	0.0019	0.0012	0.0000	0.0000	0.0001

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.154	560.363	1.68
EVAPOTRANSPIRATION	7.972	28939.984	86.75
PERC./LEAKAGE THROUGH LAYER 1	0.177856	645.619	1.94
CHANGE IN WATER STORAGE	0.885	3213.752	9.63
SOIL WATER AT START OF YEAR	2.095	7605.704	
SOIL WATER AT END OF YEAR	2.900	10528.114	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	-0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.181	0.080	0.232	0.000	0.000
	0.000	0.000	0.004	0.000	0.024	0.000
EVAPOTRANSPIRATION	0.733	0.828	2.022	2.683	0.941	0.285
	0.238	0.201	0.981	0.464	1.444	0.870
PERCOLATION/LEAKAGE THROUGH	0.0033	0.0000	0.0383	0.0203	0.2000	0.0904
LAYER 1	0.0516	0.0405	0.0463	0.0139	0.0009	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.522	1895.255	4.19
EVAPOTRANSPIRATION	11.692	42440.695	93.76
PERC./LEAKAGE THROUGH LAYER 1	0.505387	1834.554	4.05
CHANGE IN WATER STORAGE	-0.249	-904.399	-2.00
SOIL WATER AT START OF YEAR	2.900	10528.114	
SOIL WATER AT END OF YEAR	2.731	9915.057	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.096	0.043	0.047	0.029	0.000
	0.000	0.007	0.001	0.043	0.005	0.007
STD. DEVIATIONS	0.010	0.137	0.045	0.103	0.040	0.000
	0.001	0.017	0.002	0.076	0.011	0.015
EVAPOTRANSPIRATION						
TOTALS	0.493	0.497	0.946	1.176	0.998	0.311
	0.607	0.609	0.468	0.780	0.635	0.445
STD. DEVIATIONS	0.232	0.310	0.604	0.977	0.839	0.158
	0.534	0.654	0.319	0.454	0.506	0.318
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0021	0.0050	0.0153	0.0421	0.0728	0.0238
	0.0218	0.0152	0.0181	0.0242	0.0428	0.0060
STD. DEVIATIONS	0.0031	0.0062	0.0133	0.0200	0.0766	0.0387
	0.0194	0.0148	0.0203	0.0407	0.0479	0.0077

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.283	(0.2164)	1025.78	3.219
EVAPOTRANSPIRATION	7.965	(2.9077)	28912.16	90.715
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.28905	(0.15876)	1049.264	3.29218
CHANGE IN WATER STORAGE	0.244	(0.4284)	884.20	2.774

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.171	621.3705
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.021810	79.16972
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2188
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0841

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	2.7314	0.1517
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B124CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B124CN85.OUT


TIME:  13:14     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                     =     24.00   INCHES
          POROSITY                      =      0.4570 VOL/VOL
          FIELD CAPACITY                =      0.1310 VOL/VOL
          WILTING POINT                 =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0683 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.638	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	10.968	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.392	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.638	INCHES
TOTAL INITIAL WATER	=	1.638	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.021	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.223	0.427	0.770	0.267	0.159	0.131
	0.126	0.163	0.009	1.162	0.504	0.171
PERCOLATION/LEAKAGE THROUGH	0.0008	0.0011	0.0076	0.0281	0.0250	0.0340
LAYER 1	0.0095	0.0123	0.0007	0.0539	0.0128	0.0067

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.021	77.798	0.51
EVAPOTRANSPIRATION	4.112	14927.397	97.45
PERC./LEAKAGE THROUGH LAYER 1	0.192257	697.892	4.56
CHANGE IN WATER STORAGE	-0.106	-384.489	-2.51
SOIL WATER AT START OF YEAR	1.638	5946.329	
SOIL WATER AT END OF YEAR	1.532	5561.840	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.000	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.080	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.737	1.287	1.369	1.569	0.154
	1.110	0.555	0.541	0.886	0.120	0.427
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0119	0.0639	0.0516	0.0128
LAYER 1	0.0101	0.0175	0.0093	0.0242	0.0027	0.0096

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.080	291.519	0.82
EVAPOTRANSPIRATION	9.495	34465.789	97.18
PERC./LEAKAGE THROUGH LAYER 1	0.213696	775.718	2.19
CHANGE IN WATER STORAGE	-0.019	-67.915	-0.19
SOIL WATER AT START OF YEAR	1.532	5561.840	
SOIL WATER AT END OF YEAR	1.513	5493.925	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.004	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.272	0.027	0.000	0.000	0.000
	0.000	0.000	0.000	0.006	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.558	0.720	1.423	0.411	0.284
	1.405	0.423	0.646	1.310	0.164	0.012
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0026	0.0000	0.0633	0.0201	0.0264
LAYER 1	0.0439	0.0125	0.0142	0.0695	0.0465	0.0042

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.306	1110.190	3.71
EVAPOTRANSPIRATION	7.735	28077.418	93.76
PERC./LEAKAGE THROUGH LAYER 1	0.303130	1100.362	3.67
CHANGE IN WATER STORAGE	-0.094	-340.472	-1.14
SOIL WATER AT START OF YEAR	1.513	5493.925	
SOIL WATER AT END OF YEAR	1.420	5153.453	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.008	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.022
EVAPOTRANSPIRATION	0.390	0.074	0.607	0.306	2.611	0.689
	0.756	1.566	0.302	0.339	0.364	0.555
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0009	0.0007	0.0143	0.0543	0.0503
LAYER 1	0.0757	0.0489	0.0083	0.0349	0.0154	0.0020

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.025	89.554	0.27
EVAPOTRANSPIRATION	8.559	31069.990	93.14
PERC./LEAKAGE THROUGH LAYER 1	0.305699	1109.688	3.33
CHANGE IN WATER STORAGE	0.300	1090.477	3.27
SOIL WATER AT START OF YEAR	1.420	5153.453	
SOIL WATER AT END OF YEAR	1.640	5952.589	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.123	0.061	0.190	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.720	0.885	1.679	2.631	0.811	0.467
	0.480	0.302	1.246	0.152	1.219	1.050
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0047	0.0279	0.0580	0.0115	0.0018
LAYER 1	0.0548	0.0094	0.0178	0.0143	0.0152	0.0318

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.374	1359.285	3.00
EVAPOTRANSPIRATION	11.642	42259.105	93.36
PERC./LEAKAGE THROUGH LAYER 1	0.247223	897.418	1.98
CHANGE IN WATER STORAGE	0.207	750.274	1.66
SOIL WATER AT START OF YEAR	1.640	5952.589	
SOIL WATER AT END OF YEAR	1.927	6994.204	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.024	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.079	0.034	0.039	0.000	0.000
	0.000	0.000	0.000	0.001	0.000	0.004
STD. DEVIATIONS	0.010	0.120	0.036	0.085	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.010
EVAPOTRANSPIRATION						
TOTALS	0.491	0.536	1.012	1.199	1.112	0.345
	0.775	0.602	0.549	0.770	0.474	0.443
STD. DEVIATIONS	0.228	0.311	0.455	0.974	0.993	0.234
	0.505	0.558	0.460	0.506	0.444	0.400
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0002	0.0019	0.0096	0.0455	0.0325	0.0250
	0.0388	0.0201	0.0100	0.0393	0.0185	0.0109
STD. DEVIATIONS	0.0004	0.0018	0.0113	0.0229	0.0193	0.0188
	0.0289	0.0163	0.0065	0.0224	0.0165	0.0121

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.161	(0.1667)	585.67	1.838
EVAPOTRANSPIRATION	8.309	(2.7621)	30159.94	94.630
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.25240	(0.05137)	916.216	2.87473
CHANGE IN WATER STORAGE	0.058	(0.1848)	209.57	0.658

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.159	578.4798
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.025232	91.59343
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1330
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.9268	0.0803
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B124CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B124CN88.OUT


TIME:  13:13     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
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                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                    =     24.00   INCHES
          POROSITY                     =      0.4570 VOL/VOL
          FIELD CAPACITY               =      0.1310 VOL/VOL
          WILTING POINT                =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0688 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.100000005000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.650	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	10.968	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.392	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.650	INCHES
TOTAL INITIAL WATER	=	1.650	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.000
EVAPOTRANSPIRATION	0.290	0.430	0.767	0.190	0.152	0.127
	0.095	0.152	0.009	1.138	0.518	0.165
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0085	0.0061	0.0417	0.0310	0.0422
LAYER 1	0.0109	0.0507	0.0018	0.0700	0.0231	0.0072

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.024	88.748	0.58
EVAPOTRANSPIRATION	4.035	14646.328	95.61
PERC./LEAKAGE THROUGH LAYER 1	0.293223	1064.400	6.95
CHANGE IN WATER STORAGE	-0.132	-480.879	-3.14
SOIL WATER AT START OF YEAR	1.650	5989.551	
SOIL WATER AT END OF YEAR	1.518	5508.672	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.081	0.000	0.005	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.736	1.276	1.464	1.455	0.129
	1.076	0.552	0.537	0.876	0.111	0.427
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0133	0.0693	0.0566	0.0309
LAYER 1	0.0433	0.0278	0.0129	0.0335	0.0062	0.0085

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.085	308.791	0.87
EVAPOTRANSPIRATION	9.380	34050.289	96.01
PERC./LEAKAGE THROUGH LAYER 1	0.302311	1097.389	3.09
CHANGE IN WATER STORAGE	0.002	8.639	0.02
SOIL WATER AT START OF YEAR	1.518	5508.672	
SOIL WATER AT END OF YEAR	1.520	5517.311	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.007	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.272	0.028	0.000	0.000	0.000
	0.000	0.000	0.000	0.039	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.555	0.724	1.426	0.410	0.192
	1.405	0.436	0.646	1.337	0.098	0.012
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0050	0.0000	0.0581	0.0380	0.0522
LAYER 1	0.0723	0.0229	0.0137	0.0946	0.0271	0.0028

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.339	1229.438	4.11
EVAPOTRANSPIRATION	7.623	27671.430	92.40
PERC./LEAKAGE THROUGH LAYER 1	0.386802	1404.090	4.69
CHANGE IN WATER STORAGE	-0.098	-357.452	-1.19
SOIL WATER AT START OF YEAR	1.520	5517.311	
SOIL WATER AT END OF YEAR	1.421	5159.858	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.001	0.000
	0.000	0.000	0.000	0.000	0.000	0.022
EVAPOTRANSPIRATION	0.390	0.074	0.605	0.300	2.690	0.637
	0.616	1.655	0.286	0.381	0.214	0.576
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0023	0.0000	0.0214	0.0537	0.0320
LAYER 1	0.0688	0.1019	0.0095	0.0435	0.0400	0.0112

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.026	94.848	0.28
EVAPOTRANSPIRATION	8.422	30573.414	91.65
PERC./LEAKAGE THROUGH LAYER 1	0.384336	1395.139	4.18
CHANGE IN WATER STORAGE	0.357	1296.293	3.89
SOIL WATER AT START OF YEAR	1.421	5159.858	
SOIL WATER AT END OF YEAR	1.698	6164.810	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.021	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.124	0.061	0.193	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.725	0.900	1.751	2.674	0.785	0.352
	0.326	0.248	1.116	0.287	1.321	1.045
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0051	0.0250	0.0650	0.1022	0.0501
LAYER 1	0.1041	0.0677	0.0206	0.0252	0.0318	0.0303

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.377	1370.032	3.03
EVAPOTRANSPIRATION	11.531	41856.281	92.47
PERC./LEAKAGE THROUGH LAYER 1	0.527193	1913.709	4.23
CHANGE IN WATER STORAGE	0.035	126.092	0.28
SOIL WATER AT START OF YEAR	1.698	6164.810	
SOIL WATER AT END OF YEAR	1.813	6582.243	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.005	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.079	0.034	0.039	0.001	0.000
	0.000	0.000	0.000	0.008	0.000	0.004
STD. DEVIATIONS	0.010	0.121	0.036	0.086	0.002	0.000
	0.000	0.000	0.000	0.017	0.000	0.010
EVAPOTRANSPIRATION						
TOTALS	0.505	0.539	1.025	1.211	1.098	0.288
	0.704	0.609	0.519	0.804	0.452	0.445
STD. DEVIATIONS	0.212	0.315	0.481	1.015	1.016	0.216
	0.537	0.605	0.414	0.460	0.514	0.401
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0042	0.0089	0.0511	0.0563	0.0415
	0.0599	0.0542	0.0117	0.0534	0.0257	0.0120
STD. DEVIATIONS	0.0000	0.0032	0.0105	0.0196	0.0278	0.0099
	0.0349	0.0322	0.0069	0.0285	0.0126	0.0107

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.170	(0.1736)	618.37	1.940
EVAPOTRANSPIRATION	8.198	(2.7485)	29759.55	93.374
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.37877	(0.09393)	1374.946	4.31404
CHANGE IN WATER STORAGE	0.033	(0.1941)	118.54	0.372

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.159	578.9391
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.022625	82.13032
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1308
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0580

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.8133	0.0756
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B124CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B124CN91.OUT


TIME:  13:11     DATE:   4/24/2003



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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                  LAYER  1
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                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   5
          THICKNESS                     =     24.00   INCHES
          POROSITY                      =      0.4570 VOL/VOL
          FIELD CAPACITY                =      0.1310 VOL/VOL
          WILTING POINT                 =      0.0580 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.1015 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.100000005000E-02 CM/SEC
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.514	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	8.226	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.044	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	2.436	INCHES
TOTAL INITIAL WATER	=	2.436	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.040	0.000	0.000
EVAPOTRANSPIRATION	0.223	0.265	0.658	0.205	0.160	0.133
	0.136	0.122	0.108	0.668	0.810	0.282
PERCOLATION/LEAKAGE THROUGH	0.0220	0.0142	0.0167	0.0093	0.0183	0.0196
LAYER 1	0.0129	0.0109	0.0140	0.0115	0.0084	0.0135

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.062	226.034	1.48
EVAPOTRANSPIRATION	3.769	13680.873	89.31
PERC./LEAKAGE THROUGH LAYER 1	0.171484	622.489	4.06
CHANGE IN WATER STORAGE	0.217	789.203	5.15
SOIL WATER AT START OF YEAR	2.436	8842.468	
SOIL WATER AT END OF YEAR	2.653	9631.671	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.097	0.000	0.066	0.000
	0.002	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.733	0.740	1.440	1.227	0.326
	1.337	0.334	0.440	1.087	0.391	0.452
PERCOLATION/LEAKAGE THROUGH	0.0119	0.0093	0.0077	0.0117	0.0197	0.0233
LAYER 1	0.0177	0.0140	0.0155	0.0115	0.0371	0.0755

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.165	599.700	1.69
EVAPOTRANSPIRATION	9.248	33571.887	94.66
PERC./LEAKAGE THROUGH LAYER 1	0.254865	925.160	2.61
CHANGE IN WATER STORAGE	0.101	368.365	1.04
SOIL WATER AT START OF YEAR	2.653	9631.671	
SOIL WATER AT END OF YEAR	2.755	10000.035	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.297	0.037	0.000	0.000	0.000
	0.000	0.000	0.000	0.175	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.562	0.699	1.102	0.373	0.249
	1.009	0.672	0.357	1.393	0.319	0.027
PERCOLATION/LEAKAGE THROUGH	0.0453	0.0273	0.0220	0.0086	0.0222	0.0319
LAYER 1	0.0180	0.0294	0.0184	0.0270	0.0022	0.0495

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.509	1847.557	6.17
EVAPOTRANSPIRATION	7.143	25927.355	86.58
PERC./LEAKAGE THROUGH LAYER 1	0.301751	1095.357	3.66
CHANGE IN WATER STORAGE	0.297	1077.226	3.60
SOIL WATER AT START OF YEAR	2.755	10000.035	
SOIL WATER AT END OF YEAR	3.052	11077.261	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.010	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.004	0.079	0.000
	0.000	0.037	0.000	0.000	0.000	0.034
EVAPOTRANSPIRATION	0.390	0.096	0.607	0.448	2.288	0.562
	0.314	1.716	0.456	0.289	0.211	0.595
PERCOLATION/LEAKAGE THROUGH	0.0351	0.0209	0.0204	0.0089	0.0119	0.0435
LAYER 1	0.0459	0.0310	0.0214	0.0184	0.0144	0.0124

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.154	560.363	1.68
EVAPOTRANSPIRATION	7.972	28939.984	86.75
PERC./LEAKAGE THROUGH LAYER 1	0.284322	1032.090	3.09
CHANGE IN WATER STORAGE	0.779	2827.280	8.48
SOIL WATER AT START OF YEAR	3.052	11077.261	
SOIL WATER AT END OF YEAR	3.750	13613.200	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	-0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.181	0.080	0.232	0.000	0.000
	0.000	0.000	0.004	0.000	0.024	0.000
EVAPOTRANSPIRATION	0.733	0.828	2.022	2.683	0.941	0.285
	0.238	0.201	0.981	0.464	1.444	0.870
PERCOLATION/LEAKAGE THROUGH	0.0104	0.0089	0.0045	0.0091	0.0019	0.0876
LAYER 1	0.0852	0.0641	0.0485	0.0579	0.0407	0.0288

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.522	1895.255	4.19
EVAPOTRANSPIRATION	11.692	42440.695	93.76
PERC./LEAKAGE THROUGH LAYER 1	0.447574	1624.693	3.59
CHANGE IN WATER STORAGE	-0.191	-694.537	-1.53
SOIL WATER AT START OF YEAR	3.750	13613.200	
SOIL WATER AT END OF YEAR	3.639	13210.004	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.096	0.043	0.047	0.029	0.000
	0.000	0.007	0.001	0.043	0.005	0.007
STD. DEVIATIONS	0.010	0.137	0.045	0.103	0.040	0.000
	0.001	0.017	0.002	0.076	0.011	0.015
EVAPOTRANSPIRATION						
TOTALS	0.493	0.497	0.946	1.176	0.998	0.311
	0.607	0.609	0.468	0.780	0.635	0.445
STD. DEVIATIONS	0.232	0.310	0.604	0.977	0.839	0.158
	0.534	0.654	0.319	0.454	0.506	0.318
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0249	0.0161	0.0143	0.0095	0.0148	0.0412
	0.0360	0.0299	0.0236	0.0252	0.0206	0.0360
STD. DEVIATIONS	0.0151	0.0079	0.0078	0.0012	0.0082	0.0275
	0.0304	0.0211	0.0142	0.0193	0.0173	0.0267

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.283	(0.2164)	1025.78	3.219
EVAPOTRANSPIRATION	7.965	(2.9077)	28912.16	90.715
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.29200	(0.10032)	1059.958	3.32573
CHANGE IN WATER STORAGE	0.241	(0.3533)	873.51	2.741

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.171	621.3705
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.003561	12.92607
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2188
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0841

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	3.6391	0.1516
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B206CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B206CN85.OUT


TIME:  13:14     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
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                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER   4
          THICKNESS                     =      6.00   INCHES
          POROSITY                      =      0.4370 VOL/VOL
          FIELD CAPACITY                =      0.1050 VOL/VOL
          WILTING POINT                 =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0676 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.406	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	2.622	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.282	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.406	INCHES
TOTAL INITIAL WATER	=	0.406	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.024	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.231	0.275	0.669	0.235	0.195	0.323
	0.286	0.021	0.010	0.645	0.820	0.157
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0026	0.0003	0.0103	0.0043	0.0038
LAYER 1	0.0032	0.0000	0.0000	0.2517	0.0528	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.024	87.831	0.57
EVAPOTRANSPIRATION	3.868	14039.260	91.65
PERC./LEAKAGE THROUGH LAYER 1	0.329221	1195.074	7.80
CHANGE IN WATER STORAGE	-0.001	-3.564	-0.02
SOIL WATER AT START OF YEAR	0.406	1473.098	
SOIL WATER AT END OF YEAR	0.405	1469.533	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.114	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.735	0.764	1.668	1.242	0.413
	1.102	0.492	0.582	0.388	0.314	0.441
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0685	0.2322	0.1320	0.0065
LAYER 1	0.0034	0.0053	0.0032	0.0690	0.0506	0.0116

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.114	413.523	1.17
EVAPOTRANSPIRATION	8.882	32240.373	90.91
PERC./LEAKAGE THROUGH LAYER 1	0.582279	2113.673	5.96
CHANGE IN WATER STORAGE	0.192	697.542	1.97
SOIL WATER AT START OF YEAR	0.405	1469.533	
SOIL WATER AT END OF YEAR	0.597	2167.075	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.368	0.091	0.000	0.000	0.000
	0.000	0.000	0.000	0.010	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.560	0.794	0.857	0.509	0.370
	1.304	0.493	0.401	0.866	0.118	0.022
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0016	0.4473	0.0759	0.0020	0.0048
LAYER 1	0.0057	0.0021	0.0028	0.8605	0.0000	0.0017

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.469	1703.669	5.69
EVAPOTRANSPIRATION	6.673	24222.799	80.88
PERC./LEAKAGE THROUGH LAYER 1	1.404406	5097.993	17.02
CHANGE IN WATER STORAGE	-0.297	-1076.949	-3.60
SOIL WATER AT START OF YEAR	0.597	2167.075	
SOIL WATER AT END OF YEAR	0.300	1090.125	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.005	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.029
EVAPOTRANSPIRATION	0.390	0.085	0.603	0.323	2.212	0.365
	0.609	1.541	0.252	0.282	0.214	0.594
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0030	0.0000	0.0002	1.0479	0.0017
LAYER 1	0.0040	0.0488	0.0005	0.0044	0.0010	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.032	116.399	0.35
EVAPOTRANSPIRATION	7.472	27122.437	81.30
PERC./LEAKAGE THROUGH LAYER 1	1.111367	4034.263	12.09
CHANGE IN WATER STORAGE	0.575	2086.601	6.25
SOIL WATER AT START OF YEAR	0.300	1090.125	
SOIL WATER AT END OF YEAR	0.795	2885.385	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.002	0.205	0.062	0.228	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.668	0.792	1.887	2.698	0.634	0.000
	0.046	0.230	0.973	0.208	1.408	0.845
PERCOLATION/LEAKAGE THROUGH	0.0001	0.2951	0.0921	0.7872	0.0113	0.0000
LAYER 1	0.0007	0.0077	0.3609	0.0244	0.4631	0.0010

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.497	1804.959	3.99
EVAPOTRANSPIRATION	10.390	37714.453	83.32
PERC./LEAKAGE THROUGH LAYER 1	2.043905	7419.375	16.39
CHANGE IN WATER STORAGE	-0.461	-1672.684	-3.70
SOIL WATER AT START OF YEAR	0.795	2885.385	
SOIL WATER AT END OF YEAR	0.414	1504.042	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.004	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.115	0.053	0.046	0.000	0.000
	0.000	0.000	0.000	0.002	0.000	0.006
STD. DEVIATIONS	0.011	0.167	0.052	0.102	0.000	0.000
	0.000	0.000	0.000	0.004	0.000	0.013
EVAPOTRANSPIRATION						
TOTALS	0.482	0.490	0.943	1.156	0.958	0.294
	0.670	0.555	0.443	0.478	0.575	0.412
STD. DEVIATIONS	0.214	0.303	0.533	1.033	0.797	0.168
	0.531	0.586	0.362	0.273	0.539	0.331
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0605	0.1217	0.2212	0.2395	0.0034
	0.0034	0.0128	0.0735	0.2420	0.1135	0.0029
STD. DEVIATIONS	0.0001	0.1312	0.1866	0.3297	0.4552	0.0026
	0.0018	0.0204	0.1607	0.3593	0.1971	0.0049

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.227	(0.2365)	825.28	2.589
EVAPOTRANSPIRATION	7.457	(2.4561)	27067.87	84.928
PERCOLATION/LEAKAGE THROUGH LAYER 1	1.09424	(0.67929)	3972.075	12.46282
CHANGE IN WATER STORAGE	0.002	(0.4086)	6.19	0.019

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.191	692.0428
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.721030	2617.33740
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2678
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	0.4143	0.0691
SNOW WATER	0.000	

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**                                                                  **
**                                                                  **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE        **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)        **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY           **
**                    USAE WATERWAYS EXPERIMENT STATION             **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY       **
**                                                                  **
**                                                                  **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B206CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B206CN88.OUT


TIME:  13:13     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                    =      6.00   INCHES
          POROSITY                     =      0.4370 VOL/VOL
          FIELD CAPACITY               =      0.1050 VOL/VOL
          WILTING POINT                =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0683 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.410	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	2.622	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.282	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.410	INCHES
TOTAL INITIAL WATER	=	0.410	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.024	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.006	0.000	0.000
EVAPOTRANSPIRATION	0.228	0.273	0.667	0.229	0.191	0.258
	0.310	0.081	0.010	0.975	0.419	0.252
PERCOLATION/LEAKAGE THROUGH	0.0017	0.0027	0.0004	0.0085	0.0025	0.0036
LAYER 1	0.0049	0.0006	0.0002	0.2129	0.0033	0.0078

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.031	111.744	0.73
EVAPOTRANSPIRATION	3.894	14136.990	92.29
PERC./LEAKAGE THROUGH LAYER 1	0.248983	903.809	5.90
CHANGE IN WATER STORAGE	0.046	166.054	1.08
SOIL WATER AT START OF YEAR	0.410	1488.417	
SOIL WATER AT END OF YEAR	0.456	1654.471	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.112	0.000	0.008	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.735	1.133	1.312	1.238	0.378
	1.115	0.438	0.653	0.301	0.311	0.441
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0048	0.0697	0.3983	0.0081
LAYER 1	0.0000	0.0080	0.0012	0.1333	0.0569	0.0083

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.120	436.797	1.23
EVAPOTRANSPIRATION	8.796	31930.859	90.03
PERC./LEAKAGE THROUGH LAYER 1	0.688681	2499.914	7.05
CHANGE IN WATER STORAGE	0.165	597.534	1.68
SOIL WATER AT START OF YEAR	0.456	1654.471	
SOIL WATER AT END OF YEAR	0.620	2252.004	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.012	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.372	0.092	0.000	0.000	0.000
	0.000	0.000	0.000	0.052	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.560	0.798	0.881	0.495	0.327
	1.506	0.356	0.277	0.891	0.116	0.022
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0016	0.4154	0.0873	0.0046	0.0060
LAYER 1	0.0059	0.0002	0.0013	0.9189	0.0000	0.0010

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.516	1874.437	6.26
EVAPOTRANSPIRATION	6.609	23991.494	80.11
PERC./LEAKAGE THROUGH LAYER 1	1.442093	5234.798	17.48
CHANGE IN WATER STORAGE	-0.318	-1153.225	-3.85
SOIL WATER AT START OF YEAR	0.620	2252.004	
SOIL WATER AT END OF YEAR	0.303	1098.780	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.008	0.000
	0.000	0.000	0.000	0.000	0.000	0.029
EVAPOTRANSPIRATION	0.390	0.088	0.602	0.324	2.248	0.340
	0.632	1.517	0.236	0.276	0.212	0.594
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0023	0.0000	0.0008	0.9993	0.0017
LAYER 1	0.0073	0.0759	0.0007	0.0056	0.0007	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.041	147.918	0.44
EVAPOTRANSPIRATION	7.459	27077.355	81.17
PERC./LEAKAGE THROUGH LAYER 1	1.094236	3972.075	11.91
CHANGE IN WATER STORAGE	0.596	2162.349	6.48
SOIL WATER AT START OF YEAR	0.303	1098.780	
SOIL WATER AT END OF YEAR	0.818	2969.787	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.019	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.002	0.209	0.062	0.230	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.668	0.802	1.890	2.727	0.636	0.000
	0.042	0.203	0.969	0.213	1.395	0.836
PERCOLATION/LEAKAGE THROUGH	0.0002	0.2939	0.0977	0.7581	0.0088	0.0000
LAYER 1	0.0003	0.0051	0.3927	0.0254	0.4734	0.0006

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.504	1830.445	4.04
EVAPOTRANSPIRATION	10.381	37681.773	83.25
PERC./LEAKAGE THROUGH LAYER 1	2.056219	7464.075	16.49
CHANGE IN WATER STORAGE	-0.471	-1710.178	-3.78
SOIL WATER AT START OF YEAR	0.818	2969.787	
SOIL WATER AT END OF YEAR	0.427	1550.950	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.009	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.116	0.053	0.047	0.003	0.000
	0.000	0.000	0.000	0.012	0.000	0.006
STD. DEVIATIONS	0.011	0.169	0.052	0.103	0.004	0.000
	0.000	0.000	0.000	0.023	0.000	0.013
EVAPOTRANSPIRATION						
TOTALS	0.481	0.492	1.018	1.095	0.962	0.261
	0.721	0.519	0.429	0.531	0.491	0.429
STD. DEVIATIONS	0.215	0.304	0.529	1.012	0.814	0.152
	0.594	0.575	0.380	0.369	0.518	0.312
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0004	0.0601	0.1037	0.1849	0.2827	0.0039
	0.0037	0.0180	0.0792	0.2592	0.1069	0.0035
STD. DEVIATIONS	0.0008	0.1307	0.1792	0.3226	0.4352	0.0033
	0.0033	0.0325	0.1752	0.3782	0.2063	0.0041

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.242	(0.2470)	880.27	2.762
EVAPOTRANSPIRATION	7.428	(2.4366)	26963.70	84.602
PERCOLATION/LEAKAGE THROUGH LAYER 1	1.10604	(0.69366)	4014.934	12.59729
CHANGE IN WATER STORAGE	0.003	(0.4204)	12.51	0.039

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.192	697.5745
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.554615	2013.25098
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2631
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	0.4273	0.0712
SNOW WATER	0.000	

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**                                                                              **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                   **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                    **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                       **
**                    USAE WATERWAYS EXPERIMENT STATION                         **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY                  **
**                                                                              **
**                                                                              **
**********************************************************************************
**********************************************************************************

PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B206CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B206CN91.OUT

TIME:  13:43     DATE:   4/24/2003

**********************************************************************************

     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.

                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                    =      6.00   INCHES
          POROSITY                     =      0.4370 VOL/VOL
          FIELD CAPACITY               =      0.1050 VOL/VOL
          WILTING POINT                =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0696 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.170000002000E-02 CM/SEC
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.418	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	2.622	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.282	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.418	INCHES
TOTAL INITIAL WATER	=	0.418	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	6.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.025	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.041	0.000	0.000
EVAPOTRANSPIRATION	0.223	0.275	0.665	0.222	0.182	0.157
	0.159	0.143	0.127	0.742	0.785	0.148
PERCOLATION/LEAKAGE THROUGH	0.0001	0.0019	0.0002	0.0057	0.0032	0.0016
LAYER 1	0.0019	0.0074	0.0036	0.2701	0.0332	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.067	241.605	1.58
EVAPOTRANSPIRATION	3.828	13897.155	90.72
PERC./LEAKAGE THROUGH LAYER 1	0.328909	1193.940	7.79
CHANGE IN WATER STORAGE	-0.004	-14.103	-0.09
SOIL WATER AT START OF YEAR	0.418	1515.731	
SOIL WATER AT END OF YEAR	0.414	1501.629	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.118	0.000	0.037	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.732	0.760	1.689	1.053	0.322
	1.287	0.195	0.448	1.124	0.130	0.434
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0493	0.2156	0.0874	0.0002
LAYER 1	0.0848	0.0043	0.0532	0.2150	0.0056	0.0008

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.156	566.251	1.60
EVAPOTRANSPIRATION	8.915	32361.641	91.25
PERC./LEAKAGE THROUGH LAYER 1	0.716232	2599.922	7.33
CHANGE IN WATER STORAGE	-0.017	-62.699	-0.18
SOIL WATER AT START OF YEAR	0.414	1501.629	
SOIL WATER AT END OF YEAR	0.396	1438.930	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.361	0.088	0.000	0.000	0.000
	0.000	0.000	0.000	0.146	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.559	0.605	1.188	0.281	0.255
	1.109	0.676	0.208	0.956	0.111	0.022
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.1689	0.1952	0.0029	0.0043
LAYER 1	0.1528	0.0394	0.0017	0.8282	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.595	2159.816	7.21
EVAPOTRANSPIRATION	6.349	23046.615	76.96
PERC./LEAKAGE THROUGH LAYER 1	1.393284	5057.621	16.89
CHANGE IN WATER STORAGE	-0.087	-316.542	-1.06
SOIL WATER AT START OF YEAR	0.396	1438.930	
SOIL WATER AT END OF YEAR	0.309	1122.388	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.079	0.000
	0.000	0.028	0.000	0.000	0.000	0.031
EVAPOTRANSPIRATION	0.390	0.092	0.602	0.323	2.128	0.424
	0.308	1.591	0.194	0.262	0.208	0.595
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0028	0.0004	0.0038	0.9074	0.0089
LAYER 1	0.0027	0.3540	0.0032	0.0025	0.0067	0.0092

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.140	509.392	1.53
EVAPOTRANSPIRATION	7.116	25831.707	77.43
PERC./LEAKAGE THROUGH LAYER 1	1.301601	4724.813	14.16
CHANGE IN WATER STORAGE	0.632	2293.784	6.88
SOIL WATER AT START OF YEAR	0.309	1122.388	
SOIL WATER AT END OF YEAR	0.861	3124.831	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.019	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.003	0.207	0.065	0.238	0.000	0.000
	0.000	0.000	0.003	0.000	0.017	0.000
EVAPOTRANSPIRATION	0.727	0.820	1.949	2.622	0.786	0.000
	0.029	0.157	0.956	0.228	1.427	0.841
PERCOLATION/LEAKAGE THROUGH	0.0000	0.2053	0.1106	0.6756	0.0210	0.0000
LAYER 1	0.0006	0.0054	0.4382	0.0326	0.4145	0.0036

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.533	1935.887	4.28
EVAPOTRANSPIRATION	10.542	38267.004	84.54
PERC./LEAKAGE THROUGH LAYER 1	1.907259	6923.351	15.29
CHANGE IN WATER STORAGE	-0.512	-1860.143	-4.11
SOIL WATER AT START OF YEAR	0.861	3124.831	
SOIL WATER AT END OF YEAR	0.429	1556.029	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.011	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.006	0.114	0.054	0.048	0.023	0.000
	0.000	0.006	0.001	0.038	0.003	0.006
STD. DEVIATIONS	0.011	0.165	0.053	0.106	0.035	0.000
	0.000	0.012	0.001	0.063	0.008	0.014
EVAPOTRANSPIRATION						
TOTALS	0.492	0.496	0.916	1.209	0.886	0.232
	0.578	0.552	0.387	0.662	0.532	0.408
STD. DEVIATIONS	0.230	0.307	0.581	0.998	0.781	0.162
	0.578	0.622	0.341	0.404	0.572	0.331
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0420	0.0659	0.2192	0.2044	0.0030
	0.0485	0.0821	0.1000	0.2697	0.0920	0.0027
STD. DEVIATIONS	0.0000	0.0913	0.0733	0.2742	0.3945	0.0037
	0.0685	0.1527	0.1903	0.3326	0.1807	0.0039

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.78 (2.993)	31871.4	100.00
RUNOFF	0.298 (0.2460)	1082.59	3.397
EVAPOTRANSPIRATION	7.350 (2.5542)	26680.82	83.714
PERCOLATION/LEAKAGE THROUGH LAYER 1	1.12946 (0.61560)	4099.929	12.86397
CHANGE IN WATER STORAGE	0.002 (0.4092)	8.06	0.025

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.187	679.3039
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.550118	1996.92932
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2708
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	0.4287	0.0714
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B212CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B212CN85.OUT


TIME:  13:15     DATE:   4/24/2003



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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                  LAYER  1
                                  --------

                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER   4
          THICKNESS                     =     12.00   INCHES
          POROSITY                      =      0.4370 VOL/VOL
          FIELD CAPACITY                =      0.1050 VOL/VOL
          WILTING POINT                 =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0705 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.846	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	5.244	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.564	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.846	INCHES
TOTAL INITIAL WATER	=	0.846	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

****

MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.241	0.281	0.674	0.246	0.176	0.258
	0.396	0.023	0.009	0.584	0.866	0.309
PERCOLATION/LEAKAGE THROUGH	0.0035	0.0253	0.0179	0.0195	0.0032	0.0261
LAYER 1	0.0270	0.0021	0.0010	0.0512	0.0499	0.0092

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.022	80.563	0.53
EVAPOTRANSPIRATION	4.063	14750.081	96.29
PERC./LEAKAGE THROUGH LAYER 1	0.235868	856.199	5.59
CHANGE IN WATER STORAGE	-0.101	-368.239	-2.40
SOIL WATER AT START OF YEAR	0.846	3069.749	
SOIL WATER AT END OF YEAR	0.744	2701.510	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.004	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.094	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.739	0.763	1.531	1.309	0.499
	1.491	0.282	0.270	1.025	0.377	0.426
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0226	0.0677	0.0083	0.0032
LAYER 1	0.0099	0.0117	0.0421	0.0396	0.0791	0.0111

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.094	340.311	0.96
EVAPOTRANSPIRATION	9.450	34303.918	96.73
PERC./LEAKAGE THROUGH LAYER 1	0.295296	1071.926	3.02
CHANGE IN WATER STORAGE	-0.069	-251.041	-0.71
SOIL WATER AT START OF YEAR	0.744	2701.510	
SOIL WATER AT END OF YEAR	0.675	2450.469	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.305	0.048	0.000	0.000	0.000
	0.000	0.000	0.000	0.006	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.554	0.603	1.144	0.413	0.481
	1.476	0.490	0.627	1.352	0.181	0.018
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0054	0.0000	0.0294	0.0275	0.0274
LAYER 1	0.0523	0.0250	0.0332	0.0305	0.0208	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.359	1303.508	4.35
EVAPOTRANSPIRATION	7.719	28020.643	93.57
PERC./LEAKAGE THROUGH LAYER 1	0.251503	912.957	3.05
CHANGE IN WATER STORAGE	-0.080	-289.602	-0.97
SOIL WATER AT START OF YEAR	0.675	2450.469	
SOIL WATER AT END OF YEAR	0.595	2160.867	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.028
EVAPOTRANSPIRATION	0.390	0.088	0.611	0.312	2.217	0.723
	0.943	1.560	0.228	0.243	0.192	0.588
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0011	0.0162	0.2368	0.0819
LAYER 1	0.0385	0.0301	0.0101	0.0104	0.0121	0.0012

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.031	112.730	0.34
EVAPOTRANSPIRATION	8.094	29379.488	88.07
PERC./LEAKAGE THROUGH LAYER 1	0.438454	1591.587	4.77
CHANGE IN WATER STORAGE	0.627	2275.895	6.82
SOIL WATER AT START OF YEAR	0.595	2160.867	
SOIL WATER AT END OF YEAR	1.142	4145.421	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.176	0.070	0.220	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.666	0.765	1.754	2.797	0.850	0.419
	0.076	0.324	0.901	0.440	1.115	1.045
PERCOLATION/LEAKAGE THROUGH	0.0002	0.0024	0.0222	0.5085	0.1139	0.0628
LAYER 1	0.0036	0.0161	0.0403	0.0484	0.0235	0.1158

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.467	1696.779	3.75
EVAPOTRANSPIRATION	11.152	40481.891	89.43
PERC./LEAKAGE THROUGH LAYER 1	0.957530	3475.835	7.68
CHANGE IN WATER STORAGE	-0.107	-388.404	-0.86
SOIL WATER AT START OF YEAR	1.142	4145.421	
SOIL WATER AT END OF YEAR	1.115	4048.358	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.008	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.096	0.042	0.045	0.000	0.000
	0.000	0.000	0.000	0.001	0.000	0.006
STD. DEVIATIONS	0.010	0.139	0.042	0.098	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.012
EVAPOTRANSPIRATION						
TOTALS	0.483	0.485	0.881	1.206	0.993	0.476
	0.876	0.536	0.407	0.729	0.546	0.477
STD. DEVIATIONS	0.211	0.295	0.492	1.044	0.810	0.168
	0.635	0.596	0.354	0.452	0.422	0.380
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0007	0.0066	0.0128	0.1282	0.0779	0.0403
	0.0263	0.0170	0.0254	0.0360	0.0371	0.0275
STD. DEVIATIONS	0.0015	0.0107	0.0113	0.2135	0.0994	0.0315
	0.0201	0.0110	0.0187	0.0165	0.0274	0.0496

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.195	(0.2050)	706.78	2.218
EVAPOTRANSPIRATION	8.096	(2.6257)	29387.20	92.206
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.43573	(0.30244)	1581.701	4.96276
CHANGE IN WATER STORAGE	0.054	(0.3207)	195.72	0.614

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.170	617.0450
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.154908	562.31525
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2107
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.1153	0.0929
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B212CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B212CN88.OUT


TIME:  13:13     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
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                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                     =     12.00   INCHES
          POROSITY                      =      0.4370 VOL/VOL
          FIELD CAPACITY                =      0.1050 VOL/VOL
          WILTING POINT                 =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0709 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.850	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	5.244	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.564	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.850	INCHES
TOTAL INITIAL WATER	=	0.850	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.000
EVAPOTRANSPIRATION	0.238	0.281	0.674	0.226	0.171	0.205
	0.359	0.097	0.009	0.585	0.881	0.301
PERCOLATION/LEAKAGE THROUGH	0.0032	0.0246	0.0208	0.0406	0.0038	0.0126
LAYER 1	0.0598	0.0071	0.0014	0.0216	0.0431	0.0043

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.025	91.695	0.60
EVAPOTRANSPIRATION	4.028	14622.090	95.45
PERC./LEAKAGE THROUGH LAYER 1	0.242827	881.461	5.75
CHANGE IN WATER STORAGE	-0.076	-276.649	-1.81
SOIL WATER AT START OF YEAR	0.850	3087.250	
SOIL WATER AT END OF YEAR	0.774	2810.601	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.095	0.000	0.007	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.737	0.760	1.561	1.339	0.424
	1.354	0.409	0.709	0.290	0.308	0.436
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0161	0.0625	0.0750	0.0447
LAYER 1	0.0139	0.0142	0.0276	0.0091	0.0071	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.102	370.802	1.05
EVAPOTRANSPIRATION	9.069	32919.223	92.82
PERC./LEAKAGE THROUGH LAYER 1	0.270140	980.607	2.76
CHANGE IN WATER STORAGE	0.329	1194.471	3.37
SOIL WATER AT START OF YEAR	0.774	2810.601	
SOIL WATER AT END OF YEAR	1.103	4005.072	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.014	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.327	0.055	0.000	0.000	0.000
	0.000	0.000	0.000	0.039	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.559	0.774	1.310	0.531	0.374
	1.394	0.645	0.637	1.285	0.214	0.013
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0024	0.0317	0.0432	0.0165
LAYER 1	0.0217	0.0241	0.0226	0.0179	0.0322	0.0079

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.421	1529.796	5.11
EVAPOTRANSPIRATION	8.116	29460.475	98.37
PERC./LEAKAGE THROUGH LAYER 1	0.220167	799.205	2.67
CHANGE IN WATER STORAGE	-0.507	-1841.966	-6.15
SOIL WATER AT START OF YEAR	1.103	4005.072	
SOIL WATER AT END OF YEAR	0.596	2163.106	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.007	0.000
	0.000	0.000	0.000	0.000	0.000	0.029
EVAPOTRANSPIRATION	0.390	0.081	0.608	0.315	2.258	0.659
	0.857	1.592	0.205	0.231	0.186	0.588
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0077	0.0028	0.0151	0.2831	0.0747
LAYER 1	0.0479	0.0514	0.0159	0.0179	0.0195	0.0007

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.039	140.191	0.42
EVAPOTRANSPIRATION	7.969	28927.703	86.71
PERC./LEAKAGE THROUGH LAYER 1	0.536774	1948.488	5.84
CHANGE IN WATER STORAGE	0.646	2343.317	7.02
SOIL WATER AT START OF YEAR	0.596	2163.106	
SOIL WATER AT END OF YEAR	1.161	4215.083	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.016	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.178	0.072	0.222	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.666	0.774	1.814	2.867	0.651	0.397
	0.265	0.327	0.950	0.396	1.309	0.871
PERCOLATION/LEAKAGE THROUGH	0.0003	0.0014	0.0164	0.4153	0.1011	0.0457
LAYER 1	0.0325	0.0215	0.0019	0.0826	0.0140	0.0456

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.473	1718.547	3.80
EVAPOTRANSPIRATION	11.285	40965.902	90.50
PERC./LEAKAGE THROUGH LAYER 1	0.778273	2825.130	6.24
CHANGE IN WATER STORAGE	-0.067	-243.469	-0.54
SOIL WATER AT START OF YEAR	1.161	4215.083	
SOIL WATER AT END OF YEAR	1.174	4262.955	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.101	0.044	0.045	0.003	0.000
	0.000	0.000	0.000	0.008	0.000	0.006
STD. DEVIATIONS	0.010	0.148	0.043	0.099	0.004	0.000
	0.000	0.000	0.000	0.017	0.000	0.013
EVAPOTRANSPIRATION						
TOTALS	0.483	0.486	0.926	1.256	0.990	0.412
	0.846	0.614	0.502	0.557	0.579	0.442
STD. DEVIATIONS	0.212	0.299	0.501	1.077	0.826	0.163
	0.532	0.581	0.385	0.428	0.496	0.320
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0007	0.0068	0.0117	0.1130	0.1012	0.0388
	0.0352	0.0236	0.0139	0.0298	0.0232	0.0117
STD. DEVIATIONS	0.0014	0.0105	0.0085	0.1698	0.1080	0.0253
	0.0188	0.0169	0.0119	0.0298	0.0145	0.0192

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.212	(0.2175)	770.21	2.417
EVAPOTRANSPIRATION	8.093	(2.6307)	29379.08	92.180
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.40964	(0.24251)	1486.978	4.66556
CHANGE IN WATER STORAGE	0.065	(0.4393)	235.14	0.738

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.181	655.3098
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.172744	627.06079
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2086
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.1744	0.0979
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B212CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B212CN91.OUT


TIME:  13:11     DATE:   4/24/2003



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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                     =     12.00   INCHES
          POROSITY                      =      0.4370 VOL/VOL
          FIELD CAPACITY                =      0.1050 VOL/VOL
          WILTING POINT                 =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0642 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.170000002000E-02 CM/SEC
```

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	0.770	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	5.244	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.564	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	0.770	INCHES
TOTAL INITIAL WATER	=	0.770	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	12.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.038	0.000	0.000
EVAPOTRANSPIRATION	0.226	0.265	0.645	0.172	0.150	0.133
	0.135	0.121	0.108	0.890	0.417	0.243
PERCOLATION/LEAKAGE THROUGH	0.0142	0.0192	0.0031	0.0528	0.0417	0.0000
LAYER 1	0.0157	0.0044	0.0117	0.0848	0.0414	0.0043

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.060	217.648	1.42
EVAPOTRANSPIRATION	3.506	12726.902	83.08
PERC./LEAKAGE THROUGH LAYER 1	0.293311	1064.719	6.95
CHANGE IN WATER STORAGE	0.361	1309.328	8.55
SOIL WATER AT START OF YEAR	0.770	2794.634	
SOIL WATER AT END OF YEAR	1.131	4103.962	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.107	0.000	0.054	0.000
	0.001	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.733	1.141	1.360	1.277	0.332
	1.386	0.338	0.457	1.138	0.402	0.456
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0263	0.0378	0.0575	0.0001
LAYER 1	0.0023	0.0000	0.0000	0.0004	0.0022	0.0015

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.162	587.945	1.66
EVAPOTRANSPIRATION	9.760	35428.301	99.90
PERC./LEAKAGE THROUGH LAYER 1	0.128150	465.184	1.31
CHANGE IN WATER STORAGE	-0.280	-1016.318	-2.87
SOIL WATER AT START OF YEAR	1.131	4103.962	
SOIL WATER AT END OF YEAR	0.851	3087.644	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.311	0.049	0.000	0.000	0.000
	0.000	0.000	0.000	0.158	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.563	0.718	1.196	0.389	0.258
	1.080	0.449	0.509	1.345	0.311	0.011
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0006	0.0132	0.0072	0.0001	0.0001
LAYER 1	0.0087	0.1137	0.0374	0.4784	0.1029	0.0079

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.517	1877.309	6.27
EVAPOTRANSPIRATION	7.208	26166.359	87.37
PERC./LEAKAGE THROUGH LAYER 1	0.769925	2794.829	9.33
CHANGE IN WATER STORAGE	-0.245	-890.993	-2.98
SOIL WATER AT START OF YEAR	0.851	3087.644	
SOIL WATER AT END OF YEAR	0.605	2196.651	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.078	0.000
	0.000	0.029	0.000	0.000	0.000	0.030
EVAPOTRANSPIRATION	0.390	0.081	0.602	0.320	2.209	0.561
	0.313	1.691	0.453	0.289	0.211	0.595
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0077	0.0028	0.0255	0.0793	0.0913
LAYER 1	0.0310	0.0358	0.1104	0.0494	0.0174	0.0026

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.141	512.227	1.54
EVAPOTRANSPIRATION	7.715	28005.283	83.95
PERC./LEAKAGE THROUGH LAYER 1	0.453265	1645.351	4.93
CHANGE IN WATER STORAGE	0.881	3196.852	9.58
SOIL WATER AT START OF YEAR	0.605	2196.651	
SOIL WATER AT END OF YEAR	1.406	5102.162	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.178	0.074	0.227	0.000	0.000
	0.000	0.000	0.003	0.000	0.019	0.000
EVAPOTRANSPIRATION	0.733	0.828	2.024	2.684	0.941	0.282
	0.238	0.184	0.913	0.448	1.405	0.870
PERCOLATION/LEAKAGE THROUGH	0.0028	0.0070	0.0009	0.2142	0.1099	0.0459
LAYER 1	0.0491	0.0208	0.0082	0.0090	0.0389	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.503	1824.719	4.03
EVAPOTRANSPIRATION	11.550	41925.457	92.62
PERC./LEAKAGE THROUGH LAYER 1	0.506720	1839.395	4.06
CHANGE IN WATER STORAGE	-0.089	-323.462	-0.71
SOIL WATER AT START OF YEAR	1.406	5102.162	
SOIL WATER AT END OF YEAR	1.397	5070.041	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.098	0.046	0.046	0.027	0.000
	0.000	0.006	0.001	0.039	0.004	0.006
STD. DEVIATIONS	0.010	0.142	0.047	0.101	0.037	0.000
	0.000	0.013	0.001	0.068	0.008	0.014
EVAPOTRANSPIRATION						
TOTALS	0.494	0.494	1.026	1.146	0.993	0.313
	0.630	0.557	0.488	0.822	0.549	0.435
STD. DEVIATIONS	0.231	0.315	0.598	1.005	0.812	0.157
	0.564	0.647	0.286	0.448	0.485	0.329
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0034	0.0069	0.0093	0.0675	0.0577	0.0275
	0.0214	0.0349	0.0335	0.1244	0.0406	0.0033
STD. DEVIATIONS	0.0062	0.0077	0.0107	0.0837	0.0411	0.0408
	0.0188	0.0463	0.0452	0.2007	0.0384	0.0030

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.277	(0.2165)	1003.97	3.150
EVAPOTRANSPIRATION	7.948	(3.0244)	28850.46	90.521
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.43027	(0.24071)	1561.896	4.90062
CHANGE IN WATER STORAGE	0.125	(0.4934)	455.08	1.428

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.173	627.5353
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.064540	234.28133
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2116
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.3967	0.1164
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B218CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B218CN85.OUT


TIME:  13:15     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                    =     18.00   INCHES
          POROSITY                     =      0.4370 VOL/VOL
          FIELD CAPACITY               =      0.1050 VOL/VOL
          WILTING POINT                =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0660 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.188	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.866	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.846	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.188	INCHES
TOTAL INITIAL WATER	=	1.188	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.231	0.264	0.662	0.215	0.172	0.258
	0.491	0.025	0.009	0.526	0.790	0.284
PERCOLATION/LEAKAGE THROUGH	0.0126	0.0187	0.0122	0.0258	0.0248	0.0016
LAYER 1	0.0649	0.0028	0.0013	0.0406	0.0420	0.0369

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.022	79.024	0.52
EVAPOTRANSPIRATION	3.926	14251.122	93.03
PERC./LEAKAGE THROUGH LAYER 1	0.284164	1031.516	6.73
CHANGE IN WATER STORAGE	-0.012	-43.067	-0.28
SOIL WATER AT START OF YEAR	1.188	4312.027	
SOIL WATER AT END OF YEAR	1.176	4268.959	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.004	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.090	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.738	0.719	1.318	1.404	0.456
	1.435	0.428	0.592	0.272	0.292	0.432
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0225	0.1159	0.2066	0.0508
LAYER 1	0.1206	0.0122	0.0615	0.0173	0.0024	0.0079

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.090	326.889	0.92
EVAPOTRANSPIRATION	8.827	32041.500	90.35
PERC./LEAKAGE THROUGH LAYER 1	0.617665	2242.124	6.32
CHANGE IN WATER STORAGE	0.235	854.581	2.41
SOIL WATER AT START OF YEAR	1.176	4268.959	
SOIL WATER AT END OF YEAR	1.411	5123.540	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.023	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.309	0.040	0.000	0.000	0.000
	0.000	0.000	0.000	0.011	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.558	0.752	1.210	0.483	0.435
	1.641	0.382	0.296	1.216	0.277	0.012
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0022	0.0000	0.0845	0.0516	0.0377
LAYER 1	0.1129	0.0355	0.0036	0.2764	0.1678	0.0064

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.360	1308.429	4.37
EVAPOTRANSPIRATION	7.643	27744.074	92.64
PERC./LEAKAGE THROUGH LAYER 1	0.778528	2826.058	9.44
CHANGE IN WATER STORAGE	-0.532	-1931.062	-6.45
SOIL WATER AT START OF YEAR	1.411	5123.540	
SOIL WATER AT END OF YEAR	0.879	3192.477	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.007	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.026
EVAPOTRANSPIRATION	0.390	0.081	0.612	0.297	2.192	0.768
	1.200	1.525	0.204	0.226	0.183	0.581
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0060	0.0037	0.0186	0.0469	0.0149
LAYER 1	0.0291	0.0647	0.0332	0.0847	0.0051	0.0001

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.029	104.074	0.31
EVAPOTRANSPIRATION	8.261	29988.381	89.89
PERC./LEAKAGE THROUGH LAYER 1	0.307022	1114.490	3.34
CHANGE IN WATER STORAGE	0.593	2152.748	6.45
SOIL WATER AT START OF YEAR	0.879	3192.477	
SOIL WATER AT END OF YEAR	1.392	5053.884	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.023	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.158	0.072	0.212	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.664	0.723	1.556	2.555	0.927	0.497
	0.818	0.222	0.787	0.424	1.182	0.901
PERCOLATION/LEAKAGE THROUGH	0.0004	0.0010	0.0302	0.0159	0.1355	0.0732
LAYER 1	0.1176	0.0370	0.0106	0.0751	0.0142	0.0350

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.443	1606.815	3.55
EVAPOTRANSPIRATION	11.256	40859.867	90.27
PERC./LEAKAGE THROUGH LAYER 1	0.545814	1981.306	4.38
CHANGE IN WATER STORAGE	0.225	818.126	1.81
SOIL WATER AT START OF YEAR	1.392	5053.884	
SOIL WATER AT END OF YEAR	1.698	6163.351	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.006	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.093	0.040	0.043	0.000	0.000
	0.000	0.000	0.000	0.002	0.000	0.005
STD. DEVIATIONS	0.010	0.139	0.041	0.095	0.000	0.000
	0.000	0.000	0.000	0.005	0.000	0.011
EVAPOTRANSPIRATION						
TOTALS	0.481	0.473	0.860	1.119	1.036	0.483
	1.117	0.516	0.378	0.533	0.545	0.442
STD. DEVIATIONS	0.213	0.290	0.393	0.949	0.797	0.184
	0.465	0.586	0.311	0.400	0.428	0.331
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0026	0.0056	0.0137	0.0521	0.0931	0.0357
	0.0890	0.0304	0.0220	0.0988	0.0463	0.0172
STD. DEVIATIONS	0.0056	0.0077	0.0127	0.0454	0.0762	0.0284
	0.0405	0.0242	0.0254	0.1029	0.0697	0.0173

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.78 (2.993)	31871.4	100.00
RUNOFF	0.189 (0.1982)	685.05	2.149
EVAPOTRANSPIRATION	7.983 (2.6495)	28976.99	90.918
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.50664 (0.21043)	1839.099	5.77037
CHANGE IN WATER STORAGE	0.102 (0.4150)	370.26	1.162

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.175	634.6328
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.049781	180.70547
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1789
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.6979	0.0943
SNOW WATER	0.000	

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**                                                                           **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B218CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B218CN88.OUT


TIME:  13:13     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
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                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                    =     18.00   INCHES
          POROSITY                     =      0.4370 VOL/VOL
          FIELD CAPACITY               =      0.1050 VOL/VOL
          WILTING POINT                =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0684 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.231	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.866	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.846	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.231	INCHES
TOTAL INITIAL WATER	=	1.231	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.000
EVAPOTRANSPIRATION	0.228	0.264	0.661	0.211	0.168	0.204
	0.515	0.100	0.008	0.526	0.789	0.280
PERCOLATION/LEAKAGE THROUGH	0.0135	0.0219	0.0126	0.0274	0.0253	0.0014
LAYER 1	0.0558	0.0136	0.0015	0.0392	0.0338	0.0169

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.025	89.978	0.59
EVAPOTRANSPIRATION	3.955	14354.858	93.71
PERC./LEAKAGE THROUGH LAYER 1	0.262798	953.957	6.23
CHANGE IN WATER STORAGE	-0.022	-80.197	-0.52
SOIL WATER AT START OF YEAR	1.231	4467.871	
SOIL WATER AT END OF YEAR	1.209	4387.674	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.091	0.000	0.014	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.737	0.716	1.295	1.386	0.400
	1.205	0.604	0.685	0.276	0.310	0.436
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0249	0.2330	0.1065	0.0501
LAYER 1	0.0990	0.1089	0.0468	0.0196	0.0077	0.0119

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.105	380.643	1.07
EVAPOTRANSPIRATION	8.791	31912.906	89.98
PERC./LEAKAGE THROUGH LAYER 1	0.708373	2571.394	7.25
CHANGE IN WATER STORAGE	0.165	600.164	1.69
SOIL WATER AT START OF YEAR	1.209	4387.674	
SOIL WATER AT END OF YEAR	1.374	4987.837	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.009	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.308	0.040	0.000	0.000	0.000
	0.000	0.000	0.000	0.052	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.559	0.765	1.213	0.481	0.350
	1.477	0.605	0.253	1.245	0.286	0.011
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0034	0.0138	0.0270	0.0449	0.0263
LAYER 1	0.0825	0.1009	0.0016	0.2409	0.1675	0.0067

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.400	1452.402	4.85
EVAPOTRANSPIRATION	7.627	27684.367	92.44
PERC./LEAKAGE THROUGH LAYER 1	0.715516	2597.322	8.67
CHANGE IN WATER STORAGE	-0.492	-1786.583	-5.97
SOIL WATER AT START OF YEAR	1.374	4987.837	
SOIL WATER AT END OF YEAR	0.882	3201.254	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.005	0.000
	0.000	0.000	0.000	0.000	0.000	0.025
EVAPOTRANSPIRATION	0.390	0.081	0.610	0.290	2.184	0.714
	0.857	1.897	0.193	0.210	0.169	0.581
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0060	0.0053	0.0264	0.0551	0.0167
LAYER 1	0.0065	0.1082	0.0294	0.1341	0.0355	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.033	118.970	0.36
EVAPOTRANSPIRATION	8.177	29681.305	88.97
PERC./LEAKAGE THROUGH LAYER 1	0.423258	1536.425	4.61
CHANGE IN WATER STORAGE	0.557	2023.007	6.06
SOIL WATER AT START OF YEAR	0.882	3201.254	
SOIL WATER AT END OF YEAR	1.359	4932.920	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.008	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.157	0.071	0.214	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.664	0.726	1.579	2.581	0.929	0.405
	0.899	0.204	0.784	0.413	1.073	1.020
PERCOLATION/LEAKAGE THROUGH	0.0004	0.0000	0.0374	0.0164	0.0242	0.0706
LAYER 1	0.1163	0.0867	0.0160	0.0694	0.0908	0.1029

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.443	1607.949	3.55
EVAPOTRANSPIRATION	11.279	40943.250	90.45
PERC./LEAKAGE THROUGH LAYER 1	0.631224	2291.343	5.06
CHANGE IN WATER STORAGE	0.117	423.560	0.94
SOIL WATER AT START OF YEAR	1.359	4932.920	
SOIL WATER AT END OF YEAR	1.556	5647.821	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.007	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.093	0.041	0.043	0.004	0.000
	0.000	0.000	0.000	0.011	0.000	0.005
STD. DEVIATIONS	0.010	0.138	0.041	0.095	0.006	0.000
	0.000	0.000	0.000	0.023	0.000	0.011
EVAPOTRANSPIRATION						
TOTALS	0.480	0.473	0.866	1.118	1.030	0.415
	0.991	0.682	0.385	0.534	0.525	0.466
STD. DEVIATIONS	0.214	0.291	0.403	0.960	0.793	0.186
	0.366	0.717	0.334	0.416	0.388	0.375
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0028	0.0062	0.0188	0.0660	0.0512	0.0330
	0.0720	0.0836	0.0191	0.1006	0.0671	0.0277
STD. DEVIATIONS	0.0060	0.0091	0.0125	0.0935	0.0336	0.0275
	0.0429	0.0402	0.0193	0.0896	0.0638	0.0425

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.201	(0.2042)	729.99	2.290
EVAPOTRANSPIRATION	7.966	(2.6415)	28915.34	90.725
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.54823	(0.19850)	1990.088	6.24412
CHANGE IN WATER STORAGE	0.065	(0.3785)	235.99	0.740

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.174	633.3832
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.035717	129.65172
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1748
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.5559	0.0864
SNOW WATER	0.000	

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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.301	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.866	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.846	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.301	INCHES
TOTAL INITIAL WATER	=	1.301	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.041	0.000	0.000
EVAPOTRANSPIRATION	0.222	0.263	0.657	0.202	0.158	0.133
	0.134	0.121	0.107	0.859	0.416	0.243
PERCOLATION/LEAKAGE THROUGH	0.0084	0.0187	0.0112	0.0245	0.0124	0.0000
LAYER 1	0.0064	0.0081	0.0002	0.0302	0.0098	0.0014

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.064	231.210	1.51
EVAPOTRANSPIRATION	3.516	12763.154	83.32
PERC./LEAKAGE THROUGH LAYER 1	0.131452	477.172	3.11
CHANGE IN WATER STORAGE	0.509	1847.062	12.06
SOIL WATER AT START OF YEAR	1.301	4724.021	
SOIL WATER AT END OF YEAR	1.810	6571.083	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.109	0.000	0.065	0.000
	0.002	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.733	1.139	1.274	1.252	0.324
	1.340	0.333	0.468	1.095	0.408	0.454
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0247	0.0484	0.0181	0.0054
LAYER 1	0.0488	0.0178	0.0242	0.0361	0.0020	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.175	636.667	1.80
EVAPOTRANSPIRATION	9.561	34705.215	97.86
PERC./LEAKAGE THROUGH LAYER 1	0.225487	818.517	2.31
CHANGE IN WATER STORAGE	-0.192	-695.277	-1.96
SOIL WATER AT START OF YEAR	1.810	6571.083	
SOIL WATER AT END OF YEAR	1.619	5875.806	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	-0.005	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.296	0.037	0.000	0.000	0.000
	0.000	0.000	0.000	0.167	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.563	0.706	1.202	0.399	0.264
	1.069	0.450	0.545	1.414	0.319	0.027
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0004	0.0277	0.0248	0.0106
LAYER 1	0.0404	0.0192	0.0192	0.0837	0.1703	0.0139

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.500	1815.082	6.06
EVAPOTRANSPIRATION	7.338	26636.258	88.94
PERC./LEAKAGE THROUGH LAYER 1	0.410195	1489.009	4.97
CHANGE IN WATER STORAGE	0.002	7.153	0.02
SOIL WATER AT START OF YEAR	1.619	5875.806	
SOIL WATER AT END OF YEAR	1.621	5882.959	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.005	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.004	0.072	0.000
	0.000	0.032	0.000	0.000	0.000	0.032
EVAPOTRANSPIRATION	0.390	0.096	0.607	0.449	2.288	0.561
	0.314	1.715	0.455	0.289	0.211	0.595
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0119	0.0044	0.0639	0.1422	0.0007
LAYER 1	0.0000	0.0044	0.0001	0.0000	0.0013	0.0024

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.140	508.172	1.52
EVAPOTRANSPIRATION	7.970	28932.809	86.73
PERC./LEAKAGE THROUGH LAYER 1	0.231285	839.564	2.52
CHANGE IN WATER STORAGE	0.848	3079.169	9.23
SOIL WATER AT START OF YEAR	1.621	5882.959	
SOIL WATER AT END OF YEAR	2.389	8670.787	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.173	0.077	0.223	0.000	0.000
	0.000	0.000	0.003	0.000	0.022	0.000
EVAPOTRANSPIRATION	0.733	0.828	2.023	2.683	0.942	0.285
	0.238	0.201	0.981	0.464	1.441	0.870
PERCOLATION/LEAKAGE THROUGH	0.0002	0.0012	0.0390	0.0280	0.1590	0.0775
LAYER 1	0.0419	0.0344	0.0396	0.0184	0.0114	0.0001

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.500	1816.393	4.01
EVAPOTRANSPIRATION	11.689	42430.539	93.74
PERC./LEAKAGE THROUGH LAYER 1	0.450582	1635.614	3.61
CHANGE IN WATER STORAGE	-0.170	-616.445	-1.36
SOIL WATER AT START OF YEAR	2.389	8670.787	
SOIL WATER AT END OF YEAR	2.299	8345.684	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.005	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.094	0.045	0.045	0.027	0.000
	0.000	0.006	0.001	0.042	0.004	0.006
STD. DEVIATIONS	0.010	0.136	0.048	0.100	0.038	0.000
	0.001	0.014	0.002	0.072	0.010	0.014
EVAPOTRANSPIRATION						
TOTALS	0.493	0.497	1.027	1.162	1.008	0.313
	0.619	0.564	0.511	0.824	0.559	0.438
STD. DEVIATIONS	0.232	0.310	0.596	0.969	0.836	0.156
	0.547	0.656	0.312	0.458	0.500	0.324
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0017	0.0064	0.0160	0.0385	0.0713	0.0188
	0.0275	0.0168	0.0167	0.0337	0.0389	0.0036
STD. DEVIATIONS	0.0037	0.0085	0.0159	0.0171	0.0728	0.0331
	0.0225	0.0117	0.0168	0.0312	0.0736	0.0059

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.276	(0.2087)	1001.50	3.142
EVAPOTRANSPIRATION	8.015	(3.0244)	29093.60	91.284
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.28980	(0.13507)	1051.975	3.30069
CHANGE IN WATER STORAGE	0.200	(0.4596)	724.33	2.273

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.169	612.3197
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.019271	69.95487
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1914
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0723

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	2.2991	0.1277
SNOW WATER	0.000	

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**                                                                           **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B218CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B218CN91.OUT


TIME:  13:11     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                     =     18.00   INCHES
          POROSITY                      =      0.4370 VOL/VOL
          FIELD CAPACITY                =      0.1050 VOL/VOL
          WILTING POINT                 =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0723 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.170000002000E-02 CM/SEC
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**                                                                  **
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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE        **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)        **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY           **
**                    USAE WATERWAYS EXPERIMENT STATION             **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY       **
**                                                                  **
**                                                                  **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B224CN85.D10
OUTPUT DATA FILE:           C:\HELP3\B224CN85.OUT


TIME:  13:15     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                     =     24.00   INCHES
          POROSITY                      =      0.4370 VOL/VOL
          FIELD CAPACITY                =      0.1050 VOL/VOL
          WILTING POINT                 =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0524 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.257	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	10.488	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.128	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.257	INCHES
TOTAL INITIAL WATER	=	1.257	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.021	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.361	0.312	0.633	0.134	0.294	0.000
	0.244	0.020	0.010	1.159	0.450	0.158
PERCOLATION/LEAKAGE THROUGH	0.0492	0.0512	0.0143	0.0559	0.0543	0.0000
LAYER 1	0.0465	0.0000	0.0000	0.1021	0.0415	0.0107

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.021	75.301	0.49
EVAPOTRANSPIRATION	3.774	13698.329	89.42
PERC./LEAKAGE THROUGH LAYER 1	0.425694	1545.271	10.09
CHANGE IN WATER STORAGE	0.000	-0.304	0.00
SOIL WATER AT START OF YEAR	1.257	4563.461	
SOIL WATER AT END OF YEAR	1.257	4563.158	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.080	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.735	1.316	1.357	1.406	0.218
	0.933	0.528	0.523	0.825	0.160	0.455
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0267	0.1642	0.0739	0.0600
LAYER 1	0.0791	0.0422	0.0138	0.0985	0.0379	0.0279

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.080	291.687	0.82
EVAPOTRANSPIRATION	9.195	33376.191	94.11
PERC./LEAKAGE THROUGH LAYER 1	0.624173	2265.750	6.39
CHANGE IN WATER STORAGE	-0.129	-468.518	-1.32
SOIL WATER AT START OF YEAR	1.257	4563.158	
SOIL WATER AT END OF YEAR	1.128	4094.640	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.267	0.026	0.000	0.000	0.000
	0.000	0.000	0.000	0.006	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.546	0.729	1.357	0.415	0.226
	1.253	0.383	0.617	1.308	0.092	0.014
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.1247	0.0353	0.0450
LAYER 1	0.1257	0.0371	0.0427	0.1487	0.0385	0.0115

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.299	1087.150	3.63
EVAPOTRANSPIRATION	7.320	26570.156	88.72
PERC./LEAKAGE THROUGH LAYER 1	0.609204	2211.412	7.38
CHANGE IN WATER STORAGE	0.022	78.782	0.26
SOIL WATER AT START OF YEAR	1.128	4094.640	
SOIL WATER AT END OF YEAR	1.150	4173.422	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.006	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.022
EVAPOTRANSPIRATION	0.390	0.073	0.603	0.297	2.753	0.637
	0.385	1.492	0.255	0.383	0.166	0.550
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0017	0.0005	0.0259	0.1331	0.1029
LAYER 1	0.2156	0.1289	0.0549	0.1378	0.0741	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.025	89.942	0.27
EVAPOTRANSPIRATION	7.983	28980.002	86.87
PERC./LEAKAGE THROUGH LAYER 1	0.875449	3177.879	9.53
CHANGE IN WATER STORAGE	0.306	1111.880	3.33
SOIL WATER AT START OF YEAR	1.150	4173.422	
SOIL WATER AT END OF YEAR	1.376	4993.961	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.012	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.123	0.060	0.186	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.730	0.924	1.751	2.750	0.777	0.362
	0.069	0.245	1.263	0.092	1.446	1.028
PERCOLATION/LEAKAGE THROUGH	0.0065	0.0314	0.0560	0.1076	0.1198	0.1137
LAYER 1	0.0019	0.0971	0.0746	0.0084	0.0429	0.0456

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.370	1342.151	2.97
EVAPOTRANSPIRATION	11.435	41509.496	91.70
PERC./LEAKAGE THROUGH LAYER 1	0.705655	2561.527	5.66
CHANGE IN WATER STORAGE	-0.041	-147.079	-0.32
SOIL WATER AT START OF YEAR	1.376	4993.961	
SOIL WATER AT END OF YEAR	1.415	5138.224	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.014	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.078	0.033	0.038	0.000	0.000
	0.000	0.000	0.000	0.001	0.000	0.004
STD. DEVIATIONS	0.009	0.118	0.036	0.083	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.010
EVAPOTRANSPIRATION						
TOTALS	0.520	0.518	1.006	1.179	1.129	0.288
	0.577	0.533	0.534	0.753	0.463	0.441
STD. DEVIATIONS	0.196	0.337	0.507	1.049	1.006	0.234
	0.498	0.568	0.472	0.513	0.567	0.394
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0111	0.0169	0.0195	0.0957	0.0833	0.0643
	0.0938	0.0611	0.0372	0.0991	0.0470	0.0192
STD. DEVIATIONS	0.0214	0.0234	0.0232	0.0551	0.0420	0.0460
	0.0818	0.0514	0.0303	0.0552	0.0153	0.0179

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.159	(0.1639)	577.25	1.811
EVAPOTRANSPIRATION	7.941	(2.8078)	28826.84	90.447
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.64804	(0.16321)	2352.368	7.38081
CHANGE IN WATER STORAGE	0.032	(0.1640)	114.95	0.361

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.157	570.7954
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.035088	127.36953
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1132
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.4155	0.0590
SNOW WATER	0.000	

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**                                                                  **
**                                                                  **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE        **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)        **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY           **
**                    USAE WATERWAYS EXPERIMENT STATION             **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY       **
**                                                                  **
**                                                                  **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B224CN88.D10
OUTPUT DATA FILE:           C:\HELP3\B224CN88.OUT


TIME:  13:13     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
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                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                    =     24.00   INCHES
          POROSITY                     =      0.4370 VOL/VOL
          FIELD CAPACITY               =      0.1050 VOL/VOL
          WILTING POINT                =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.0504 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.170000002000E-02 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.209	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	10.488	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.128	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	1.209	INCHES
TOTAL INITIAL WATER	=	1.209	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.021	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.000
EVAPOTRANSPIRATION	0.374	0.297	0.634	0.148	0.274	0.000
	0.234	0.020	0.010	1.124	0.408	0.190
PERCOLATION/LEAKAGE THROUGH	0.0306	0.0582	0.0362	0.0320	0.0262	0.0000
LAYER 1	0.0563	0.0000	0.0000	0.1256	0.0914	0.0236

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.023	84.901	0.55
EVAPOTRANSPIRATION	3.713	13478.466	87.99
PERC./LEAKAGE THROUGH LAYER 1	0.480114	1742.815	11.38
CHANGE IN WATER STORAGE	0.003	12.418	0.08
SOIL WATER AT START OF YEAR	1.209	4388.824	
SOIL WATER AT END OF YEAR	1.212	4401.242	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.080	0.000	0.005	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.734	1.305	1.300	1.365	0.255
	0.908	0.529	0.503	0.753	0.192	0.417
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0567	0.1589	0.1100	0.0549
LAYER 1	0.0689	0.0437	0.0470	0.1567	0.0446	0.0270

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.084	306.645	0.86
EVAPOTRANSPIRATION	9.001	32675.293	92.13
PERC./LEAKAGE THROUGH LAYER 1	0.768530	2789.763	7.87
CHANGE IN WATER STORAGE	-0.084	-306.602	-0.86
SOIL WATER AT START OF YEAR	1.212	4401.242	
SOIL WATER AT END OF YEAR	1.128	4094.640	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.017	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.267	0.026	0.000	0.000	0.000
	0.000	0.000	0.000	0.039	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.546	0.732	1.327	0.449	0.247
	1.234	0.389	0.616	1.295	0.082	0.010
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0485	0.1048	0.0217
LAYER 1	0.1482	0.0305	0.0435	0.1468	0.0293	0.0149

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.332	1204.541	4.02
EVAPOTRANSPIRATION	7.306	26521.525	88.56
PERC./LEAKAGE THROUGH LAYER 1	0.588268	2135.413	7.13
CHANGE IN WATER STORAGE	0.024	86.026	0.29
SOIL WATER AT START OF YEAR	1.128	4094.640	
SOIL WATER AT END OF YEAR	1.152	4180.666	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.001	0.000
	0.000	0.000	0.000	0.000	0.000	0.022
EVAPOTRANSPIRATION	0.390	0.073	0.602	0.294	2.761	0.590
	0.321	1.540	0.148	0.528	0.150	0.560
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0023	0.0003	0.0306	0.1520	0.0850
LAYER 1	0.1832	0.2102	0.0359	0.1246	0.0708	0.0067

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.025	92.197	0.28
EVAPOTRANSPIRATION	7.957	28882.187	86.58
PERC./LEAKAGE THROUGH LAYER 1	0.901525	3272.537	9.81
CHANGE IN WATER STORAGE	0.307	1112.788	3.34
SOIL WATER AT START OF YEAR	1.152	4180.666	
SOIL WATER AT END OF YEAR	1.378	5002.113	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.007	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.123	0.060	0.188	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.719	0.859	1.730	2.770	0.776	0.348
	0.071	0.213	1.202	0.180	1.431	1.056
PERCOLATION/LEAKAGE THROUGH	0.0456	0.0717	0.0899	0.0797	0.1002	0.1006
LAYER 1	0.0251	0.0971	0.0585	0.0421	0.1583	0.0446

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.371	1347.880	2.98
EVAPOTRANSPIRATION	11.355	41220.285	91.06
PERC./LEAKAGE THROUGH LAYER 1	0.913241	3315.063	7.32
CHANGE IN WATER STORAGE	-0.170	-617.098	-1.36
SOIL WATER AT START OF YEAR	1.378	5002.113	
SOIL WATER AT END OF YEAR	1.288	4676.355	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.023	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.078	0.033	0.038	0.001	0.000
	0.000	0.000	0.000	0.008	0.000	0.004
STD. DEVIATIONS	0.009	0.118	0.036	0.084	0.002	0.000
	0.000	0.000	0.000	0.017	0.000	0.010
EVAPOTRANSPIRATION						
TOTALS	0.521	0.502	1.001	1.168	1.125	0.288
	0.554	0.538	0.496	0.776	0.453	0.447
STD. DEVIATIONS	0.191	0.320	0.498	1.050	1.005	0.213
	0.494	0.592	0.467	0.449	0.560	0.400
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0153	0.0264	0.0366	0.0699	0.0986	0.0524
	0.0963	0.0763	0.0370	0.1192	0.0789	0.0234
STD. DEVIATIONS	0.0215	0.0355	0.0384	0.0535	0.0455	0.0421
	0.0664	0.0827	0.0222	0.0452	0.0504	0.0142

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.167	(0.1706)	607.23	1.905
EVAPOTRANSPIRATION	7.867	(2.7854)	28555.55	89.596
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.73034	(0.19171)	2651.118	8.31817
CHANGE IN WATER STORAGE	0.016	(0.1798)	57.51	0.180

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.157	570.7954
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.035871	130.21066
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1119
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0470

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	1.2883	0.0537
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\B224CN91.D10
OUTPUT DATA FILE:           C:\HELP3\B224CN91.OUT


TIME:  13:12     DATE:   4/24/2003



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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   4
          THICKNESS                     =     24.00   INCHES
          POROSITY                      =      0.4370 VOL/VOL
          FIELD CAPACITY                =      0.1050 VOL/VOL
          WILTING POINT                 =      0.0470 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.0892 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.170000002000E-02 CM/SEC
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	1.301	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.866	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	0.846	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	2.140	INCHES
TOTAL INITIAL WATER	=	2.140	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.022	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.041	0.000	0.000
EVAPOTRANSPIRATION	0.222	0.263	0.657	0.202	0.158	0.133
	0.134	0.121	0.107	0.859	0.416	0.243
PERCOLATION/LEAKAGE THROUGH	0.0322	0.0165	0.0216	0.0101	0.0243	0.0256
LAYER 1	0.0148	0.0128	0.0158	0.0150	0.0118	0.0150

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.064	231.210	1.51
EVAPOTRANSPIRATION	3.516	12763.154	83.32
PERC./LEAKAGE THROUGH LAYER 1	0.215728	783.093	5.11
CHANGE IN WATER STORAGE	0.425	1541.142	10.06
SOIL WATER AT START OF YEAR	2.140	7767.787	
SOIL WATER AT END OF YEAR	2.564	9308.929	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.000	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.109	0.000	0.065	0.000
	0.002	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.733	1.139	1.274	1.252	0.324
	1.340	0.333	0.468	1.095	0.408	0.454
PERCOLATION/LEAKAGE THROUGH	0.0133	0.0101	0.0102	0.0125	0.0219	0.0132
LAYER 1	0.0074	0.0159	0.0217	0.0255	0.0297	0.0232

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.175	636.667	1.80
EVAPOTRANSPIRATION	9.561	34705.215	97.86
PERC./LEAKAGE THROUGH LAYER 1	0.204726	743.154	2.10
CHANGE IN WATER STORAGE	-0.171	-619.915	-1.75
SOIL WATER AT START OF YEAR	2.564	9308.929	
SOIL WATER AT END OF YEAR	2.394	8689.014	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	-0.004	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.296	0.037	0.000	0.000	0.000
	0.000	0.000	0.000	0.167	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.563	0.706	1.202	0.399	0.264
	1.069	0.450	0.545	1.414	0.319	0.027
PERCOLATION/LEAKAGE THROUGH	0.0175	0.0131	0.0116	0.0066	0.0023	0.0096
LAYER 1	0.0158	0.0250	0.0230	0.0154	0.0466	0.1275

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.500	1815.082	6.06
EVAPOTRANSPIRATION	7.338	26636.258	88.94
PERC./LEAKAGE THROUGH LAYER 1	0.313876	1139.371	3.80
CHANGE IN WATER STORAGE	0.098	356.791	1.19
SOIL WATER AT START OF YEAR	2.394	8689.014	
SOIL WATER AT END OF YEAR	2.492	9045.805	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.005	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.004	0.072	0.000
	0.000	0.032	0.000	0.000	0.000	0.032
EVAPOTRANSPIRATION	0.390	0.096	0.607	0.449	2.288	0.561
	0.314	1.715	0.455	0.289	0.211	0.595
PERCOLATION/LEAKAGE THROUGH	0.0505	0.0261	0.0242	0.0108	0.0333	0.0935
LAYER 1	0.0435	0.0272	0.0203	0.0163	0.0116	0.0097

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.140	508.172	1.52
EVAPOTRANSPIRATION	7.970	28932.809	86.73
PERC./LEAKAGE THROUGH LAYER 1	0.366943	1332.003	3.99
CHANGE IN WATER STORAGE	0.713	2586.730	7.75
SOIL WATER AT START OF YEAR	2.492	9045.805	
SOIL WATER AT END OF YEAR	3.124	11341.193	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.001	0.173	0.077	0.223	0.000	0.000
	0.000	0.000	0.003	0.000	0.022	0.000
EVAPOTRANSPIRATION	0.733	0.828	2.023	2.683	0.942	0.285
	0.238	0.201	0.981	0.464	1.441	0.870
PERCOLATION/LEAKAGE THROUGH	0.0101	0.0073	0.0040	0.0092	0.0016	0.0764
LAYER 1	0.0769	0.0526	0.0390	0.0471	0.0398	0.0305

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.500	1816.393	4.01
EVAPOTRANSPIRATION	11.689	42430.539	93.74
PERC./LEAKAGE THROUGH LAYER 1	0.394442	1431.826	3.16
CHANGE IN WATER STORAGE	-0.114	-412.657	-0.91
SOIL WATER AT START OF YEAR	3.124	11341.193	
SOIL WATER AT END OF YEAR	3.091	11219.878	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.005	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.094	0.045	0.045	0.027	0.000
	0.000	0.006	0.001	0.042	0.004	0.006
STD. DEVIATIONS	0.010	0.136	0.048	0.100	0.038	0.000
	0.001	0.014	0.002	0.072	0.010	0.014
EVAPOTRANSPIRATION						
TOTALS	0.493	0.497	1.027	1.162	1.008	0.313
	0.619	0.564	0.511	0.824	0.559	0.438
STD. DEVIATIONS	0.232	0.310	0.596	0.969	0.836	0.156
	0.547	0.656	0.312	0.458	0.500	0.324
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0247	0.0146	0.0143	0.0098	0.0167	0.0437
	0.0317	0.0267	0.0240	0.0239	0.0279	0.0412
STD. DEVIATIONS	0.0167	0.0073	0.0084	0.0022	0.0141	0.0386
	0.0288	0.0157	0.0088	0.0137	0.0160	0.0489

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.276	(0.2087)	1001.50	3.142
EVAPOTRANSPIRATION	8.015	(3.0244)	29093.60	91.284
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.29914	(0.08627)	1085.889	3.40710
CHANGE IN WATER STORAGE	0.190	(0.3738)	690.42	2.166

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.169	612.3197
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.007553	27.41669
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1914
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0723

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	3.0909	0.1288
SNOW WATER	0.000	

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**                                                                              **
**               HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                  **
**                 HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                   **
**                   DEVELOPED BY ENVIRONMENTAL LABORATORY                      **
**                     USAE WATERWAYS EXPERIMENT STATION                        **
**              FOR USEPA RISK REDUCTION ENGINEERING LABORATORY                 **
**                                                                              **
**                                                                              **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI12.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD36.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\LP00CN85.D10
OUTPUT DATA FILE:           C:\HELP3\LP00CN85.OUT


TIME:   9:42     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
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                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER   6
          THICKNESS                     =    960.00   INCHES
          POROSITY                      =      0.4530 VOL/VOL
          FIELD CAPACITY                =      0.1900 VOL/VOL
          WILTING POINT                 =      0.0850 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.1888 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.720000011000E-03 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  2.01
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	85.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	36.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	5.723	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	16.308	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	3.060	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	181.282	INCHES
TOTAL INITIAL WATER	=	181.282	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.20	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	36.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.026	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.213	0.241	0.647	0.189	0.163	0.341
	1.861	1.141	0.010	1.195	0.536	0.178
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0023	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.026	94.447	0.62
EVAPOTRANSPIRATION	6.713	24368.607	159.08
PERC./LEAKAGE THROUGH LAYER 1	0.002295	8.330	0.05
CHANGE IN WATER STORAGE	-2.521	-9152.767	-59.75
SOIL WATER AT START OF YEAR	181.282	658055.437	
SOIL WATER AT END OF YEAR	178.761	648902.687	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.017	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.080	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.740	0.608	1.506	1.597	0.645
	1.312	0.388	0.704	0.416	0.418	0.463
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.080	290.691	0.82
EVAPOTRANSPIRATION	9.536	34616.410	97.61
PERC./LEAKAGE THROUGH LAYER 1	0.000000	0.000	0.00
CHANGE IN WATER STORAGE	0.154	557.993	1.57
SOIL WATER AT START OF YEAR	178.761	648902.687	
SOIL WATER AT END OF YEAR	178.915	649460.625	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.021	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.264	0.023	0.000	0.000	0.000
	0.000	0.000	0.000	0.006	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.566	0.758	1.115	0.483	0.542
	1.669	0.446	0.402	1.537	0.253	0.013
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0009	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.292	1061.468	3.54
EVAPOTRANSPIRATION	8.162	29629.471	98.94
PERC./LEAKAGE THROUGH LAYER 1	0.000851	3.088	0.01
CHANGE IN WATER STORAGE	-0.206	-746.483	-2.49
SOIL WATER AT START OF YEAR	178.915	649460.625	
SOIL WATER AT END OF YEAR	178.709	648714.187	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.037	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.021
EVAPOTRANSPIRATION	0.390	0.082	0.613	0.322	1.995	0.996
	1.314	1.568	0.356	0.401	0.295	0.572
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0030	0.0000	0.0008	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.024	87.502	0.26
EVAPOTRANSPIRATION	8.904	32321.389	96.89
PERC./LEAKAGE THROUGH LAYER 1	0.003755	13.629	0.04
CHANGE IN WATER STORAGE	0.258	937.182	2.81
SOIL WATER AT START OF YEAR	178.709	648714.187	
SOIL WATER AT END OF YEAR	178.887	649360.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.013	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.122	0.062	0.186	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.665	0.680	1.363	2.449	1.968	0.339
	0.393	0.293	0.387	0.288	0.843	0.935
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.370	1344.390	2.97
EVAPOTRANSPIRATION	10.604	38493.379	85.04
PERC./LEAKAGE THROUGH LAYER 1	0.000000	0.000	0.00
CHANGE IN WATER STORAGE	1.495	5428.335	11.99
SOIL WATER AT START OF YEAR	178.887	649360.000	
SOIL WATER AT END OF YEAR	180.463	655079.687	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.004	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.005	0.077	0.033	0.038	0.000	0.000
	0.000	0.000	0.000	0.001	0.000	0.004
STD. DEVIATIONS	0.012	0.117	0.036	0.083	0.000	0.000
	0.000	0.000	0.000	0.003	0.000	0.009
EVAPOTRANSPIRATION						
TOTALS	0.478	0.462	0.798	1.116	1.241	0.573
	1.310	0.767	0.372	0.767	0.469	0.432
STD. DEVIATIONS	0.219	0.287	0.322	0.925	0.860	0.271
	0.564	0.560	0.246	0.562	0.237	0.358
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0012	0.0000	0.0002	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0013	0.0000	0.0004	0.0000	0.0000	0.0000

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.159	(0.1617)	575.70	1.806
EVAPOTRANSPIRATION	8.784	(1.4636)	31885.85	100.045
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.00138	(0.00163)	5.009	0.01572
CHANGE IN WATER STORAGE	-0.164	(1.4656)	-595.15	-1.867

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.157	568.7032
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.002108	7.65214
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1709
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0850

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	180.4627	0.1880
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI08.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD30.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\LP00CN88.D10
OUTPUT DATA FILE:           C:\HELP3\LP00CN88.OUT


TIME:   9:42     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER   6
          THICKNESS                     =    960.00   INCHES
          POROSITY                      =      0.4530 VOL/VOL
          FIELD CAPACITY                =      0.1900 VOL/VOL
          WILTING POINT                 =      0.0850 VOL/VOL
          INITIAL SOIL WATER CONTENT    =      0.1877 VOL/VOL
          EFFECTIVE SAT. HYD. COND.     =  0.720000011000E-03 CM/SEC
        NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.60
                 FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	88.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	30.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	3.540	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	13.590	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.550	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	180.240	INCHES
TOTAL INITIAL WATER	=	180.240	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.80	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	30.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.021	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.002	0.000	0.000
EVAPOTRANSPIRATION	0.239	0.320	0.695	0.270	0.218	0.269
	0.476	0.621	0.010	1.059	0.575	0.276
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0023	0.0030	0.0000
LAYER 1	0.0000	0.0153	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.024	85.501	0.56
EVAPOTRANSPIRATION	5.027	18249.047	119.13
PERC./LEAKAGE THROUGH LAYER 1	0.020592	74.749	0.49
CHANGE IN WATER STORAGE	-0.851	-3090.729	-20.18
SOIL WATER AT START OF YEAR	180.240	654270.062	
SOIL WATER AT END OF YEAR	179.388	651179.312	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.031	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.080	0.000	0.006	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.735	0.818	1.405	1.696	0.561
	1.082	0.636	0.558	0.906	0.142	0.463
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.086	313.519	0.88
EVAPOTRANSPIRATION	9.743	35367.016	99.72
PERC./LEAKAGE THROUGH LAYER 1	0.000841	3.053	0.01
CHANGE IN WATER STORAGE	-0.060	-218.511	-0.62
SOIL WATER AT START OF YEAR	179.388	651179.312	
SOIL WATER AT END OF YEAR	179.328	650960.812	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.041	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.264	0.023	0.000	0.000	0.000
	0.000	0.000	0.000	0.039	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.568	0.743	1.519	0.451	0.209
	1.282	0.588	0.630	1.457	0.133	0.011
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.327	1185.583	3.96
EVAPOTRANSPIRATION	7.972	28937.162	96.63
PERC./LEAKAGE THROUGH LAYER 1	0.000000	0.000	0.00
CHANGE IN WATER STORAGE	-0.048	-175.197	-0.59
SOIL WATER AT START OF YEAR	179.328	650960.812	
SOIL WATER AT END OF YEAR	179.280	650785.625	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.042	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.022
EVAPOTRANSPIRATION	0.390	0.081	0.608	0.325	3.102	0.601
	0.487	1.652	0.274	0.440	0.276	0.599
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0005
LAYER 1	0.0016	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.025	89.211	0.27
EVAPOTRANSPIRATION	8.835	32071.477	96.14
PERC./LEAKAGE THROUGH LAYER 1	0.002133	7.743	0.02
CHANGE IN WATER STORAGE	0.328	1191.253	3.57
SOIL WATER AT START OF YEAR	179.280	650785.625	
SOIL WATER AT END OF YEAR	179.528	651685.562	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.080	291.341	0.87
ANNUAL WATER BUDGET BALANCE	0.0000	0.033	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.122	0.057	0.175	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.736	0.951	1.829	2.791	1.418	0.022
	0.080	0.279	1.235	0.280	1.513	1.162
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.354	1284.209	2.84
EVAPOTRANSPIRATION	12.295	44632.344	98.60
PERC./LEAKAGE THROUGH LAYER 1	0.000000	0.000	0.00
CHANGE IN WATER STORAGE	-0.179	-650.431	-1.44
SOIL WATER AT START OF YEAR	179.528	651685.562	
SOIL WATER AT END OF YEAR	179.429	651326.437	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.013	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.004	0.077	0.032	0.035	0.001	0.000
	0.000	0.000	0.000	0.008	0.000	0.004
STD. DEVIATIONS	0.009	0.117	0.036	0.078	0.003	0.000
	0.000	0.000	0.000	0.017	0.000	0.010
EVAPOTRANSPIRATION						
TOTALS	0.497	0.531	0.939	1.262	1.377	0.333
	0.681	0.755	0.541	0.829	0.528	0.502
STD. DEVIATIONS	0.228	0.342	0.503	1.035	1.149	0.245
	0.491	0.522	0.459	0.476	0.579	0.430
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0000	0.0000	0.0000	0.0005	0.0006	0.0001
	0.0003	0.0032	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0010	0.0013	0.0002
	0.0007	0.0068	0.0000	0.0000	0.0000	0.0000

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.163	(0.1640)	591.60	1.856
EVAPOTRANSPIRATION	8.774	(2.6469)	31851.41	99.937
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.00471	(0.00892)	17.109	0.05368
CHANGE IN WATER STORAGE	-0.162	(0.4299)	-588.72	-1.847

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.158	572.3980
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.003350	12.16072
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.1395
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0850

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	179.4288	0.1869
SNOW WATER	0.000	

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**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE                **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)                 **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY                    **
**                    USAE WATERWAYS EXPERIMENT STATION                      **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY               **
**                                                                           **
**                                                                           **
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PRECIPITATION DATA FILE:    C:\HELP3\PLAI0.D4
TEMPERATURE DATA FILE:      C:\HELP3\TEMP.D7
SOLAR RADIATION DATA FILE:  C:\HELP3\SOLAR.D13
EVAPOTRANSPIRATION DATA:    C:\HELP3\ETEZD18.D11
SOIL AND DESIGN DATA FILE:  C:\HELP3\LP00CN91.D10
OUTPUT DATA FILE:           C:\HELP3\LP00CN91.OUT


TIME:   9:41     DATE:   4/24/2003


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     TITLE:  Easy Junior Mine Site Cap Evaluation

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
              COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.


                                  LAYER  1
                                  --------

                  TYPE 1 - VERTICAL PERCOLATION LAYER
                      MATERIAL TEXTURE NUMBER   6
          THICKNESS                    =    960.00   INCHES
          POROSITY                     =      0.4530 VOL/VOL
          FIELD CAPACITY               =      0.1900 VOL/VOL
          WILTING POINT                =      0.0850 VOL/VOL
          INITIAL SOIL WATER CONTENT   =      0.1894 VOL/VOL
          EFFECTIVE SAT. HYD. COND.    =  0.720000011000E-03 CM/SEC
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GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS USER-SPECIFIED.

SCS RUNOFF CURVE NUMBER	=	91.00	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	2.881	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	8.154	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	1.530	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	181.860	INCHES
TOTAL INITIAL WATER	=	181.860	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
ELY NEVADA

STATION LATITUDE	=	39.10	DEGREES
MAXIMUM LEAF AREA INDEX	=	0.00	
START OF GROWING SEASON (JULIAN DATE)	=	145	
END OF GROWING SEASON (JULIAN DATE)	=	269	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	10.40	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	44.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	36.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	56.00	%

NOTE: PRECIPITATION DATA FOR ELY NEVADA
WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.40	28.80	33.40	40.90	50.10	59.00
67.50	65.40	56.70	46.00	33.90	26.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR ELY NEVADA
AND STATION LATITUDE = 39.10 DEGREES

****

MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.41	0.29	0.67	0.18	0.30	0.00
	0.29	0.02	0.01	1.54	0.23	0.28
RUNOFF	0.031	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.043	0.000	0.000
EVAPOTRANSPIRATION	0.210	0.240	0.644	0.184	0.378	0.146
	0.154	0.145	0.134	1.364	0.576	0.307
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0017	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	4.22	15318.600	100.00
RUNOFF	0.073	265.937	1.74
EVAPOTRANSPIRATION	4.481	16266.217	106.19
PERC./LEAKAGE THROUGH LAYER 1	0.001715	6.225	0.04
CHANGE IN WATER STORAGE	-0.336	-1219.785	-7.96
SOIL WATER AT START OF YEAR	181.860	660151.437	
SOIL WATER AT END OF YEAR	181.524	658931.625	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.007	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.74	0.76	1.59	1.20	1.48	0.31
	1.04	0.51	0.55	0.91	0.29	0.39
RUNOFF	0.000	0.000	0.093	0.000	0.065	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION	0.740	0.731	0.679	1.458	1.607	0.462
	0.706	0.516	1.349	0.538	0.399	0.463
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0015	0.0000	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0015	0.0014	0.0000

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ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.77	35465.117	100.00
RUNOFF	0.158	571.772	1.61
EVAPOTRANSPIRATION	9.650	35030.520	98.77
PERC./LEAKAGE THROUGH LAYER 1	0.004363	15.836	0.04
CHANGE IN WATER STORAGE	-0.042	-152.986	-0.43
SOIL WATER AT START OF YEAR	181.524	658931.625	
SOIL WATER AT END OF YEAR	181.482	658778.625	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	-0.027	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.38	1.51	0.77	0.77	0.45	0.34
	1.57	0.16	0.66	1.48	0.16	0.00
RUNOFF	0.000	0.299	0.041	0.000	0.000	0.000
	0.000	0.000	0.000	0.156	0.000	0.000
EVAPOTRANSPIRATION	0.380	0.566	0.609	1.425	0.555	0.368
	0.530	0.847	0.448	1.970	0.466	0.038
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LAYER 1	0.0000	0.0008	0.0000	0.0057	0.0012	0.0217

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	8.25	29947.508	100.00
RUNOFF	0.496	1799.678	6.01
EVAPOTRANSPIRATION	8.201	29768.609	99.40
PERC./LEAKAGE THROUGH LAYER 1	0.029524	107.174	0.36
CHANGE IN WATER STORAGE	-0.476	-1727.983	-5.77
SOIL WATER AT START OF YEAR	181.482	658778.625	
SOIL WATER AT END OF YEAR	181.006	657050.687	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.029	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.39	0.07	0.76	0.17	3.26	0.49
	0.49	1.59	0.39	0.44	0.24	0.90
RUNOFF	0.000	0.000	0.000	0.003	0.066	0.000
	0.000	0.028	0.000	0.000	0.000	0.025
EVAPOTRANSPIRATION	0.390	0.108	0.609	0.531	1.916	0.741
	0.426	1.494	0.619	0.406	0.300	0.615
PERCOLATION/LEAKAGE THROUGH	0.0947	0.0251	0.0000	0.0163	0.0379	0.0000
LAYER 1	0.0000	0.0000	0.0000	0.0008	0.0000	0.0000

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	9.19	33359.715	100.00
RUNOFF	0.123	445.207	1.33
EVAPOTRANSPIRATION	8.154	29599.211	88.73
PERC./LEAKAGE THROUGH LAYER 1	0.174930	634.997	1.90
CHANGE IN WATER STORAGE	0.738	2680.286	8.03
SOIL WATER AT START OF YEAR	181.006	657050.687	
SOIL WATER AT END OF YEAR	181.664	659439.625	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.080	291.341	0.87

ANNUAL WATER BUDGET BALANCE	0.0000	0.014	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	0.64	1.26	1.88	3.51	0.48	0.00
	0.19	0.23	1.33	0.10	2.09	0.76
RUNOFF	0.000	0.162	0.077	0.226	0.000	0.000
	0.000	0.000	0.001	0.000	0.027	0.000
EVAPOTRANSPIRATION	0.674	0.684	1.825	3.096	1.227	0.423
	0.344	0.288	0.263	0.297	1.763	0.958
PERCOLATION/LEAKAGE THROUGH	0.0000	0.0000	0.0000	0.0009	0.0113	0.0169
LAYER 1	0.0701	0.0000	0.0011	0.0000	0.0010	0.0000

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	12.47	45266.109	100.00
RUNOFF	0.495	1795.453	3.97
EVAPOTRANSPIRATION	11.843	42990.273	94.97
PERC./LEAKAGE THROUGH LAYER 1	0.101446	368.248	0.81
CHANGE IN WATER STORAGE	0.031	112.115	0.25
SOIL WATER AT START OF YEAR	181.664	659439.625	
SOIL WATER AT END OF YEAR	181.775	659843.062	
SNOW WATER AT START OF YEAR	0.080	291.341	0.64
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE	0.0000	0.020	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	0.51	0.78	1.13	1.17	1.19	0.23
	0.72	0.50	0.59	0.89	0.60	0.47
STD. DEVIATIONS	0.17	0.61	0.56	1.38	1.25	0.22
	0.58	0.63	0.48	0.63	0.83	0.36
RUNOFF						
TOTALS	0.006	0.092	0.042	0.046	0.026	0.000
	0.000	0.006	0.000	0.040	0.005	0.005
STD. DEVIATIONS	0.014	0.135	0.043	0.101	0.036	0.000
	0.000	0.013	0.001	0.068	0.012	0.011
EVAPOTRANSPIRATION						
TOTALS	0.479	0.466	0.873	1.339	1.137	0.428
	0.432	0.658	0.562	0.915	0.701	0.476
STD. DEVIATIONS	0.222	0.277	0.533	1.129	0.662	0.214
	0.206	0.537	0.477	0.724	0.602	0.344
PERCOLATION/LEAKAGE THROUGH LAYER 1						
TOTALS	0.0189	0.0050	0.0000	0.0038	0.0098	0.0034
	0.0140	0.0002	0.0002	0.0020	0.0007	0.0043
STD. DEVIATIONS	0.0424	0.0112	0.0000	0.0071	0.0164	0.0076
	0.0314	0.0004	0.0005	0.0022	0.0007	0.0097

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	8.78	(2.993)	31871.4	100.00
RUNOFF	0.269	(0.2089)	975.61	3.061
EVAPOTRANSPIRATION	8.466	(2.6858)	30730.96	96.422
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.06240	(0.07470)	226.496	0.71066
CHANGE IN WATER STORAGE	-0.017	(0.4706)	-61.67	-0.193

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PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	1.09	3956.700
RUNOFF	0.169	614.8873
PERCOLATION/LEAKAGE THROUGH LAYER 1	0.005021	18.22690
SNOW WATER	0.99	3596.8494

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.2350
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.0869

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FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	181.7749	0.1893
SNOW WATER	0.000	

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Appendix D

Analytical Results
&
Chain of Custody
for
November 2002 Samples

Appendix D.1

Heap Effluent

Laboratory Analysis Report

Chain of Custody

Laboratory Analysis Report

Sierra
Environmental
Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/12/2002
Client: CDM-147
Taken by: P. B.
Report: 50299
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200211-1199	EJ LP EFF	11/22/2002	8:25 AM	11/22/2002

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
Alkalinity, Total	SM 2320 B	59	mg/L CaCO3	1	Kobza	11/27/2002
Alkalinity/Bicarbonate	SM 2320 B	59	mg/L CaCO3	1	Kobza	11/27/2002
Alkalinity/Carbonate	SM 2320 B	<1	mg/L CaCO3	1	Kobza	11/27/2002
Alkalinity/Hydroxide	SM 2320 B	<1	mg/L CaCO3	1	Kobza	11/27/2002
pH	SM 4500 H+B	8.03	pH Units	1	Kobza	11/22/2002
pH - Temperature	SM 4500 H+B	14.2	°C	0	Kobza	11/22/2002
T Dissolved Solids	SM 2540 C	3800	mg/L	10	Eastwood	11/26/2002
N.. .e-N - Ion Chromatography	EPA 300.0	230	mg/L N	0.5	Henderson	11/22/2002
Phosphorus - Total	EPA 365.3	0.06	mg/L	0.02	Kleinworth	12/5/2002
Calcium - ICP-OES	EPA 200.7	380	mg/L	1	Hellmann	12/9/2002
Magnesium - ICP-OES	EPA 200.7	13	mg/L	0.2	Hellmann	12/9/2002
Potassium - ICP-OES	EPA 200.7	27	mg/L	1	Hellmann	12/9/2002
Sodium - ICP-OES	EPA 200.7	680	mg/L	5	Hellmann	12/9/2002
Chloride - Ion Chromatography	EPA 300.0	80	mg/L	5	Henderson	11/22/2002
Cyanide,Total	SM 4500 CN C	0.71	mg/L	0.005	Farrell	12/6/2002
Cyanide, WAD	SM 4500 CN I	0.098	mg/L	0.005	Farrell	12/9/2002
Fluoride - Ion Chromatography	EPA 300.0	1.8	mg/L	1	Henderson	11/26/2002
Sulfate - Ion Chromatography	EPA 300.0	1500	mg/L	20	Henderson	11/26/2002
Total Recoverable Metals - Acid	EPA 200.2	Completed			Kleinworth	11/27/2002
Titanium ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Antimony - ICP-MS	EPA 200.8	0.007	mg/L	0.005	Li	12/2/2002
Aluminum - ICP-OES	EPA 200.7	0.3	mg/L	0.05	Hellmann	12/5/2002
Arsenic - ICP-MS	EPA 200.8	0.15	mg/L	0.005	Li	12/2/2002
Barium - ICP-MS	EPA 200.8	0.023	mg/L	0.005	Li	12/2/2002
Beryllium - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Bismuth - ICP-OES	EPA 200.7	0.1	mg/L	0.05	Hellmann	12/4/2002
Boron - ICP-OES	EPA 200.7	0.13	mg/L	0.05	Hellmann	12/5/2002
Cadmium - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Chromium - ICP-MS	EPA 200.8	0.022	mg/L	0.005	Li	12/2/2002
Gallium - ICP-OES	EPA 200.7	<0.1	mg/L	0.1	Hellmann	12/4/2002
Silver - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Co..alt - ICP-MS	EPA 200.8	0.39	mg/L	0.005	Li	12/2/2002

John Kobza, Ph.D.
Laboratory Director

1135 Financial Blvd.
Reno, NV 89502-2348
Phone (775) 857-2400
FAX (775) 857-2404
sem@sem-analytical.com

John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/12/2002
Client: CDM-147
Taken by: P. B.
Report: 50299
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200211-1199	EJ LP EFF	11/22/2002	8:25 AM	11/22/2002

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
Copper - ICP-MS	EPA 200.8	0.022	mg/L	0.005	Li	12/2/2002
Iron - ICP-OES	EPA 200.7	0.29	mg/L	0.05	Hellmann	12/5/2002
Lanthanum - ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Lead - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Lithium - ICP-OES	EPA 200.7	<0.1	mg/L	0.1	Hellmann	12/4/2002
Manganese - ICP-MS	EPA 200.8	0.018	mg/L	0.005	Li	12/2/2002
M ury - AA Cold Vapor	EPA 245.1	0.0059	mg/L	0.0004	Layman	11/26/2002
M odenum - ICP-MS	EPA 200.8	0.043	mg/L	0.005	Li	12/2/2002
Nickel - ICP-MS	EPA 200.8	0.029	mg/L	0.005	Li	12/2/2002
Scandium - ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Selenium - ICP-MS	EPA 200.8	0.12	mg/L	0.005	Li	12/2/2002
Strontium - ICP-OES	EPA 200.7	0.36	mg/L	0.05	Hellmann	12/4/2002
Thallium - ICP-MS	EPA 200.8	0.011	mg/L	0.0025	Li	12/2/2002
Tin - ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Vanadium -ICP-MS	EPA 200.8	0.013	mg/L	0.005	Li	12/2/2002
Zinc - ICP-MS	EPA 200.8	<0.05	mg/L	0.05	Li	12/2/2002

Metals: the reporting limits for some metals were greater than half MCL due to matrix interference.

Approved By: John Kobza
Sierra Environmental Monitoring, Inc

Date: 12/12/02

John Kobza, Ph.D.
Laboratory Director

1135 Financial Blvd.
Reno, NV 89502-2348
Phone (775) 857-2400
FAX (775) 857-2404
sem@sem-analytical.com

John C. Seher
Special Consultant
Quality Assurance Manager

SIERRA ENVIRONMENTAL MONITORING, INC.
1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502
PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

Client Name: CAM
Purchase Order:
Address: 2025 LONGLEY LANE #30
Phone/Fax #: 853-0333 / 853-3135
City: RENO State: NV Zip: 89511
Report Attention: KEVIN RYAN
Sampled by: P BIOKSA
Signature: [signature]

Turnaround Time: Standard: ✓ Other: ___ Rush: 24 Hr ___ 48 Hr ___
Compliance Monitoring: Yes: ___ No: ✓

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	Analyses Requested: Prohibited Constituents	Total Cyanide							Remarks	Lab Use Only Sub-Sample pH <2	>12
11/22/02	925	4	EJ LP EFF	none	1	X								1L poly		
↓	↓	↓	↓	3	1	X								500ml poly		
↓	↓	↓	↓	4	1	X								250ml poly		
↓	↓	↓	↓	1	1	X								1L poly		
↓	↓	↓	↓	1	1	[struck out]	X							1L poly		

	Signature	Print Name	Company	Date	Time
Relinquished By:	[signature]	Kevin J Ryan	CAM	11/22/02	9:06
Received By:	[signature]				
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	[signature]	S OSTERREICHER	SEM	11-22-02	[illegible]

Custody Seal Intact: Yes ___ No ___ None ✓

Sample Temperature: Degrees C 7

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.
Terms: Net thirty days on approved credit.

* KEY: Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

Appendix D.2

Spent Ore (EJ LP 1) & Borrow Soil

Summary of Analytical Results

Laboratory Analysis Reports

Chain of Custody

Table 2-2. Sumary of Analytical Results - Spent Ore and Soil Samples

Easy Junior Reclamation Project

BLM Risk Management Criteria for Metals at BLM Mining Sites Human Risk Management Criteria				Sample Name		EJ LP 1	EJ Soil SP #1	EJ Soil Borrow #1	EJ Soil Borrow #2a	EJ Soil Borrow #2b	EJ Soil Borrow #3	EJ Soil 793
				Sample Type		Spent Ore	Soil	Soil	Soil	Soil	Soil	Soil
Camper	ATV Driver	Worker	Surveyor	Date Sampled		21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02
				Grain Size, Hydrometer	ASTM D 422	Yes	Yes	Yes	Yes	Yes	Yes	Yes
				Sand %		57.0%	56.0%	54.3%	85.7%	64.0%	88.3%	60.3%
				Silt %		22.0%	31.0%	30.7%	8.3%	26.0%	6.7%	28.7%
				Clay %		21.0%	13.0%	15.0%	6.0%	10.0%	5.0%	11.0%
				Total %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
				Grain Size, Sieve	ASTM C 136-84a	No	Yes	Yes	n/a	n/a	n/a	n/a
				Water Holding Capacity	ASTM	19.6%	22.5%	29.9%	n/a	24.1%	n/a	n/a
				Elec Conduct (umhos/cm)	SM 2510 B	n/a	690	110	74	170	62	120
				pH - Saturated Paste	SW-846 9045A	8.1	7.13	8.21	8.55	8.69	8.52	8.16
				Total Organic Carbon (TOC)	EPA 9060	n/a	n/a	n/a	10,000	5,100	n/a	n/a
				Organic Matter	SM 2540	n/a	4.6%	n/a	n/a	n/a	n/a	n/a
				Calcium, ICP-OES	EPA 200.7	n/a	640	n/a	n/a	n/a	n/a	n/a
				Magnesium, ICP-OES	EPA 200.7	n/a	65	n/a	n/a	n/a	n/a	n/a
				Nitrate-N, Ion Chroma (ppm N)	EPA 300.0	260	n/a	n/a	n/a	n/a	n/a	n/a
				Phosphorus, Total (ppm)	EPA 365.3	n/a	39	n/a	n/a	n/a	n/a	n/a
				Potassium, ICP-OES	EPA 200.7	n/a	44	n/a	n/a	n/a	n/a	n/a
				Sodium, ICP-OES	EPA 200.7	n/a	62	n/a	n/a	n/a	n/a	n/a
				Sodium Absorb Ratio (SAR)	ASTM	n/a	0.2	n/a	n/a	n/a	n/a	n/a
				Sulfate, Ion Chroma (ppm)	EPA 300.0	1500	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur, Leco Furnace	LECO	Yes	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Total	LECO	1.980%	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Sulfate	LECO	<0.010%	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Sulfide	LECO	0.887%	n/a	n/a	n/a	n/a	n/a	n/a
				Sulfur Residual	LECO	1.090%	n/a	n/a	n/a	n/a	n/a	n/a
				Total Recoverable Metals, Acid	EPA 200.2	Yes	Yes	n/a	n/a	n/a	n/a	n/a
50	750	100	600	Antimony, ICP-MS (ppm)	EPA 200.8	4	<1	n/a	n/a	n/a	n/a	n/a
20	300	12	100	Arsenic, ICP-MS (ppm)	EPA 200.8	**98**	**32**	n/a	n/a	n/a	n/a	n/a
70	950	100	800	Cadmium, ICP-MS (ppm)	EPA 200.8	<1	<1	n/a	n/a	n/a	n/a	n/a
700	9,600	1,000	8,000	Silver, ICP-MS (ppm)	EPA 200.8	<1	<1	n/a	n/a	n/a	n/a	n/a
5,000	70,000	7,400	59,000	Copper, ICP-MS (ppm)	EPA 200.8	25	16	n/a	n/a	n/a	n/a	n/a
1,000	1,000	2,000	2,000	Lead, ICP-MS (ppm)	EPA 200.8	2	6	n/a	n/a	n/a	n/a	n/a
19,000	250,000	28,000	220,000	Manganese, ICP-MS (ppm)	EPA 200.8	92	200	n/a	n/a	n/a	n/a	n/a
40	550	60	480	Mercury, AA Cold Vapor (ppm)	EPA 245.5	4	0.4	n/a	n/a	n/a	n/a	n/a
2,700	38,000	4,000	32,000	Nickel, ICP-MS (ppm)	EPA 200.8	19	25	n/a	n/a	n/a	n/a	n/a
700	9,600	1,000	8,000	Selenium, ICP-MS (ppm)	EPA 200.8	<1	<1	n/a	n/a	n/a	n/a	n/a
40,000	550,000	60,000	480,000	Zinc, ICP-MS (ppm)	EPA 200.8	53	55	n/a	n/a	n/a	n/a	n/a

n/a - Not Analyzed

Analytical Results in Bold Indicate Exceedance of BLM Risk Management Criteria

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/31/2002
Client: CDM-147
Taken by: K. Ryan
Report: 50320
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200211-1237	EJ LP 1	11/21/2002	1:52 PM	11/25/2002

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
Nitrate-N - Ion Chromatography	EPA 300.0	260	mg/Kg N	5	Henderson	12/10/2002
Sulfate - Ion Chromatography	EPA 300.0	1500	mg/Kg	20	Henderson	12/10/2002
Total Recoverable Metals - Acid	EPA 200.2	Completed			Kleinworth	11/27/2002
Sample Preparation - Aqueous Ex	SEM - SOP	Completed			Henderson	12/10/2002
Water Holding Capacity	ASTM	19.6	%	5	Kobza	12/24/2002
pH - Saturated Paste	SW-846 9045A	8.10	pH Units	1	Osterreicher	12/11/2002
Temperature	SW-846 9045A	14.5	°C	0	Osterreicher	12/11/2002
ur, Total - LECO Furnace	LECO	1.98	%	0.01	Farrell	12/31/2002
Sulfur Sulfate - LECO Furnace	LECO	<0.01	%	0.01	Farrell	12/31/2002
Sulfur Sulfide - LECO Furnace	LECO	0.887	%	0.01	Farrell	12/31/2002
Sulfur Residual - LECO Furnace	LECO	1.09	%	0.01	Farrell	12/31/2002
Antimony - ICP-MS	EPA 200.8	4	mg/Kg	1	Li	12/3/2002
Particle Size Distribution	ASTM	See Report			Kobza	12/9/2002
Arsenic - ICP-MS	EPA 200.8	98	mg/Kg	1	Li	12/3/2002
Cadmium - ICP-MS	EPA 200.8	<1	mg/Kg	1	Li	12/3/2002
Silver - ICP-MS	EPA 200.8	<1	mg/Kg	1	Li	12/3/2002
Copper - ICP-MS	EPA 200.8	25	mg/Kg	1	Li	12/3/2002
Lead - ICP-MS	EPA 200.8	2	mg/Kg	1	Li	12/3/2002
Manganese - ICP-MS	EPA 200.8	92	mg/Kg	1	Li	12/3/2002
Mercury - AA Cold Vapor	EPA 245.5	4	mg/Kg	1	Layman	12/4/2002
Nickel - ICP-MS	EPA 200.8	19	mg/Kg	1	Li	12/3/2002
Selenium - ICP-MS	EPA 200.8	<1	mg/Kg	1	Li	12/3/2002
Zinc - ICP-MS	EPA 200.8	53	mg/Kg	10	Li	12/3/2002

Hg - Sample reported on an as-received (dry) weight basis.

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/31/2002
Client: CDM-147
Taken by: K. Ryan
Report: 50320
PO #:

Approved By: John Kobza
Sierra Environmental Monitoring, Inc

Date: 12/31/02

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

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John C. Seher
Special Consultant
Quality Assurance Manager

Sierra
Environmental
Monitoring, Inc.

Sierra Environmental Monitoring, Inc
Supplemental Report – Particle Size Distribution

Report Number: 50320
Sample ID: S200211-1237
Client ID: EJ LP 1
Date: 12/19/02

The sample was dried and analyzed for Particle Size Distribution using a hydrometer procedure as outlined in ASTM Method D 422. Below are listed the percentages of sand, silt, and clay as determined in the analysis.

Soil Fraction	Percentage of Sample
Sand	57 %
Silt	22 %
Clay	21 %

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Quality Assurance Manager

SIERRA ENVIRONMENTAL MONITORING, INC.
1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502
PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

Client Name: CDM
Purchase Order:
Address: 7025 Longley Lane
Phone/Fax #: (P) 853-0333 (FAX) 853-3133
City: Reno State: NV Zip: 89511
Report Attention: Kevin Ryan
Sampled by: Kevin Ryan
Signature: [signature]

Turnaround Time: Standard: ✓ Other: ___ Rush: ___ 24 Hr ___ 48 Hr ___

Compliance Monitoring: Yes: ___ No: ✓

Date Sampled	Time Sampled	Sample Type*	Sample Identification	Preservative* See Key Below	Number of Containers	Grain Size Distribution	Water Holding Capacity	Nitrate	Sulfate Sulfide	Soil pH	Total 11 Metals			Remarks	Lab Use Only Sub-Sample pH <2	>12
11/21/02	1:52p	5	EJ LP 1		1	X	X	X	X	X	X					

	Signature	Print Name	Company	Date	Time
Relinquished By:	[signature]	Kevin J Ryan	CDM	11/22/02	4:06p
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	Sue Osterreicher [signature]	SUE OSTERREICHER	SEM	11/22/02	1606

Custody Seal Intact
Yes ___ No ___ None ✓

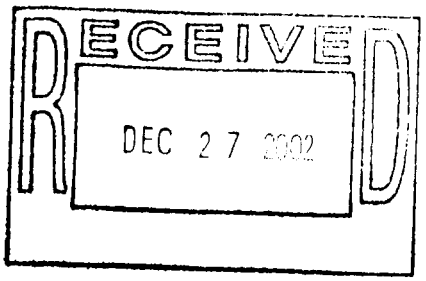
Sample Temperature
Degrees C 17

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.
Terms: Net thirty days on approved credit.

*KEY: Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

6.2



Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/26/2002
Client: CDM-147
Taken by: K. Ryan
Report: 50319
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200211-1236	EJ Soil S/P Sample 1	11/21/2002	1:20 PM	11/25/2002

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
Conductivity	SM 2510 B	690	µmhos/cm	0	Kobza	11/26/2002
Phosphorus - Total	EPA 365.3	39	mg/Kg	0.2	Kleinworth	12/6/2002
Calcium - ICP-OES	EPA 200.7	640	mg/Kg	2	Hellmann	12/6/2002
Magnesium - ICP-OES	EPA 200.7	65	mg/Kg	2	Hellmann	12/6/2002
Potassium - ICP-OES	EPA 200.7	44	mg/Kg	10	Hellmann	12/6/2002
Sodium - ICP-OES	EPA 200.7	62	mg/Kg	2	Hellmann	12/6/2002
[illegible]um Absorption Ratio (SAR)	ASTM	0.2	no units	5	Seher	12/11/2002
[illegible]e Analysis (Sieve)	ASTM	See Report	%	0	Kobza	12/18/2002
Total Recoverable Metals - Acid	EPA 200.2	Completed			Kleinworth	11/27/2002
Sample Preparation - Aqueous Ex	SEM - SOP	Completed			Hellmann	12/6/2002
Water Holding Capacity	ASTM	22.5	%	5	Kobza	12/24/2002
pH - Saturated Paste	SW-846 9045A	7.13	pH Units	1	Osterreicher	12/11/2002
pH - Temperature	SW-846 9045A	14.7	°C	0	Osterreicher	12/11/2002
Organic Matter	SM 2540	4.6	%	1	Kobza	12/24/2002
Antimony - ICP-MS	EPA 200.8	<1	mg/Kg	1	Li	12/3/2002
Particle Size Distribution	ASTM	See Report			Kobza	12/19/2002
Arsenic - ICP-MS	EPA 200.8	32	mg/Kg	1	Li	12/3/2002
Cadmium - ICP-MS	EPA 200.8	<1	mg/Kg	1	Li	12/3/2002
Silver - ICP-MS	EPA 200.8	<1	mg/Kg	1	Li	12/3/2002
Copper - ICP-MS	EPA 200.8	16	mg/Kg	1	Li	12/3/2002
Lead - ICP-MS	EPA 200.8	6	mg/Kg	1	Li	12/3/2002
Manganese - ICP-MS	EPA 200.8	200	mg/Kg	1	Li	12/3/2002
Mercury - AA Cold Vapor	EPA 245.5	0.4	mg/Kg	0.1	Layman	12/4/2002
Nickel - ICP-MS	EPA 200.8	25	mg/Kg	1	Li	12/3/2002
Selenium - ICP-MS	EPA 200.8	<1	mg/Kg	1	Li	12/3/2002
Zinc - ICP-MS	EPA 200.8	55	mg/Kg	10	Li	12/3/2002

Hg - Sample reported on an as-received (dry) weight basis.

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Laboratory Director

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/26/2002
Client: CDM-147
Taken by: K. Ryan
Report: 50319
PO #:

Approved By: _____
Sierra Environmental Monitoring, Inc

Date: 12-26-02

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

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Quality Assurance Manager

Sierra
Environmental
Monitoring, Inc.

Sierra Environmental Monitoring, Inc
Supplemental Report – Sieve Analysis

Report Number: 50319
Sample ID: S200211-1236
Date: 12/18/02

The Sample was dried and subjected to sieve analysis as outlined in ASTM Method C 136 – 84a. The following table has contains the data for this sieve analysis.

US Standard Sieve Size	Equivalent Mesh Size (inches)	Sample Mass Retained on Sieve (g)	Percent of Sample Passing through Sieve (%)
1 inch	1.0	77.09	93.2
¾ inch	0.75	50.69	88.7
½ inch	0.50	92.03	80.5
No. 4	0.187	145.40	67.7
No. 8	0.0937	136.39	55.6
No. 10	0.0787	41.11	52.0
No. 16	0.0469	91.40	43.9
No. 30	0.0234	119.41	33.3
No. 40	0.0165	54.58	28.4
No. 50	0.0117	50.07	24.0
No. 100	0.0059	84.51	16.5
No. 200	0.0029	73.62	10.0
> 200	<0.0029	113.19	

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Laboratory Director

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John C. Seher
Special Consultant
Quality Assurance Manager

Sierra
Environmental
Monitoring, Inc.

Sierra Environmental Monitoring, Inc
Supplemental Report – Particle Size Distribution

Report Number: 50319
Sample ID: S200211-1236
Client ID: EJ Soil S/P Sample 1
Date: 12/19/02

The sample was dried and analyzed for Particle Size Distribution using a hydrometer procedure as outlined in ASTM Method D 422. Below are listed the percentages of sand, silt, and clay as determined in the analysis.

Soil Fraction	Percentage of Sample
Sand	56 %
Silt	31 %
Clay	13 %

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Laboratory Director

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CHAIN OF CUSTODY RECORD

Client Name: CDM	Purchase Order:
Address: [illegible]	Phone/Fax #: [illegible]
City: [illegible] State: NV Zip: 89511	Report Attention: [illegible]
Sampled by: [illegible]	Signature: [signature]

Analyses Requested: TOC; [illegible]; [illegible]; [illegible]; [illegible]; [illegible]; [illegible]; [illegible]

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	Remarks	Lab Use Only Sub-Sample pH <2	>12
[illegible]	13:20	5	EJ SOIL S/P SAMPLE 1		1			

Turnaround Time: Standard: ___ Other: ___ Rush: 24 Hr ___ 48 Hr ___

Compliance Monitoring: Yes: ___ No: ___

	Signature	Print Name	Company	Date	Time
Relinquished By:	[signature]	[illegible]	CDM	[illegible]	[illegible]
Received By:	[signature]				
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	[signature]	SUE OSTERREICHER	SEM	11-?-02	1601

Custody Seal Intact Yes ___ No ___ None ✓

Sample Temperature

Degrees C 17

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report. Terms: Net thirty days on approved credit.

***KEY:** Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

Sierra Environmental Monitoring, Inc.

Laboratory Analysis Report

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 2/7/2003
Client: CDM-147
Taken by: Client
Report: 51367
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1030	EJ Soil Borrow #1	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
Conductivity	SM 2510 B	110	µmhos/cm	0	Kobza	1/29/2003
pH - Saturated Paste	SW-846 9045A	8.21	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.1	°C	0	Kobza	1/27/2003
Particle Size Distribution	ASTM	See Report			Hellmann	2/7/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1031	EJ Soil 793	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
Conductivity	SM 2510 B	120	µmhos/cm	0	Kobza	1/29/2003
pH - Saturated Paste	SW-846 9045A	8.16	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.3	°C	0	Kobza	1/27/2003
Particle Size Distribution	ASTM	See Report			Hellmann	2/7/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1032	EJ Soil Borrow #3	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
Conductivity	SM 2510 B	62	µmhos/cm	0	Kobza	1/29/2003
pH - Saturated Paste	SW-846 9045A	8.52	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.8	°C	0	Kobza	1/27/2003
Particle Size Distribution	ASTM	See Report			Hellmann	2/7/2003

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Laboratory Director

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 2/7/2003
Client: CDM-147
Taken by: Client
Report: 51367
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1033	EJ Soil Borrow #2a	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
Conductivity	SM 2510 B	74	µmhos/cm	0	Kobza	1/29/2003
pH - Saturated Paste	SW-846 9045A	8.55	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.5	°C	0	Kobza	1/27/2003
Particle Size Distribution	ASTM	See Report			Hellmann	2/7/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1034	EJ Soil Borrow #2b	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
Conductivity	SM 2510 B	170	µmhos/cm	0	Kobza	1/29/2003
pH - Saturated Paste	SW-846 9045A	8.69	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.6	°C	0	Kobza	1/27/2003
Particle Size Distribution	ASTM	See Report			Hellmann	2/7/2003

Approved By: John Kobza
Sierra Environmental Monitoring, Inc

Date: 2/7/03

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Quality Assurance Manager

Sierra Environmental Monitoring, Inc
Supplemental Report

Report Number: 51367
Sample ID: S200301-1030
Client ID: EJ Soil Borrow #1
Date: 02/07/03

The sample was dried and analyzed for Particle Size Distribution using a hydrometer procedure as outlined in ASTM Method D 422. Below are listed the percentages of sand, silt, and clay as determined in the analysis.

Soil Fraction	Percentage of Sample
Sand	54.3%
Silt	30.7%
Clay	15%

Sierra Environmental Monitoring, Inc
Supplemental Report

Report Number: 51367
Sample ID: S200301-1031
Client ID: EJ Soil 793
Date: 02/07/03

The sample was dried and analyzed for Particle Size Distribution using a hydrometer procedure as outlined in ASTM Method D 422. Below are listed the percentages of sand, silt, and clay as determined in the analysis.

Soil Fraction	Percentage of Sample
Sand	60.3%
Silt	28.7%
Clay	11%

Sierra Environmental Monitoring, Inc
Supplemental Report

Report Number: 51367
Sample ID: S200301-1032
Client ID: EJ Soil Borrow #3
Date: 02/07/03

The sample was dried and analyzed for Particle Size Distribution using a hydrometer procedure as outlined in ASTM Method D 422. Below are listed the percentages of sand, silt, and clay as determined in the analysis.

Soil Fraction	Percentage of Sample
Sand	88.3%
Silt	6.7%
Clay	5%

Sierra Environmental Monitoring, Inc
Supplemental Report

Report Number: 51367
Sample ID: S200301-1033
Client ID: EJ Soil Borrow #2a
Date: 02/07/03

The sample was dried and analyzed for Particle Size Distribution using a hydrometer procedure as outlined in ASTM Method D 422. Below are listed the percentages of sand, silt, and clay as determined in the analysis.

Soil Fraction	Percentage of Sample
Sand	85.7%
Silt	8.3%
Clay	6%

Sierra Environmental Monitoring, Inc
Supplemental Report

Report Number: 51367
Sample ID: S200301-1034
Client ID: EJ Soil Borrow #2b
Date: 02/07/03

The sample was dried and analyzed for Particle Size Distribution using a hydrometer procedure as outlined in ASTM Method D 422. Below are listed the percentages of sand, silt, and clay as determined in the analysis.

Soil Fraction	Percentage of Sample
Sand	64%
Silt	26%
Clay	10%

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PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

Client Name: CAM
Purchase Order:
Address: 7025 Longley Ln #20
Phone/Fax #: [illegible]
City: Reno State: NV Zip: 89511
Report Attention: Kevin Ryan
Sampled by:
Signature:

Turnaround Time: Standard: X Other: ___ Rush: 24 Hr ___ 48 Hr ___
Compliance Monitoring: Yes: — No: X

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	Grain Size Distribution	pH	Elec. Conductivity					Remarks	Lab Use Only Sub-Sample pH <2	>12
1/24/05		S	EJ Soil Borrow #1	6	1	X	X	X							
"		"	EJ Soil 793	6	1	X	X	X							
"		"	EJ Soil Borrow #3	6	1	X	X	X							
"		"	EJ Soil Borrow #2a	6	1	X	X	X							
"		"	EJ Soil Borrow #2b	6	1	X	X	X							

	Signature	Print Name	Company	Date	Time
Relinquished By:	[signature]	K Dieckberger	CAM	1-24-05	1142
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	[signature]	Sue Oesterreicher	SEM	1-24-05	1142

Custody Seal Intact
Yes ___ No ___ None ✓

Sample Temperature
Degrees C 16

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.
Terms: Net thirty days on approved credit.

*KEY: Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

6.2

Sierra Environmental Monitoring, Inc.

Laboratory Analysis Report

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 3/20/2003
Client: CDM-147
Taken by: K. Ryan
Report: 51957
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200302-1419	EJ Soil Borrow #1	11/2/2002		2/27/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
Water Holding Capacity	ASTM	29.9	%	5	Kobza	3/11/2003
Total Organic Carbon	Subcontract	See Report		0		3/20/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200302-1420	EJ Soil Borrow 2b	11/2/2002		2/27/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
Water Holding Capacity	ASTM	24.1	%	5	Kobza	3/11/2003
Total Organic Carbon	Subcontract	See Report		0		3/20/2003

Approved By: _____
Sierra Environmental Monitoring, Inc

Date: 3/20/03

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Laboratory Director

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Phone (775) 857-2400
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John C. Seher
Special Consultant
Quality Assurance Manager

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 20, 2003

CLS Work Order #: CMC0014

Sierra Enviro. Monitoring
Sierra Enviro. Monitoring
1135 Financial Boulevard
Reno, NV 89502

Project Name: No Project

Enclosed are the results of analyses for samples received by the laboratory on 03/03/03 15:50. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

03/20/03 15:59

Sierra Enviro. Monitoring 1135 Financial Boulevard Reno NV, 89502	Project: No Project Project Number: PO # 03-055 Project Manager: Sierra Enviro. Monitoring	**CLS Work Order #: CMC0014** COC #: none

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
(S2C0302-1419) EJ Soil Borrow #2 (CMC0014-01) Soil	**Sampled: 11/21/02 15:30**		**Received: 03/03/03 15:50**						
Total Organic Carbon	10000	100	mg/kg dry wt.	1	CC31829	03/14/03	03/14/03	EPA 9060	
(S2C0302-1420) EJ Soil Borrow #26 (CMC0014-02) Soil	**Sampled: 11/21/02 15:30**		**Received: 03/03/03 15:50**						
Total Organic Carbon	5100	100	mg/kg dry wt	1	CC31829	03/14/03	03/14/03	EPA 9060	

CALIFORNIA LABORATORY SERVICES

03/20/03 15:59

Sierra Enviro. Monitoring 1135 Financial Boulevard Reno NV, 89502	Project: No Project Project Number: PO # 03-055 Project Manager: Sierra Enviro. Monitoring	**CLS Work Order #: CMC0014** COC #: none

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

SIERRA ENVIRONMENTAL MONITORING, INC.
1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502
PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

Client Name: CDM	Purchase Order:
Address: [illegible]	Phone/Fax #: [illegible]
City: Reno	State: NV Zip: [illegible]
Report Attention: [illegible]	
Sampled by: [illegible]	Signature: [signature]

Analyses Requested: [illegible]; TOC

Turnaround Time: Standard: ✓ Other: ___ Rush: 24 Hr ___ 48 Hr ___

Compliance Monitoring: Yes: ___ No: ✓

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	[illegible]	TOC	Remarks	Lab Use Only Sub-Sample pH <2	>12
[illegible]		5	[illegible] Soil Boring #1		1	✓	✓			
[illegible]		5	[illegible] Soil Boring 2b			✓	✓			

	Signature	Print Name	Company	Date	Time
Relinquished By:	[signature]	[illegible]	CDM	[illegible]	[illegible]
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	[signature]	S [illegible]	SEM	[illegible]	[illegible]

Custody Seal Intact
Yes ___ No ___ None ✓

Sample Temperature
Degrees C 17

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.
Terms: Net thirty days on approved credit

*** KEY:** Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

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CHAIN OF CUSTODY RECORD

CMC0014

Client Name: Sierra Environ Mont
Purchase Order: 03-055
Address:
Phone/Fax #:
City: State: Zip:
Report Attention:
Sampled by: Client
Signature:

Analyses Requested: TOC

Turnaround Time: Standard ___ Other ___ Rush 24 Hr ___ 48 Hr ___

Compliance Monitoring: Yes: ___ No: ___

Lab Use Only Sub-Sample pH <2 >12

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	TOC	Remarks
11-21-02		5	(S2C0302-1419) EJ Soil Borrow #2			✓	Okay to run Out of hold
11-21-02		5	(S2C0302-142) EJ Soil Borrow 26			✓	

	Signature	Print Name	Company	Date	Time
Relinquished By	[signature]	Boster	SEM	2-28-03	1530
Received By					
Relinquished By:					
Received By					
Relinquished By					
Received By Laboratory	[signature]		CLS	3-3-03	1550

Custody Seal Intact
Yes ___ No ___ None ___

Sample Temperature

Degrees C ___

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report. Terms: Net thirty days on approved credit.

*** KEY:** Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

Appendix D.3

Pond Sludge

Summary of Results

Laboratory Analysis Report

Chain of Custody

Pond Sludge Analysis Results

Easy Junior Reclamation Project

Sample Name		EJ Settling	EJ Barren
Sample Type		Pond Sludge	Pond Sludge
Date Sampled		21-Nov-02	21-Nov-02
TCLP Extract	SW-846 1311		
Arsenic, ICP-MS (ppm)	SW-846 6020	1.1	1.1
Barium, ICP-MS (ppm)	SW-846 6020	0.37	0.48
Cadmium, ICP-MS (ppm)	SW-846 6020	<0.1	<0.1
Chromium, ICP-MS (ppm)	SW-846 6020	<0.1	<0.1
Silver, ICP-MS (ppm)	SW-846 6020	<0.1	<0.1
Lead, ICP-MS (ppm)	SW-846 6020	<0.1	<0.1
Mercury, AA Cold Vapor (ppm)	SW-846 7470	0.16	0.023
Selenium, ICP-MS (ppm)	SW-846 6020	<0.1	<0.1

Sierra Environmental Monitoring, Inc.

Laboratory Analysis Report

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

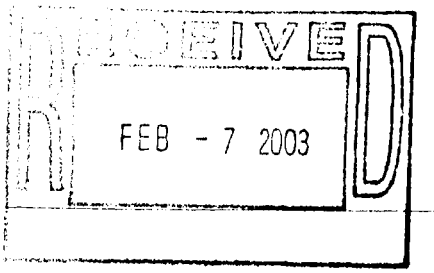
Date: 2/5/2003
Client: CDM-147
Taken by: K. Ryan
Report: 51366
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1028	EJ Set Pond Sludge	11/21/2002	3:50 PM	1/24/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
TCLP Extract	SW-846 1311	Completed			Kleinworth	1/28/2003
Arsenic - ICP-MS	SW-846 6020	1.1	mg/L	0.1	Tretten	1/30/2003
Barium - ICP-MS	SW-846 6020	0.37	mg/L	0.3	Tretten	1/30/2003
Cadmium - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Chromium - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Silver - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Lead - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Mercury - AA Cold Vapor	SW-846 7470	0.16	mg/L	0.02	Eastwood	1/30/2003
Selenium - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1029	EJ Barrow Pond Sludge	11/21/2002	3:55 PM	1/24/2003

Parameter	Method	Result	Units Of Measure	Detection Limit	Analyst	Date Analyzed
TCLP Extract	SW-846 1311	Completed			Kleinworth	1/28/2003
Arsenic - ICP-MS	SW-846 6020	1.1	mg/L	0.1	Tretten	1/30/2003
Barium - ICP-MS	SW-846 6020	0.48	mg/L	0.3	Tretten	1/30/2003
Cadmium - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Chromium - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Silver - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Lead - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003
Mercury - AA Cold Vapor	SW-846 7470	0.023	mg/L	0.002	Eastwood	1/30/2003
Selenium - ICP-MS	SW-846 6020	<0.1	mg/L	0.1	Tretten	1/30/2003



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sem@sem-analytical.com

John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 2/5/2003
Client: CDM-147
Taken by: K. Ryan
Report: 51366
PO #:

Approved By: _____
Sierra Environmental Monitoring, Inc

Date: 2/5/03

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PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

Client Name: CDM

Purchase Order:

Address: 3025 Lakeside Lane #20

Phone/Fax #: 858-9232/858-3253

City: Reno State: NV Zip: 89511

Report Attention: Kevin Ryan

Sampled by: Kevin Ryan

Signature:

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	TCLP 8 Metals								Remarks	Lab Use Only Sub-Sample pH <2	>12
1/21/03	1500	5	EJ Sed Pond Sludge	6	1	X										
1/21/03	1500	5	EJ Percol Pond Sludge	6	1	X										

Turnaround Time: Standard: ✓ Other: ___ Rush: 24 Hr ___ 48 Hr ___

Compliance Monitoring: Yes: ___ No: ✓

	Signature	Print Name	Company	Date	Time
Relinquished By:	[signature]	K Dierberger	CDM	1-21-03	[illegible]
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	[signature]	Sue Ostereicher	SEM	1-21-03	[illegible]

Custody Seal Intact
Yes ___ No ___ None ✓

Sample Temperature

Degrees C 16

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report. Terms: Net thirty days on approved credit.

*** KEY:** Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

Appendix D.4

Waste Rock Dump

Summary of Results

Laboratory Analysis Report

Chain of Custody

Waste Rock Analysis Results

Easy Junior Reclamation Project

Sample Name			EJ WD HS1	EJ WD HS 2	WD HS 3	WD HS 4	WD HP 5	WD HS 6	WD Barren	WD HS 7	WD HS 8	WD Typical
Sample Type			Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock	Waste Rock
Date Sampled			21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02	21-Nov-02
Coordinate												
	x		10 992	10 948	10 962	10 493	10 954	10 955	10 920	10 931	10 825	10 798
	y		40 595	40 636	40 600	40 568	40 741	40 740	40 750	40 744	40 605	40 478
	z		6560	6580	6566	6561	6561	6563	6561	6558	6530	6517
ph	Chromium, ICP-MS (ppm)	SW-846 9045A	2.50	2.31	1.60	2.35	1.97		7.39	7.31	1.97	7.64

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 1/28/2003
Client: CDM-147
Taken by: K. Ryan
Report: 51365
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1019	EJ WD HS1	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	2.50	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	20.9	°C	0	Kobza	1/27/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1020	EJ WD BARREN	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	7.39	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.1	°C	0	Kobza	1/27/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1021	EJ WD HS4	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	2.35	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.0	°C	0	Kobza	1/27/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1022	EJ WD HS7	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	7.31	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.1	°C	0	Kobza	1/27/2003

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 1/28/2003
Client: CDM-147
Taken by: K. Ryan
Report: 51365
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1023	EJ WD HS2	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	2.31	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.8	°C	0	Kobza	1/27/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1024	EJ WD HS8	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	1.97	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.3	°C	0	Kobza	1/27/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1025	EJ WD TYPICAL	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	7.64	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.0	°C	0	Kobza	1/27/2003

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1026	EJ WD HS3	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	1.60	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.6	°C	0	Kobza	1/27/2003

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Constructors, Inc.
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 1/28/2003
Client: CDM-147
Taken by: K. Ryan
Report: 51365
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200301-1027	EJ WD HS5	11/21/2002		1/24/2003

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
pH - Saturated Paste	SW-846 9045A	1.97	pH Units	1	Kobza	1/27/2003
pH - Temperature	SW-846 9045A	21.7	°C	0	Kobza	1/27/2003

Approved By: John Kobza
Sierra Environmental Monitoring, Inc

Date: 1/28/03

John Kobza, Ph.D
Laboratory Director

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John C. Seher
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PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

5P65

CHAIN OF CUSTODY RECORD

Client Name: COM
Purchase Order:
Address: 7025 Longley Ln #20
Phone/Fax #: 8570333/8533177
City: Reno State: NV Zip: 89511
Report Attention: Kevin Ryan
Sampled by: Kevin Ryan
Signature:

Analyses Requested: Hg

Turnaround Time: Standard X Other: ___ Rush. 24 Hr ___ 48 Hr ___

Compliance Monitoring: Yes: ___ No: X

Lab Use Only Sub-Sample pH <2 >12

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	Hg							Remarks	pH <2	pH >12
[illegible]		5	EJ WD HS1	6	1	X									
"		"	EJ WD BARREN	6	1	X									
"		"	EJ WD HS4	6	1	X									
"		"	EJ WD HS7	6	1	X									
"		"	EJ WD HS2	6	1	X									
"		"	EJ WD HS8	6	1	X									
"		"	EJ WD TYPICAL	6	1	X									
"		"	EJ WD HS3	6	1	X									
"		"	EJ WD HS5	6	1	X									

	Signature	Print Name	Company	Date	Time
Relinquished By:	[signature]	K Dierberger	COM	1-24-05	11:42
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	[signature]	[illegible]	SEM	1-24-05	11:42

Custody Seal Intact
Yes ___ No ___ None ✓

Sample Temperature
Degrees C 17

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.
Terms: Net thirty days on approved credit.

***KEY:** Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

Appendix E

NDEP BMRR Heap Leach Closure Plan

Final Closure Plan for
Easy Junior Heap Leach Pad & Effluent Drainfield Facility

Easy Junior Mine Site

White Pine County, Nevada

December 2003

Prepared for:

Sacramento District
Army Corps of Engineers
Restoration of Abandoned Mine Sites (RAMS)
Contract No. DACW05-00-D-006
Task Order No. 005

Prepared by:

CDM Federal Programs
Sacramento, CA

CDM Constructors Inc.
Reno, NV

Contents

Section 5 Final Closure Report

List of Figures

List of Tables

None

Appendices

Section 1
Introduction

1.1 General Statement of Purpose

The Easy Junior Project is situated on land managed by the Bureau of Land Management (BLM), Ely District Office and located approximately 50 miles west of Ely, Nevada in White Pine County. The open-pit heap-leaching operation produced gold in two campaigns from 1989 to 1996 under the operatorship of Alta Gold. In 1999, Alta Gold filed bankruptcy leaving Easy Junior in a partially reclaimed status.

Primary Permits for Easy Junior are Plan of Operations (POO) No. N46-89-005P and Water Pollution Control Permit (WPCP) NEV89051.

This Final Permanent Closure Plan ("Plan") for the Easy Junior Heap Leach Pad and Effluent Drainfield Facility is submitted to the Nevada Division of Environmental Protection (NDEP), Bureau of Mining Regulation and Reclamation with the intent to fulfill the requirements defined in NAC 445A.430. This Plan is intended to describe the procedures previously completed and activities proposed for final closure of the Combined Heap Leach Pad and Effluent Drainfield Facility. This Plan does not addresses issues relative to the pit, waste dump, haul roads, crusher site, process ponds, adsorption plant area, truck shop area and other miscellaneous components.

1.2 General Site Description

1.2.1 Site Location

The Easy Junior Mine site (Site) is located in White Pine County, Nevada, in Township 15 North, Range 56 East, Sections 4, 5, 8, and 9 in the foothills of what is considered to be a portion of the Pancake Range. The Site is reached by traveling 45 miles west of Ely, Nevada along Highway 50, south 15 miles along County Road #5, west 3 miles along Secondary County Road 1179 and south 5 miles on Secondary Road 1176. Figure 1-1 depicts the Project Location map.

1.2.2 Climatology

The Site is located in an area with a climate typical of eastern Nevada. Average elevation of the Site is 6,500 feet above sea level. Mean annual precipitation at the Site is slightly over 9 inches, while annual free water surface evaporation is 48 inches. The 100-year 24-hour storm event is 2.8 inches (Alta Gold Company, 1989).

1.2.3 Geology

Geologic units at the Site include sedimentary units; the Devonian Guilmette Formation (Devil's Gate Limestone), the Pilot Shale, Joana Limestone, Chainman Shale and Diamond Peak Formation of Mississippian age. Tertiary volcanics and jasperoid (Alta Gold Company, 1989b) are also found at the Site.

1.2.4 Ground Water

Water beneath the Site occurs from 1,000 to 1,500 feet below ground surface. The mine's water supply well was drilled approximately 5 miles southeast of the mine area. Water in this aquifer is of potable quality.

1.2.5 Surface Water

No perennial surface waters exist on or near the Site. The nearest surface water is Bull Creek, 8.8 miles southeast of the Site and on the opposite side of the Pancake Range. The Site is outside of the 100-year flood plain.

1.3 Project History

1.3.1 Pre-Mining Land Use

The remote and arid nature of the area, as well as sparse vegetation, limits human activity to recreation and some livestock grazing.

There was no previous mining activity in the area until the late 1970's, when sporadic exploration work commenced.

1.3.2 Exploration and Operation

Exploration of the Easy Junior site began in the early 1980's when the joint venture of Alta Gold Company and Echo Bay Mines explored unpatented mining claims at the Site. Mineral lease agreements for some of the unpatented claims were negotiated with Lyle F. Campbell and BP Mineral.

Initially, Alta Gold and Echo Bay Minerals jointly owned the Easy Junior Project with Alta Gold acting as operator. Mining began late in February 1989 and continued through November 1990. The project was inactive during 1991 and 1992, during which time Alta Gold acquired Echo Bay's interest in the property. Mining operations began again in July 1993 and continued through August 1994 when the pit was completed. However, stockpiled ore continued to be loaded on the heap until July 1995. Leaching of ore continued through late 1996 and cyanide addition to the barren solution was discontinued in October 1996. Approximately 64,000 ounces of gold was recovered during the mine life (Wilson, 2001). The Easy Junior General Site Map is depicted in Figure 1-2.

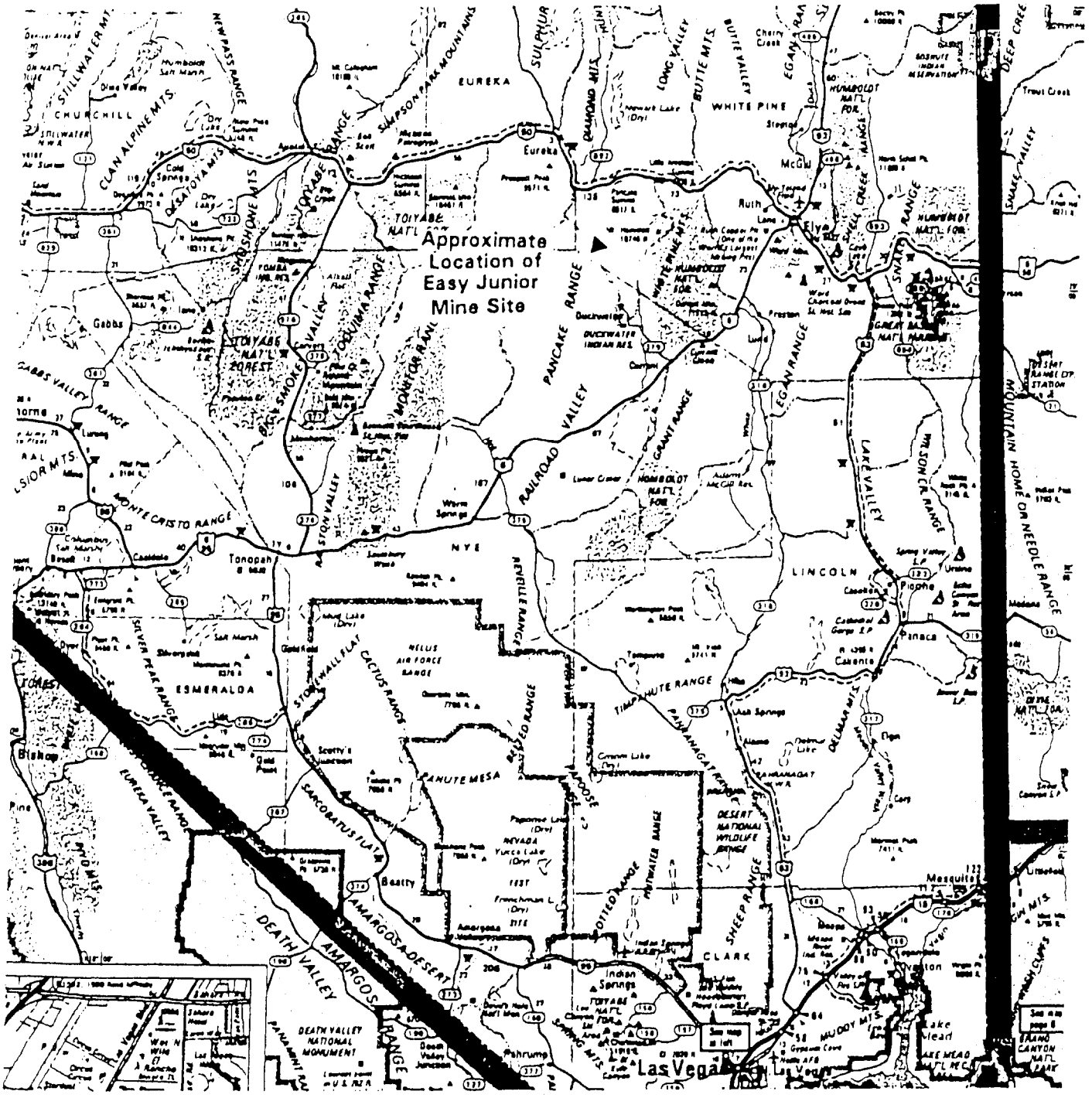
1.3.3 Reclamation and Closure

During 1994 and 1995, as mining was being completed and stockpiled ore was being loaded onto the heap, Alta Gold performed some initial reclamation work at Easy Junior. This included establishment of an isolation berm for the pit, regrading all waste rock dump slopes to 3h:1v and revegetating approximately 50% of waste dump area by applying cover soil and reseeding.

Cyanide addition to the heap ceased in October 1996 and residual leaching and rinsing continued until June 1997. During this period most of the major equipment and building structures were removed (although all foundations remain).

From April to September 1998, Alta Gold land applied approximately 5.7 million gallons of residual rinse-down solution to an area immediately south of the heap. After the land application of solution, an additional 0.5 million gallons of fresh water was applied to rinse salts off vegetation.

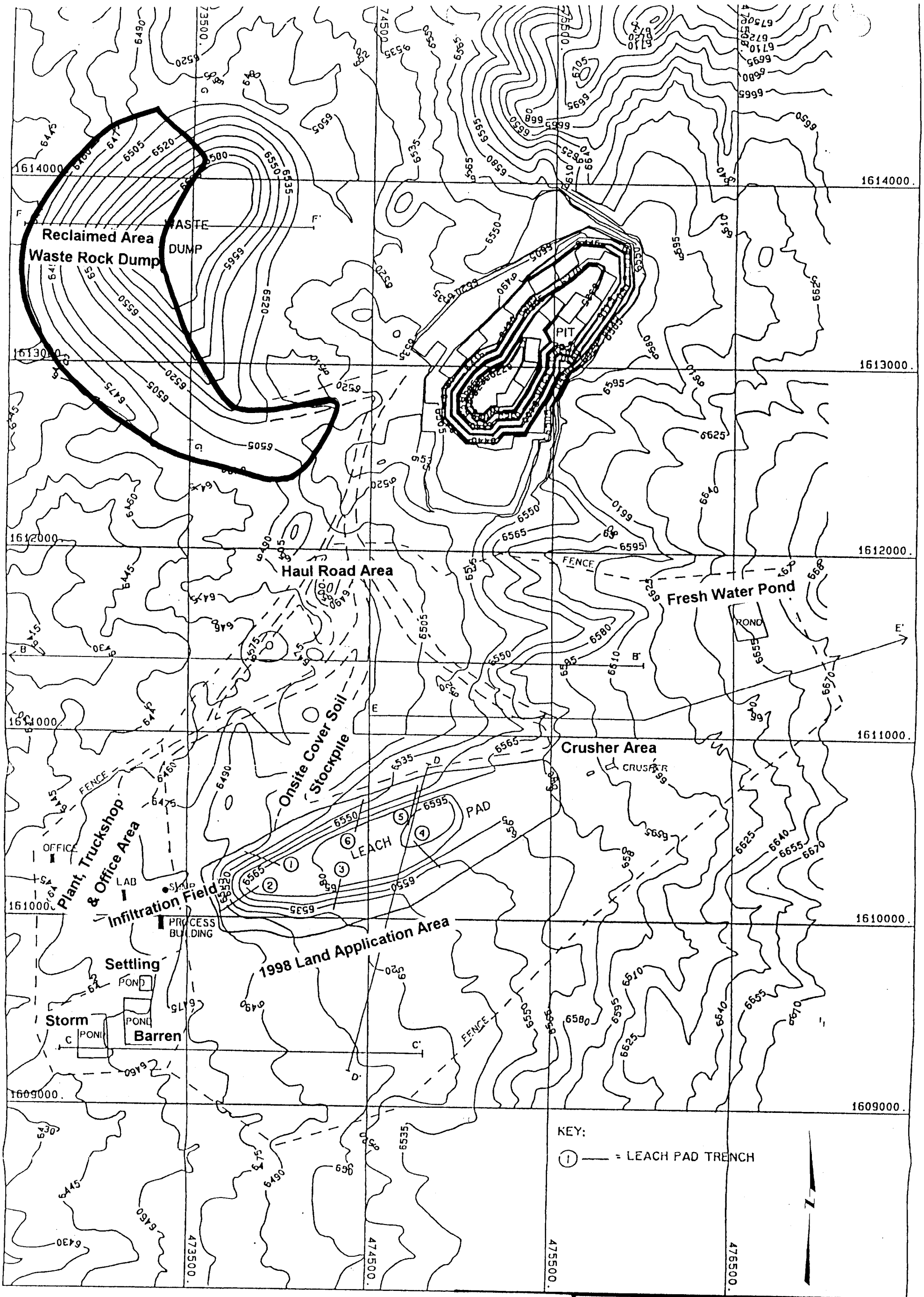
In July 1998, Alta also installed the effluent drainfield facility, a leach field to infiltrate long-term residual heap effluent. Once the heap effluent was routed to this drainfield facility, the heap was no longer hydraulically connected to the process ponds.



CDM Federal Programs Corporation
A Subsidiary of Camp Dresser & McKee Inc.

APPROXIMATE LOCATION OF
EASY JUNIOR MINE SITE
WHITE PINE COUNTY, NEVADA

Figure 1-1



Township 15 North, Range 56 East, Sections 4, 5, 8, and 9

General Site Map

August 2003

Easy Junior Project
White Pine County, Nevada

Scale: 1 in = 500 ft

CDM

Figure 1-2

Section 2
Facility Description

2.1 Operational Heap Leaching Facilities

Two heap leach pads, #1 and #2, were permitted, however, only Pad #1 was constructed, resulting in a total area of approximately 978,000 square fee t (22.5 acres). The pad was constructed with a composite liner system of 80-mil HDPE plastic overlying compacted silt with a permeability of approximately 2×10^{-7} cm/sec. Leak detection monitors consisting of 4-inch perforated drain pipe were placed under the HDPE liner on 400 ft centers across the pad. These monitor lines drain to monitor sumps on the periphery of the pad.

During operation, pregnant leach solutions were drained from the pad at the ore/liner interface by 12-inch perforated pipes placed against berms built into the pad. These drainage pipes channeled the pregnant solution to two sumps on the west end of the leach pad. At the pad sumps, the pregnant solution entered 16-inch HDPE pipes which flowed to a 20,000 gallon steel sump. From the steel sump, pregnant solution flowed into the process building where the precious metals were extracted using conventional carbon columns. Gold extraction from the loaded carbon was performed offsite. Next, the barren leach solution gravity flowed to the small settling pond (312,000 gallon capacity) for lime addition before being inventoried in the barren pond (3,500,000 gallon capacity) and ultimately being returned to the heap. An overflow (storm) pond (4,007,000 gallon capacity) was hydraulically connected to the barren pond and heap to capture flows during operational upsets or large storm events. Figure 2-1 shows the layout of the heap leach pad, process ponds and carbon columns.

2.2 Heap Closure Activities 1996 - 1999

In October 1996, Alta Gold ceased adding cyanide and began circulating solution and rinsing of the spent ore. By June 1997, heap effluent WAD cyanide concentrations reached 0.11 mg/L and the pH had reduced to 8.1. Alta Gold deemed the spent ore was rinsed and stopped application of solution to the heap. Additional samples of pad effluent were collected during pad drain-down (3rd and 4th quarters of 1997). Heap effluent water quality from 1995 to 2002 is summarized in Appendix A'.

During the heap rinsing and drain down, approximately 5.7 million gallons of solution had accumulated in the process ponds. Although some solution constituents exceeded Nevada Drinking Water Standards, Alta concluded that waters of the state would not be degraded by land application of this solution since the depth to groundwater in the project vicinity is over 1,300 feet. From April to September of 1998, Alta Gold land applied approximately 5.7 million gallons of drain-down solution to an area immediately south of the leach pad as shown on Figure 2-1.

2.3 Combined Heap Leach Pad and Effluent Drainfield Facility

In mid 1998, during the land application of the accumulated drain-down solution, Alta Gold hydraulically disconnected the heap from the process ponds and installed a leach field to infiltrate the long-term heap effluent. This system is comprised of a steel distribution box that accepts heap effluent from one 6-inch diameter pipe. The location and conceptual layout of the effluent drainfield system are shown on Figures 2-2 and 2-3.

Since September 1998, the heap system has been comprised of only two components; the heap leach pad and the effluent drainfield, cumulatively referred to as the Combined Heap Leach Pad and Effluent Drainfield Facility. This Plan addresses this facility only and does not address other closure issues for Easy Junior such as the waste dump, haul roads, crusher site, process ponds and other facilities.

Township 15 North, Range 56 East, Sections 4, 5, 8, and 9

Fresh Water Pond

Crusher Area

Onsite Cover Soil Stock Pile
(approximate location)

INFILTRATION FIELD

NW Solution Collection Sump

SW Solution Collection Sump

Heap Leach Pad

PREGNANT COLLECTION POND

Settling Pond

Barren Pond

BARREN COLLECTION POINT

Storm Pond

1998 Land Application Area

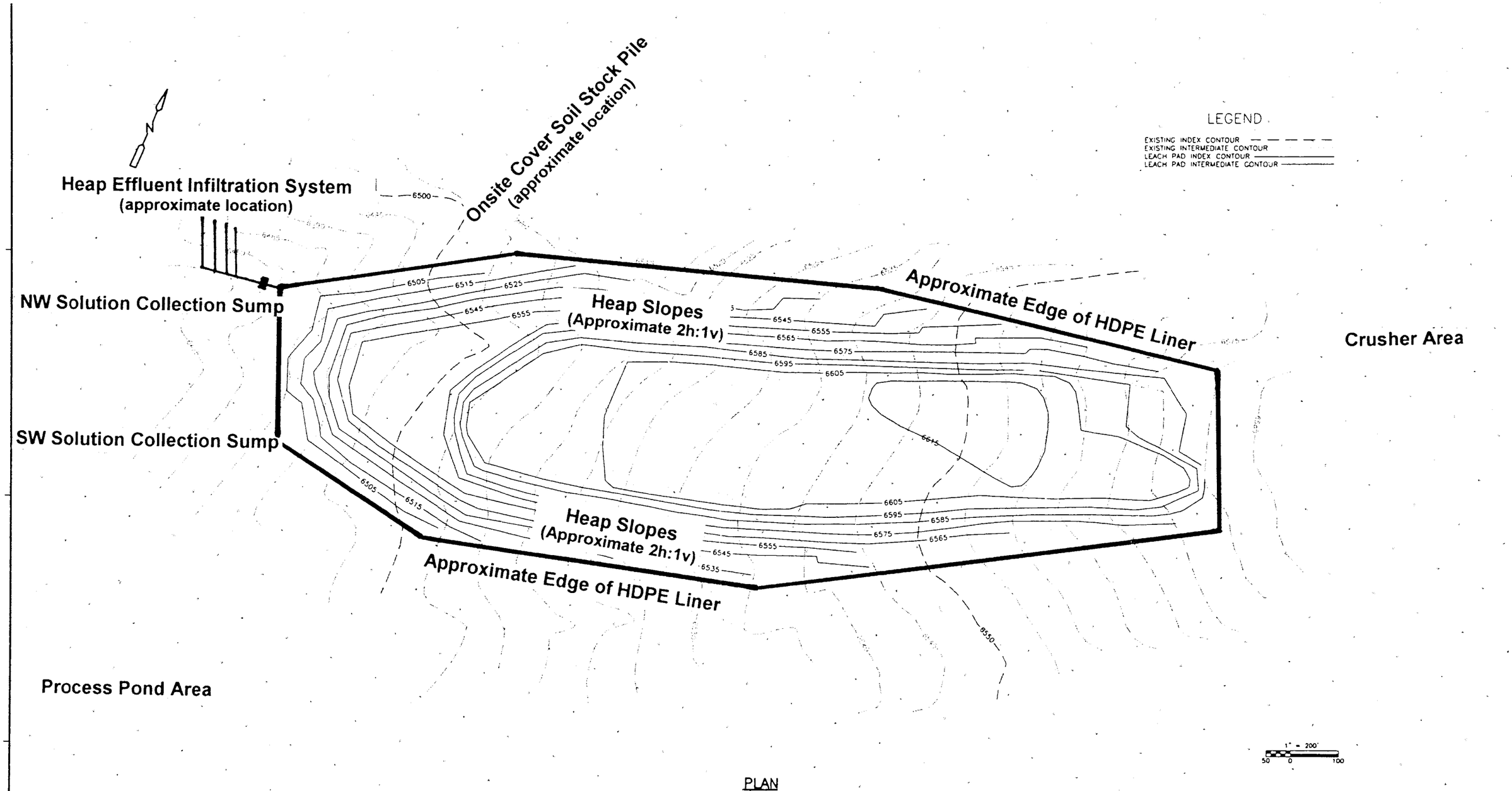
1-29-93

Operational Process Layout (1998)

Easy Junior Project
White Pine County, Nevada

CDM

Figure 2-1



PLAN

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J KOTSON
DRAWN BY: J KOTSON
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
DATE: MAY 2003

CDM Engineers & Constructors Inc
290 GENTRY WAY
RENO NEVADA 89502-4230
1-775-853-0333

USACE
CONTRACT NUMBER BACW 05-00-D-006
TASK ORDER 005

EASY JUNIOR MINE SITE

Current Heap Leach Pad Configuration
August 2003

Easy Junior Project
White Pine County, Nevada

CDM Scale 1 in = 200 ft Figure 2-2

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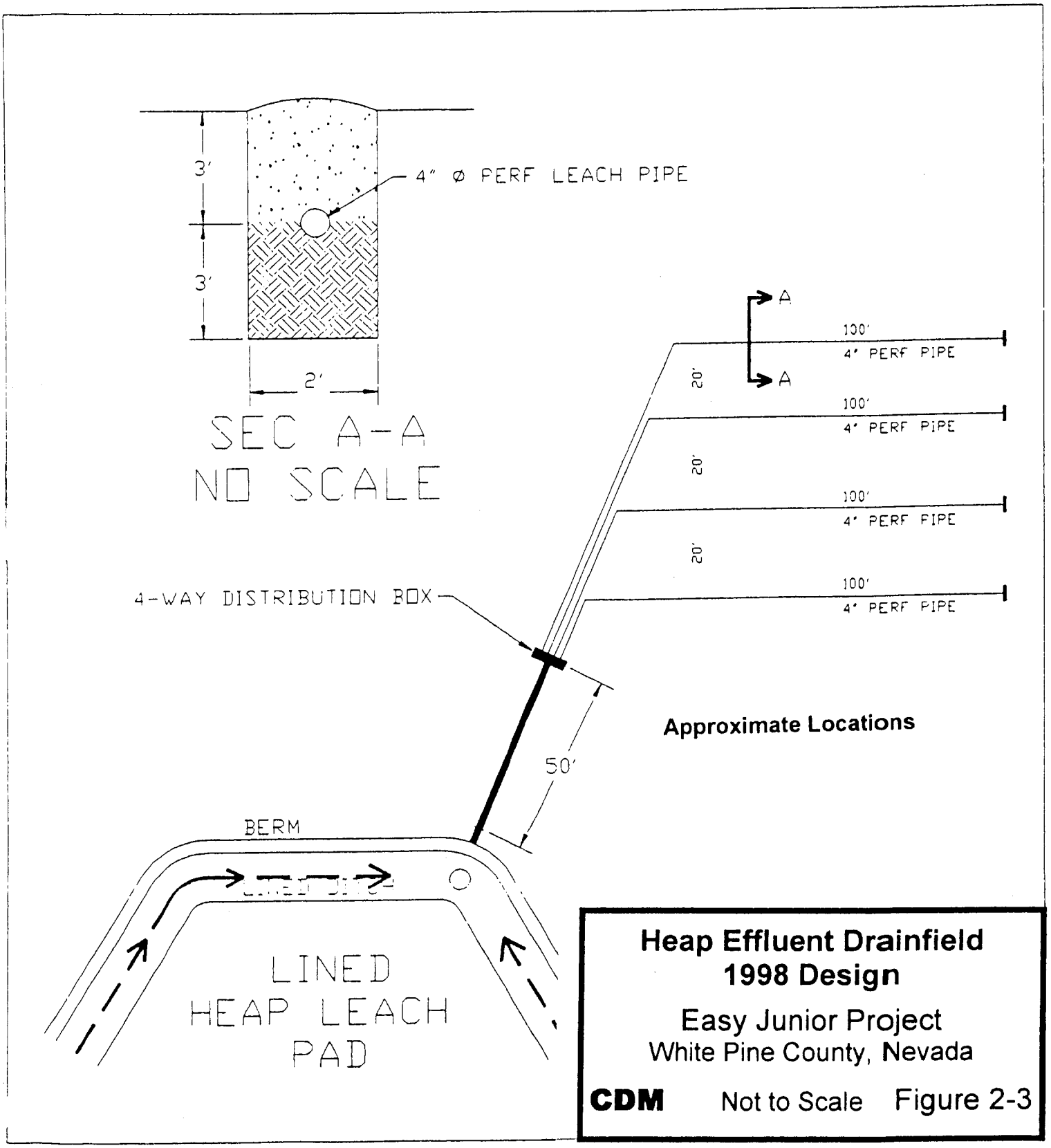


Heap Effluent Drainfield
1998 Design

Easy Junior Project
White Pine County, Nevada

CDM Not to Scale Figure 2-3

Section 3
Closure Plan

3.1 Combined Heap Leach Pad and Effluent Drainfield Facility

3.1.1 Concurrent Closure Activities

As discussed in Section 2.3, a leach field was installed for long-term infiltration of heap effluent. This system was commissioned in September 1998 and heap effluent has since been infiltrating into this area, located west of the leach pad as shown on Figure 2-2. Effluent flows of less than 1 gal/min were observed during site visits in November 2002 and May 2003.

3.1.2 Process Component Solution Characterization

Appendix A' contains NDEP Profile II water quality trends from 1995 to 2002 for the heap effluent. Also found in Appendix A' are the graphical trends of this data for antimony, arsenic, mercury, nitrate, pH, selenium, sulfate, TDS, and WAD cyanide.

Seven of the constituents from the heap effluent sample exceed USEPA drinking water standards or secondary maximum contaminant levels (MCLs): antimony, arsenic, mercury, nitrate, selenium, sulfate and total dissolved solids (TDS). Although the effluent quality does not meet USEPA drinking water standards, the groundwater level is approximately 1,300 feet bgs and leach pad effluent does not impact surface water. Additionally, there are no drinking water supply wells in the area that would be impacted by the leach pad effluent. Therefore, as allowed by Nevada Annotated Code (NAC) 445A.424, Limitation of Degradation of Waters; Exemptions, discharge of leach pad effluent exceeding standards for drinking water to groundwater is allowable.

3.1.3 Sampling Methodology, Analytical Protocol and Laboratory

Sampling and analytical methods will be consistent with those required by the NDEP Water Pollution Control Permit NEV89051.

All sample analysis will be performed by a Nevada State certified laboratory.

3.1.4 Process Component Solids Characterization

No additional characterization of the spent ore is proposed as the heap effluent has been infiltrating into the subsurface drainfield since September 1998.

3.1.5 Stabilization of Heap

Additional rinsing and/or application of chemicals to the heap is not proposed.

A cover soil cap has been designed to minimize infiltration of meteoric water. The soil would capture meteoric water, allowing moisture to be evaporated and transpirated rather than infiltrating into the spent ore. HELP modeling conducted by CDM for the Site indicates that a 12-inch cover soil cap constructed with material

from the onsite stockpile and revegetated will provide a cap system with an efficiency of approximately 98 percent for preventing infiltration of meteoric water.

3.1.6 Procedures for Final Closure

3.1.6.1 Solution Management

No solution management is required as the drain-down solutions were land applied during the second and third quarter of 1998. Since September 1998, heap effluent has been infiltrating into the drainfield.

3.1.6.2 Heap Recontouring

Heap crests will be rounded and slopes steeper than 3h:1v will be regraded to nominal 3h:1v. This configuration will make for efficient placement of the soil cap and improve revegetation success.

Heap effluent exits the leach pad at two solution collection sumps, located at the northwest and southwest corners of the leach pad. Prior to covering the sumps' exit boots with regraded spent ore, a protective cover would be installed in each sump to ensure long-term flows into the effluent drainfield system. A clean, coarse drain rock layer overlain with filter fabric is envisioned. The filter system would be designed and approved prior to installation.

Recontouring to 3h:1v will require spent ore to be graded beyond the existing HDPE liner containment system. This is deemed acceptable since meteoric waters that pass through the spent ore would then infiltrate into the unlined ground similar to the heap effluent reporting to the effluent drainfield for infiltration.

3.1.6.3 Soil Cap of Heap

Based upon the analysis discussed in Section 3.1.5, a 12-inch soil cap would be applied to the entire heap to minimize flux of meteoric water through the heap.

3.1.6.4 Revegetation

Once the soil cap is placed, the entire heap surface will be seeded to establish a vegetative cover. The revegetation program will be designed to establish a productive community for post mining use and maximize transpiration of meteoric water thus minimizing infiltration through the soil cap and into the spent ore.

3.1.6.5 Effluent Management

Long-term solution management would be accomplished by the continuing to discharge to the existing heap effluent drainfield system that has been operating since September 1998.

Section 4
Post-Closure Sampling and Analysis

4.1 Post-Closure Sampling and Analysis

Upon completion of the work described in Section 3.1.6, the heap effluent would be monitored twice per year (approximately April and October). The monitoring would be comprised of flow measurements and Profile II analysis of the heap effluent sampled at the drainfield distribution box.

The monitoring program would be adjusted as warranted based upon monitoring results.

Section 5
Final Closure Report

5.1 Final Closure Report

A final closure report would be developed for the Combined Heap Leach Pad and Effluent Drainfield Facility. This report would summarize the completed reclamation work and post-closure analysis previously described.

Based upon analysis of the heap effluent monitoring discussed in Section 4, the Water Pollution Control Permit would be terminated once potential to degrade waters of the State is deemed minimal.

Appendix A'

1995 – 2002
HEAP EFFLUENT WATER QUALITY

Heap Effluent NDEP Profile II Results

1995 - 2002

Easy Junior Project

	Std (mg/L)	Operational Preg Solution				Land Applied Rinse/Draindown Solution						Infiltrated Pad Effluent						
Reporting Period Sample Date		1Q95 2/15/95	2Q95 5/15/95	3Q95 8/15/95	4Q95 11/15/95	1Q97 2/19/97	2Q97 4/28/97	2Q97 6/3/97	3Q97 8/27/97	4Q97 11/19/97	3Q98 8/19/98	4Q98 12/17/98	1Q99 3/14/99	2Q99 5/16/99	3Q99 8/16/99	4Q99 12/16/99	1Q00 2/9/00	4Q02 11/22/02
Alkalinity (total as CaCO3)	-	209 2	139 5	140 3	150	15 66	44	40	36	80	66	46	62	56	50 6	64	64	59
Aluminum	0 05 - 0 2	0 418	0 071	<0 065	0 428	<0 025	<0 025	0 279	0 299	0 327	0 029	<0 025	<0 025	0 195	0 111	0 155	0 125	0 3
Antimony	0 006	<0 050	<0 050	<0 050	0 074	<0 003	<0 003	0 007	<0 003	<0 003	<0 003	0 005	<0 003	0 009	0 005	0 006	0 005	0 007
Arsenic	0 05	0 043	0 066	0 032	<0 025	0 192	0 13	0 106	0 147	0 068	0 202	0 183	0 248	0 18	0 127	0 173	0 173	0 15
Barium	2	0 051	0 014	0 006	0 022	0 025	0 009	0 013	0 018	<0 005	<0 050	<0 050	<0 050	<0 050	0 233	<0 050	0 336	0 023
Beryllium	0 004	<0 001	<0 001	<0 001	<0 001	<0 002	<0 002	<0 002	<0 002	<0 002	<0 004	<0 004	<0 004	<0 004	<0 002	<0 002	<0 002	<0 005
Bismuth	-	<0 050	<0 005	<0 050	0 097	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	0 154	0 1
Boron	-					0 018	<0 200	<0 200	<0 200	0 34	<0 200	0 29	0 204	0 516	0 464	0 494	0 336	0 13
Cadmium	0 005	0 023	<0 005	<0 005	<0 005	<0 002	<0 002	<0 002	0 053	<0 002	<0 003	<0 003	<0 003	<0 003	<0 003	<0 003	<0 003	<0 005
Calcium	-	57 02	64 73	64 6	59 5	145 3	137	190 4	238	319	214 5	255	288	295	331	392	385	380
Chloride	250 - 400	173 7	168 4	120 5	156	125 6	77 99	67 4	95 72	85 08	131	95	76 7	70	66 7	66	61 2	80
Chromium	0 1	<0 010	<0 010	0 024	<0 010	<0 010	0 011	<0 010	0 021	<0 010	<0 010	<0 010	0 014	0 014	0 02	0 017	0 019	0 022
Cobalt	-	0 316	0 354	0 379	0 398	0 484	0 385	0 385	0 463	0 471	0 408	0 393	0 36	0 33	0 333	0 392	0 385	0 39
Copper	1 3	5 217	7 519	4 431	4 625	0 066	0 134	0 044	0 013	<0 010	0 01	<0 010	0 03	0 028	0 059	0 022	0 018	0 022
Fluonde	2 - 4	5 88	3 38	5 7	4 02	1 9	1 56	1 21	1 78	1 2	2 3	2	4	1 9	1 8	1 5	1 2	1 8
Gallium	-	<0 050	<0 050	<0 050	<0 050	<0 200	<0 200	<0 200	<0 200	<0 200	<0 250	<0 250	<0 250	<0 250	<0 250	<0 250	<0 200	<0 1
Iron	0 3 - 0 6	<0 005	0 074	0 123	0 036	0 135	0 053	0 079	2 466	0 26	<0 020	0 17	0 125	0 055	0 114	0 184	0 18	0 29
Lead	0 015	<0 015	<0 015	<0 015	<0 015	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	<0 007	0 008	<0 007	<0 007	<0 005
Lithium	-	<0 010	<0 010	<0 010	<0 010	0 137	0 06	0 126	<0 010	<0 050	<0 010	<0 010	<0 010	0 049	<0 010	<0 010	<0 010	<0 1
Magnesium	125 - 150	0 454	0 486	0 332	0 558	1 776	2 801	4 751	4 295	10 1	10	8 7	19 5	11 7	10 4	12 5	12 7	13
Manganese	0 05 - 0 10	<0 005	<0 005	<0 005	<0 005	<0 005	0 006	0 016	0 093	0 02	<0 010	0 02	0 01	0 01	<0 010	0 015	0 013	0 018
Mercury	0 002	5	4 733	4 489	0 3735	0 0069	0 01	0 008	0 005	0 0056	<0 001	<0 002	<0 002	<0 001	<0 001	0 003	0 0059	
Molybdenum	-	1 991	0 153	<0 010	0 4841	<0 250	<0 250	<0 250	<0 250	0 25	<0 250	<0 250	<0 250	<0 250	<0 250	<0 250	<0 250	0 043
Nickel	0 1	0 64	1 341	1 196	0 999	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	<0 025	0 029
Nitrate/Nitrite	10	30 08	29 25	34 31	34 69	321	55	78 8	148 15	125	215	790	228	191	195	199	174	230
pH (0 1 units)	6 5 - 8 5	9 95	9 82	9 75	9 83	9 13	8 41	8 05	7 78	7 88	8 97	7 83	8 22	8 61	8 4	7 69	7 68	8 03
Phosphorus	-	3 656	4 162	0 28	0 828	2 145	<0 250	0 48	<0 250	<0 250	<0 250	<0 250	0 25	<0 250	<0 250	<0 250	<0 250	0 06
Potassium	-	12 36	13 41	21 24	19	15 07	13 71	26 42	25 98	19 5	32 8	27	19 5	24 3	30 3	18 4	22 6	27
Scandium	-	<0 005	<0 005	<0 005	0 025	<0 050	<0 050	<0 050	<0 050	<0 050	<0 100	<0 100	0 1	<0 100	<0 100	<0 100	<0 050	<0 05
Selenium	0 05	0 012	0 006	0 012	<0 002	0 053	0 06	0 029	0 093	0 031	0 119	0 117	0 141	0 085	0 09	0 144	0 094	0 12
Silver	0 1	<0 025	0 096	0 146	0 092	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 035	<0 005
Sodium	-	221 1	274 5	374 8	324 6	505 8	395 6	645 4	626 3	500 3	785	641	641	633	846	819	777	680
Strontium	-	0 015	0 057	0 065	0 068	<0 200	0 975	<0 200	0 143	0 396	0 406	0 0304	0 316	0 35	0 37	0 349	0 342	0 36
Sulfate	250 - 500	526 6	497 4	610	669 8	1239	815	943	1090	1500	1874	1117	1317	1042	1093	1220	1010	1500
Thallium	0 002	<0 100	<0 100	<0 100	<0 100	0 194	0 174	0 014	0 013	0 007	<0 001	0 007	0 001	0 008	0 007	0 01	0 009	0 011
Tin	-	<0 050	<0 050	<0 050	0 13	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 05
Titanium	-	0 042	<0 010	0 018	<0 010	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 05
Total Dissolved Solids	500-1000	1080	1190	1750	1390	2367	2373	2501	2991	2978	3892	3208	3340	3355	3705	3988	3452	3800
Vanadium	-	0 024	<0 010	0 047	0 021	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	<0 100	0 013
WAD Cyanide	0 2	71 42	62 32	22 92	30 12	0 21	<0 02	0 11	<0 02	0 38	<0 02	0 28	0 23	0 22	0 26	0 19	0 14	0 098
Zinc	5	3 359	3 135	0 224	0 992	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 050	<0 05

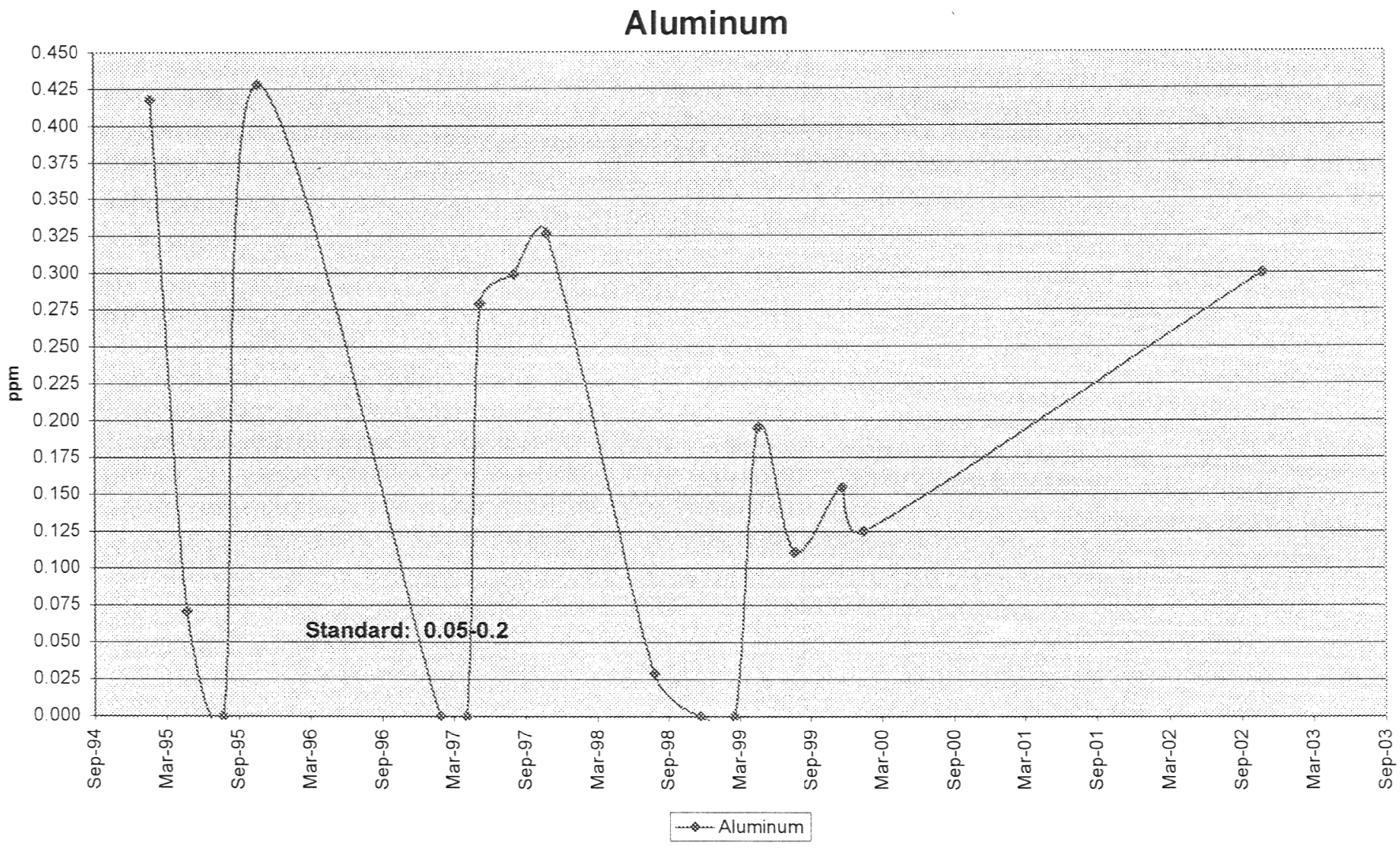
Appendix A'.1

Heap Effluent NDEP Profile II Results
&
Graphical Trends for

Aluminum
Antimony
Arsenic
Mercury
Nitrate
pH
Selenium
Sulfate
Thallium
TDS
WAD CN

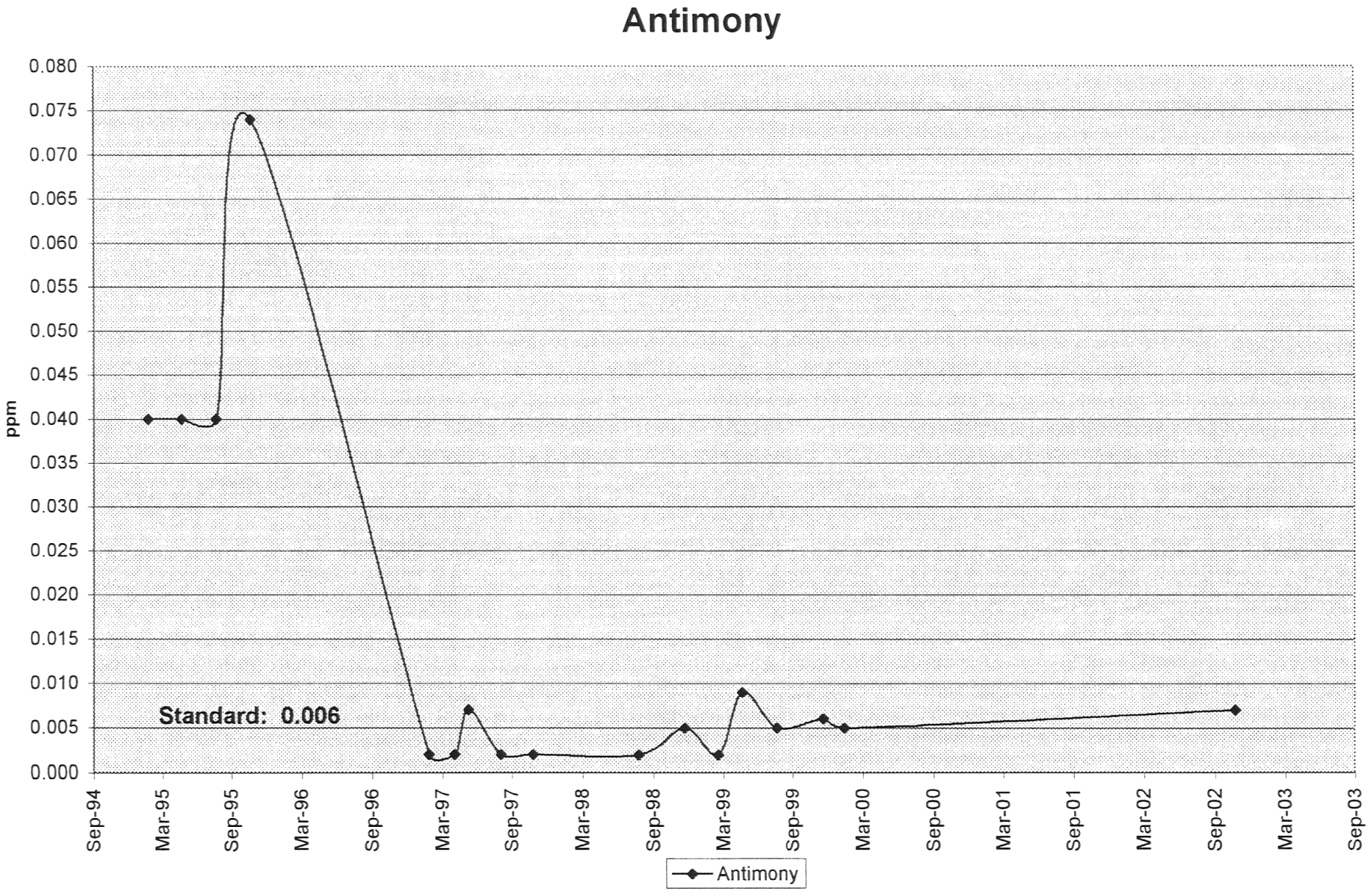
Heap Effluent Water Quality

Easy Junior Project



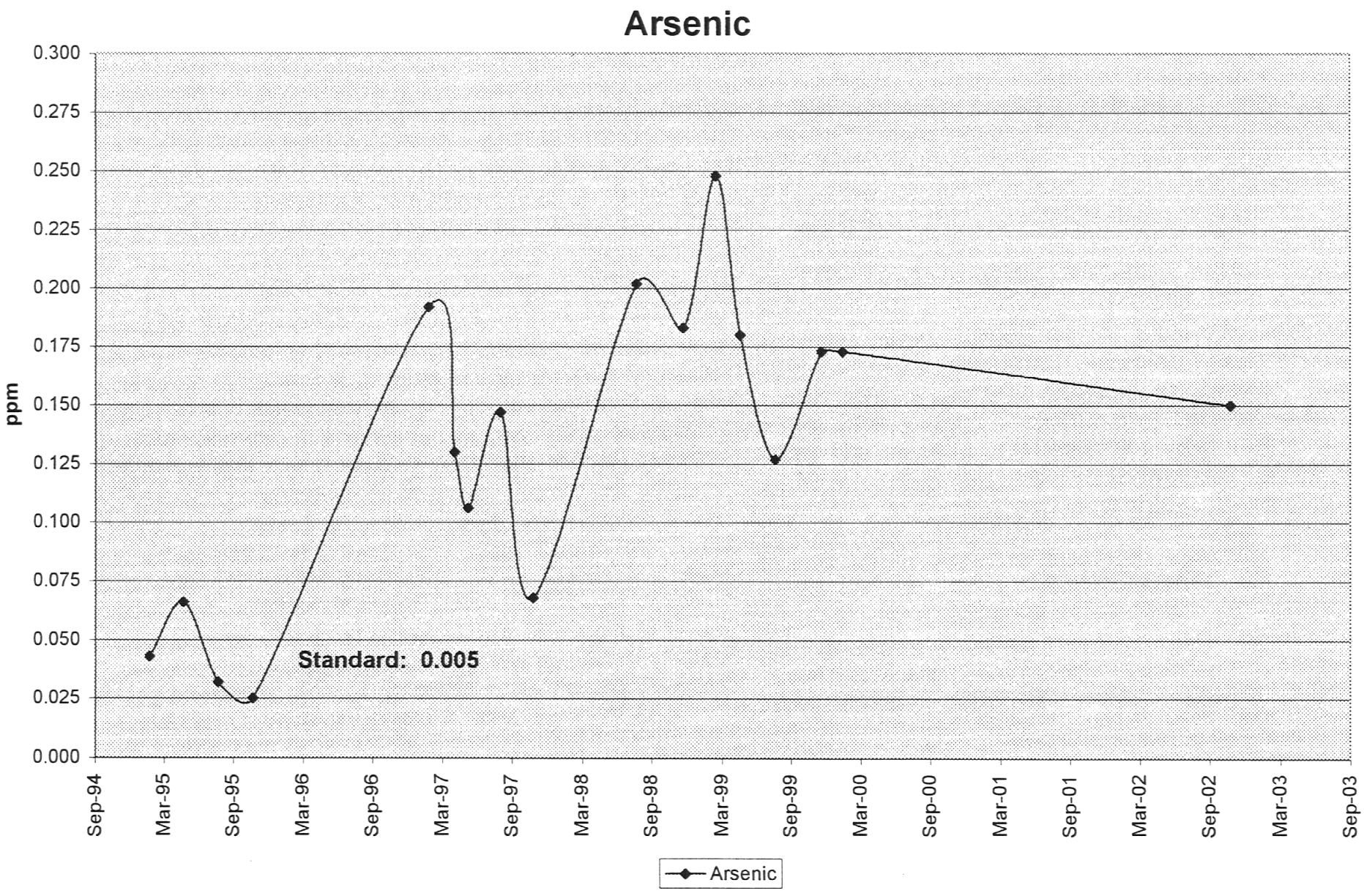
Heap Effluent Water Quality

Easy Junior Project



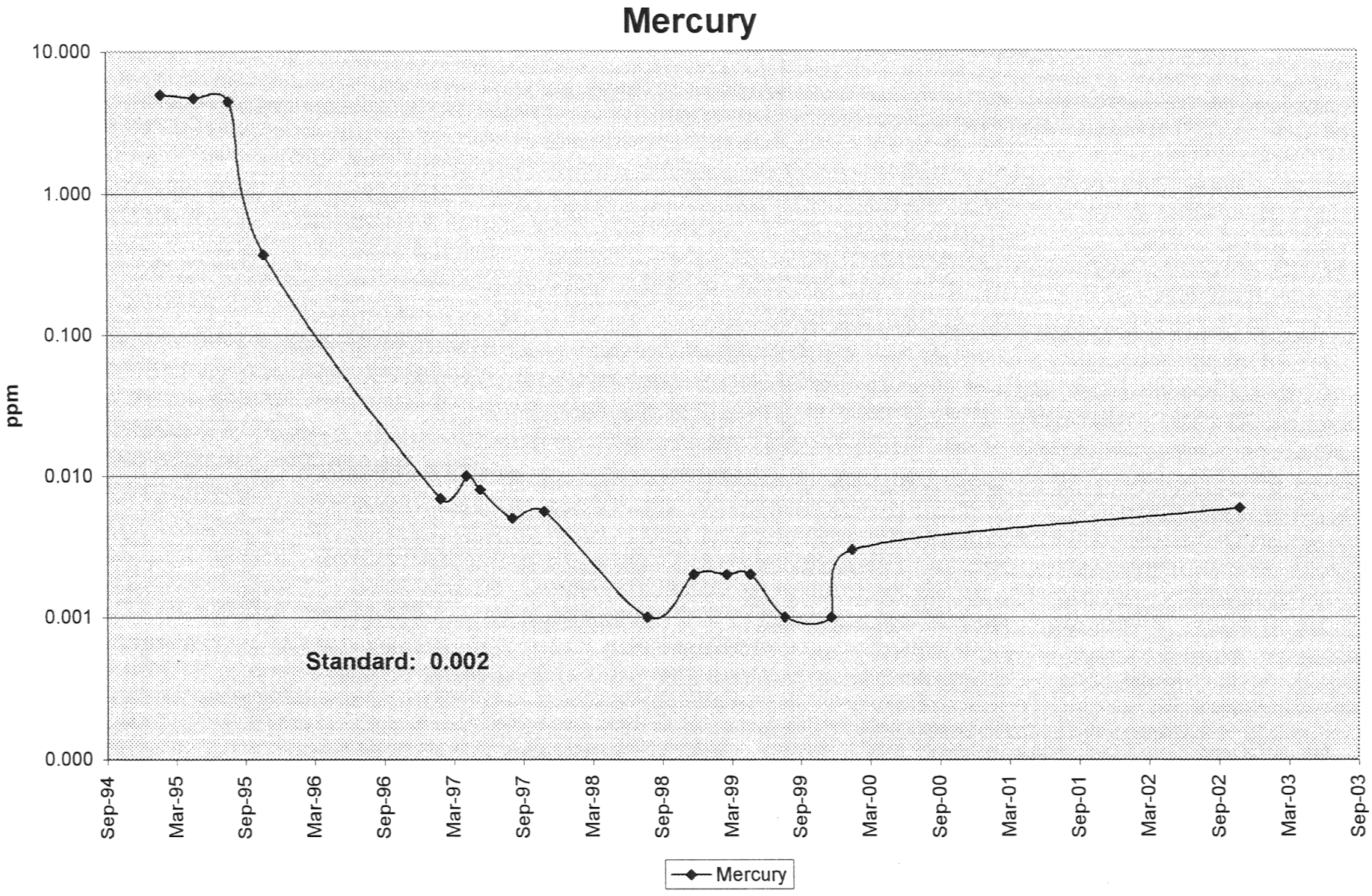
Heap Effluent Water Quality

Easy Junior Project



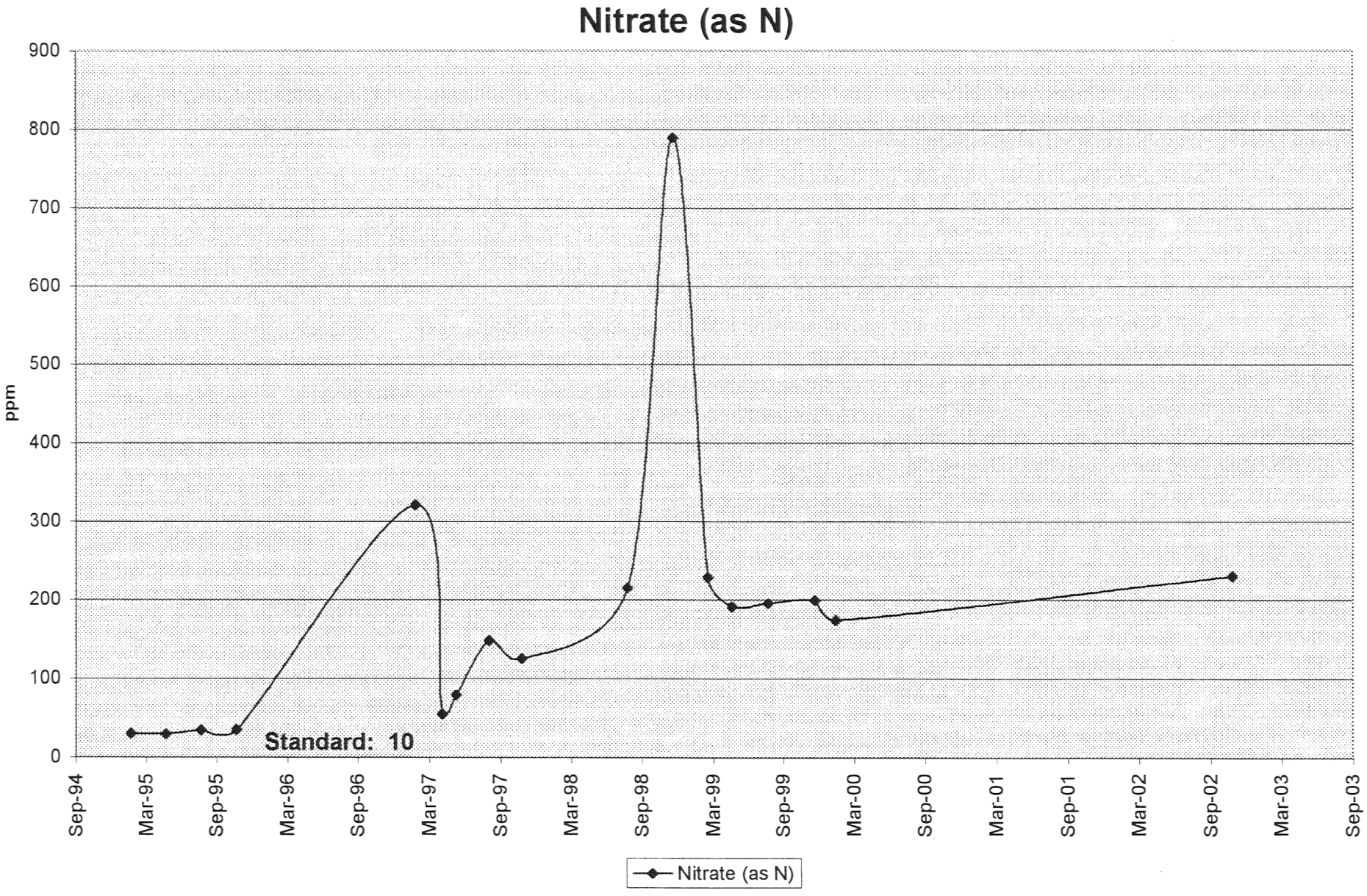
Heap Effluent Water Quality

Easy Junior Project



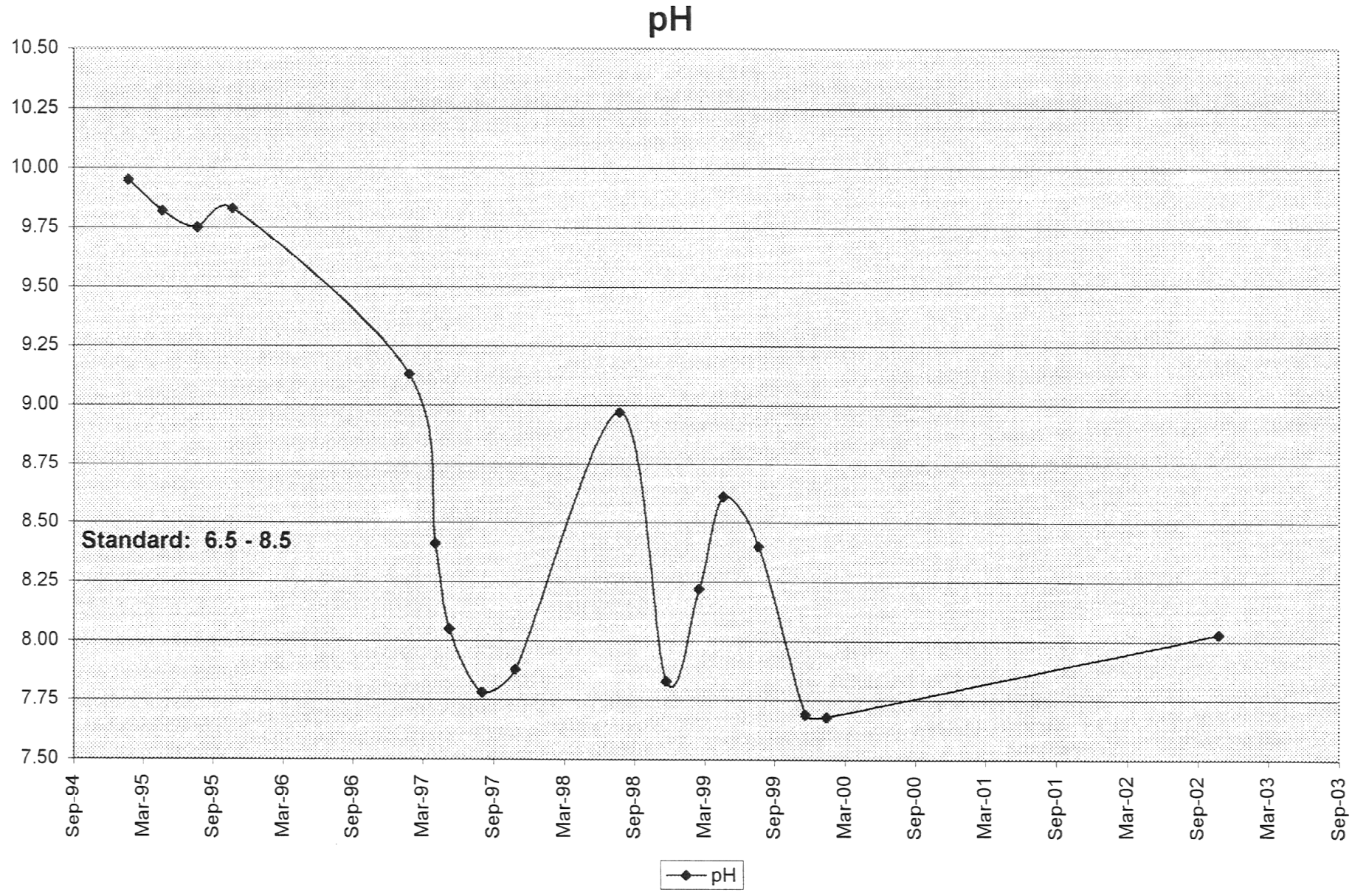
Heap Effluent Water Quality

Easy Junior Project



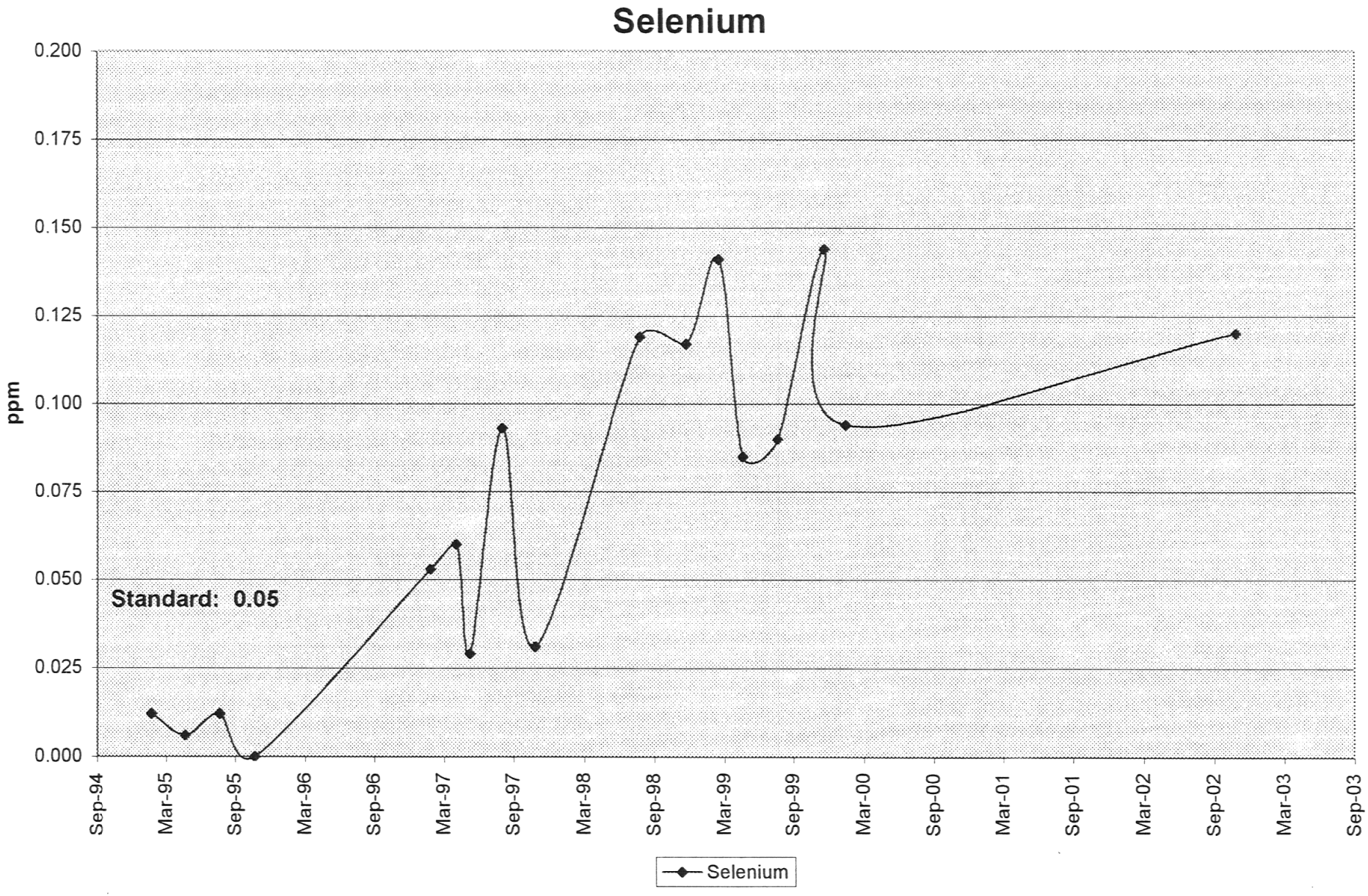
Heap Effluent Water Quality

Easy Junior Project



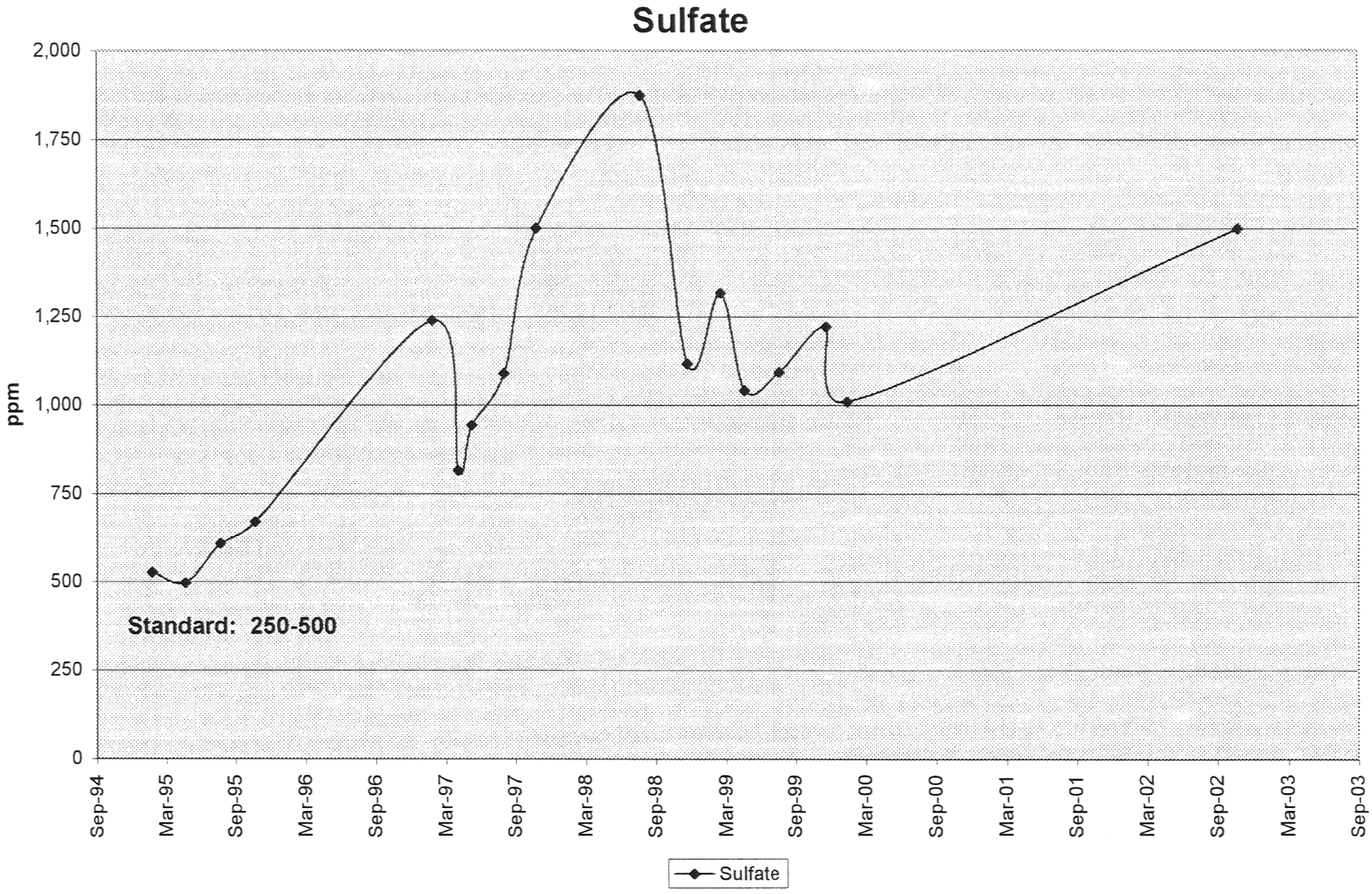
Heap Effluent Water Quality

Easy Junior Project



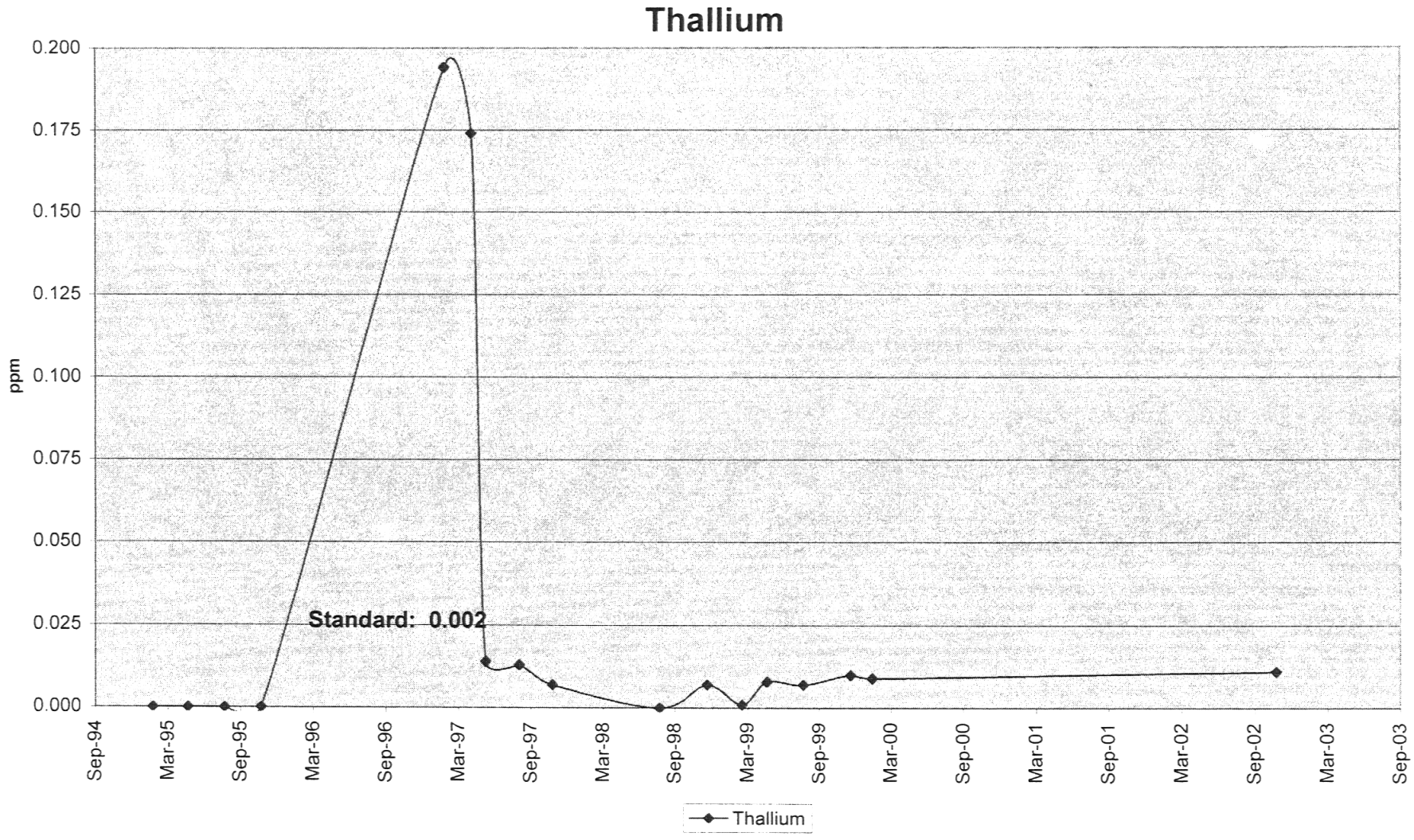
Heap Effluent Water Quality

Easy Junior Project



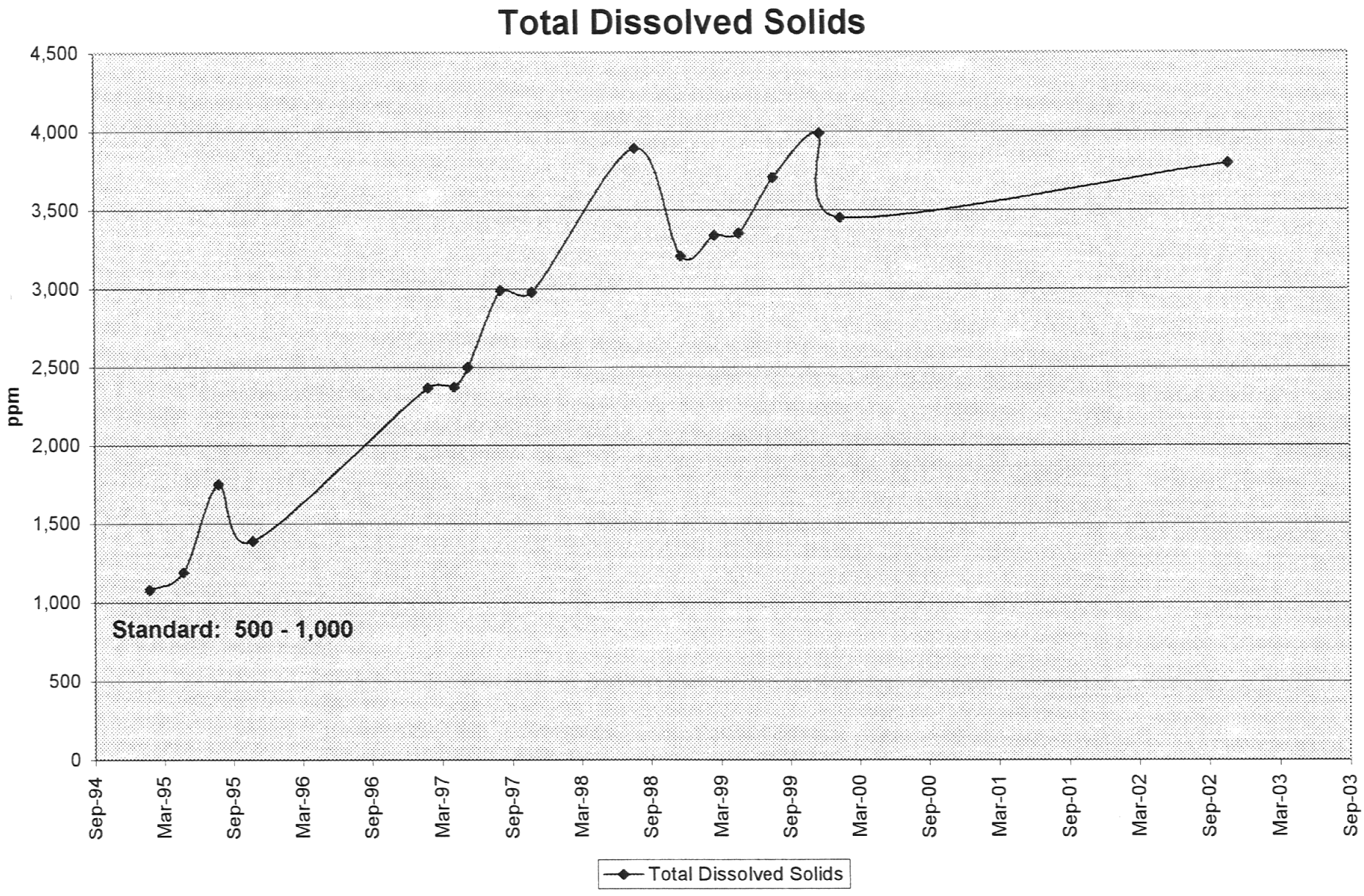
Heap Effluent Water Quality

Easy Junior Project



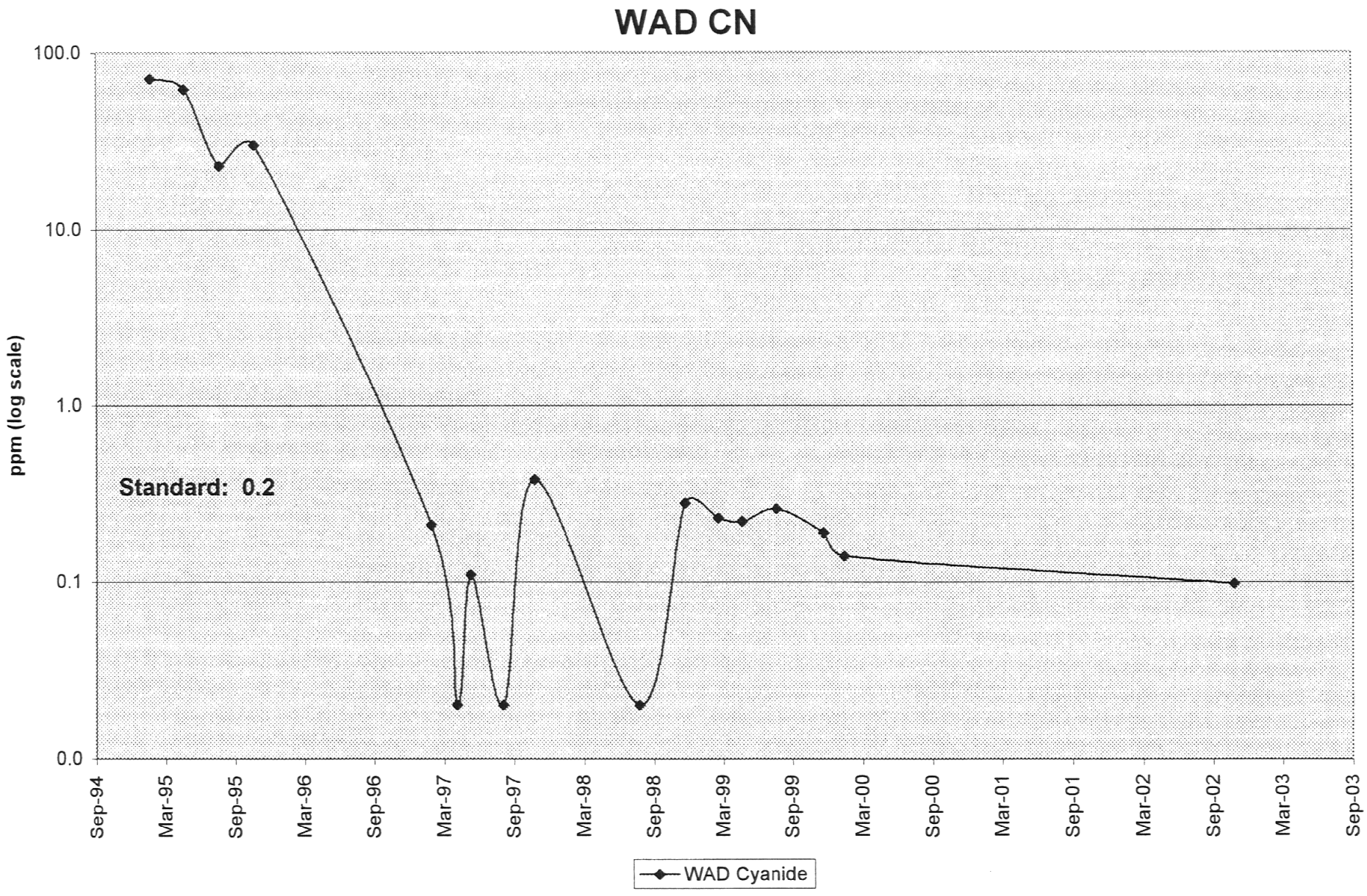
Heap Effluent Water Quality

Easy Junior Project



Heap Effluent Water Quality

Easy Junior Project



Appendix A'.2

NDEP Profile II Water Quality Data

Alta Gold, 1Q95 – 1Q00
&
CDM November 2002

Company Name: ALTA GOLD COMPANY
Laboratory Number: J320-02
Purchase Order Number: 8254 EJ
Date: December 14, 1995 NDEP Profile II

Calendar Year 1995 Sample Date 11-15-95 Sample Location EJ Preg	*Standards (mg/l)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Alkalinity (Total $CaCO_3$)	-	209.2	139.5	140.3	150
Aluminum	-	0.418	0.071	<0.065	0.428
Antimony	-	<0.050	<0.050	<0.050	0.074
Arsenic	0.05	0.043	0.066	0.032	<0.025
Barium	1.0	0.051	0.014	0.006	0.022
Beryllium	-	<0.001	<0.001	<0.001	<0.001
Bismuth	-	<0.050	<0.005	<0.050	0.097
Cadmium	0.01	0.023	<0.005	<0.005	<0.005
Calcium	-	57.02	64.73	64.30	59.50
Chloride	-	173.7	168.4	120.5	156.0
Chromium	0.05	<0.010	<0.010	0.024	<0.010
Cobalt	-	0.316	0.354	0.379	0.398
Copper	1.0	5.217	7.519	4.431	4.625
Fluoride	2	5.88	3.38	5.70	4.02
Gallium	-	<0.050	<0.050	<0.050	<0.050
Iron	0.3 - 0.6	<0.005	0.074	0.123	0.036
Lead	0.015	<0.015	<0.015	<0.015	<0.015
Lithium	-	<0.010	<0.010	<0.010	<0.010
Magnesium	125 - 150	0.454	0.486	0.[illegible]	0.558
Manganese	0.05 - 0.10	<0.005	<0.005	<0.005	<0.005
Mercury	0.002	5.000	4.733	4.489	0.3735
Molybdenum	-	1.991	0.153	<0.010	0.481
Nickel	-	0.640	1.341	1.196	0.999
Nitrate (as N)	10	30.08	29.25	34.31	34.69
**pH (± 0.1 units)	6.5 - 8.5	9.95	9.82	9.75	9.83
Phosphorous	-	3.656	4.162	0.280	0.828
Potassium	-	12.36	13.41	21.24	19.00
Scandium	-	<0.005	<0.005	<0.005	0.025
Selenium	0.01	0.012	0.006	0.012	<0.002
Silver	0.05	<0.025	0.096	0.146	0.092
Sodium	-	221.1	274.5	374.8	324.6
Strontium	-	0.015	0.057	0.065	0.068
Sulfate	250	526.6	497.4	610.0	669.8
Thallium	-	<0.100	<0.100	<0.100	<0.100
Tin	-	<0.050	<0.050	<0.050	0.130
Titanium	-	0.042	<0.010	0.018	<0.010
Total Dissolved Solids	500 - 1000	1080	1190	1750	1390
Vanadium	-	0.024	<0.010	0.047	0.021
W.A.D. Cyanide	0.2	71.42	62.32	22.92	30.12
Zinc	5.0	3.359	3.135	0.224	0.992

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
General Manager

Cal Year 1997
Description: EJ Pregnant Sol.
Cert. Lab: CT EL. #0031
Sample Date:
Sampled By:

	Std. (mg/L)	1997 2/19/1997 1st Qtr.	1997 4/28/1997 2nd Qtr.	1997 6/3/1997 2nd Qtr.	1997 8/27/1997 3rd Qtr.	1997 11/19/1997 4th Qtr.
Alkalinity (total as CaCO3)	-	15.66	44	40	36	80
Aluminum	0.05 - 0.2	<0.025	<0.025	0.279	0.299	0.327
Antimony	0.006	<0.003	<0.003	0.007	<0.003	<0.003
Arsenic	0.05	0.192	0.13	0.106	0.147	0.068
Barium	2	0.025	0.009	0.013	0.018	<0.005
Beryllium	0.004	<0.002	<0.002	<0.002	<0.002	<0.002
Bismuth	-	<0.050	<0.050	<0.050	<0.050	<0.050
Boron	-	0.018	<0.200	<0.200	<0.200	0.34
Cadmium	0.005	<0.002	<0.002	<0.002	0.053	<0.002
Calcium	-	145.3	137	190.4	238	319
Chloride	250-400	125.6	77.99	67.4	95.72	85.08
Chromium	0.1	<0.010	0.011	<0.010	0.021	<0.010
Cobalt	-	0.484	0.385	0.385	0.463	0.471
Copper	1.3	0.066	0.134	0.044	0.013	<0.010
Fluoride	2.0-4.0	1.9	1.56	1.21	1.78	1.2
Gallium	-	<0.200	<0.200	<0.200	<0.200	<0.200
Iron	0.3-0.6	0.135	0.053	0.079	2.466	0.26
Lead	0.015	<0.007	<0.007	<0.007	<0.007	<0.007
Lithium	-	0.137	0.06	0.126	<0.010	<0.050
Magnesium	125-150	1.776	2.801	4.751	4.295	10.1
Manganese	0.05-0.10	<0.005	0.006	0.016	0.093	0.02
Mercury	0.002	0.0069	0.01	0.008	0.005	0.0056
Molybdenum	-	<0.250	<0.250	<0.250	<0.250	0.25
Nickel	0.1	<0.025	<0.025	<0.025	<0.025	<0.025
Nitrate/Nitrite	10	321	55	78.8	148.15	125
pH (0.1 units)	6.5-8.5	9.13	8.41	8.05	7.78	7.88
Phosphorus	-	2.145	<0.250	0.48	<0.250	<0.250
Potassium	-	15.07	13.71	26.42	25.98	19.5
Scandium	-	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium	0.05	0.053	0.06	0.029	0.093	0.031
Silver	0.1	<0.035	<0.035	<0.035	<0.035	<0.035
Sodium	-	505.8	395.6	645.4	626.3	500.3
Strontium	-	<0.200	0.975	<0.200	0.143	0.396
Sulfate	250-500	1239	812-5	943	1090	1500
Thallium	0.002	0.194	0.174	0.014	0.013	0.007
Tin	-	<0.100	<0.100	<0.100	<0.100	<0.100
Titanium	-	<0.100	<0.100	<0.100	<0.100	<0.100
Total Dissolved Solids	500-1000	2367	2373	2501	2991	2978
Vanadium	-	<0.100	<0.100	<0.100	<0.100	<0.100
WAD Cyanide	0.2	0.21	<0.02	0.11	<0.02	0.38
Zinc	5	<0.050	<0.050	<0.050	<0.050	<0.050

Company Name: AL(GOLD COMPANY
Laboratory Number: M233-01
Date: September 11, 1998

Purchase Order Number: 16462 AEJ

NDEP Profile II

Calendar Year 1998

Sample Date: 8-19-98 Sample Location: Easy Junior Barren Pond Solution	*Standards (mg/l)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Alkalinity (Total as $CaCO_3$)	-	NO	NO	66	
Aluminum	0.05 - 0.2	SAMPLE	SAMPLE	0.029	
Antimony	0.006			<0.003	
Arsenic	0.05			[redacted]	0.202
Barium	2.0			<0.050	
Beryllium	0.004			<0.004	
Bismuth	-			<0.050	
Boron	-			<0.200	
Cadmium	0.005			<0.003	
Calcium	-			214.5	
Chloride	250 - 400			131	
Chromium	0.1			<0.010	
Cobalt	-			0.408	
Copper	1.3			0.010	
Fluoride	2 - 4			2.3	
Gallium	-			<0.250	
Iron	0.3 - 0.6			<0.020	
Lead	0.015			<0.007	
Lithium	-			<0.010	
Magnesium	125 - 150			10.0	
Manganese	0.05 - 0.10			<0.010	
Mercury	0.002			<0.001	
Molybdenum	-			<0.250	
Nickel	0.1			<0.025	
Nitrate (NO_3 + NO_2 as N)	10			[redacted]	215
**pH (± 0.1 units)	6.5 - 8.5			[redacted]	8.97
Phosphorous	-			<0.250	
Potassium	-			32.8	
Scandium	-			<0.100	
Selenium	0.05			[redacted]	0.119
Silver	0.10			<0.035	
Sodium	-			785	
Strontium	-			0.406	
Sulfate	250 - 500			[redacted]	1874
Thallium	0.002			<0.001	
Tin	-			<0.100	
Titanium	-			<0.100	
Total Dissolved Solids	500 - 1000			[redacted]	3592
Vanadium	-			<0.100	
W.A.D. Cyanide	0.2			<0.02	
Zinc	5.0			<0.050	

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
General Manager

COL•TECH EnviroLabs, Inc.
1855 Deming Way, Sparks, Nevada 89431 PH 800 774 3636, 702 331 3600, FAX 702 331 7264

Company Name: AL GOLD COMPANY Page: 2 of 2
Laboratory Number: M356-01 Purchase Order Number: 17633 EJ
Date: January 7, 1999 Calendar Year: 1998

NDEP Profile II

Sample Date: 12-17-98 Sample Location: Easy Junior Pad Effluent	*Standards (mg/l)	RESULTS (mg/l)
Alkalinity (Total as $CaCO_3$)	-	46
Aluminum	0.05 - 0.2	<0.025
Antimony	0.006	0.005
Arsenic	0.05	[redacted] 0.183
Barium	2.0	<0.050
Beryllium	0.004	<0.004
Bismuth	-	<0.050
Boron	-	0.29
Cadmium	0.005	<0.003
Calcium	-	255
Chloride	250 - 400	95.0
Chromium	0.1	<0.010
Cobalt	-	0.393
Copper	1.3	<0.010
Fluoride	2 - 4	2.0
Gallium	-	<0.250
Iron	0.3 - 0.6	0.170
Lead	0.015	<0.007
Lithium	-	<0.010
Magnesium	125 - 150	8.7
Manganese	0.05 - 0.10	0.020
Mercury	0.002	<0.002
Molybdenum	-	<0.250
Nickel	0.1	<0.025
Nitrate (NO_3 + NO_2 as N)	10	[redacted] 1.90
**pH (± 0.1 units)	6.5 - 8.5	7.83
Phosphorous	-	<0.250
Potassium	-	27.0
Scandium	-	<0.100
Selenium	0.05	[redacted] 0.117
Silver	0.10	<0.035
Sodium	-	641
Strontium	-	0.304
Sulfate	250 - 500	[redacted] 1117
Thallium	0.002	[redacted] 0.007
Tin	-	<0.100
Titanium	-	<0.100
Total Dissolved Solids	500 - 1000	[redacted] 3208
Vanadium	-	<0.100
W.A.D. Cyanide	0.2	[redacted] 0.28
Zinc	5.0	<0.050

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
Director of Laboratory Services

COL•TECH EnviroLabs, Inc.
1855 Deming Way, Sparks, Nevada 89431 PH 800 774 3636, 702 331 3600, FAX 702 331 7264

Company Name: Alt [illegible]old Company
Laboratory Number: N341-02
Purchase Order Number: 18821 EJ

Page: 3 of 3

Date: December 16, 1999

NDEP Profile II

Calendar Year 1999 Sample Date: 12-2-99 Sample Location: Easy Junior Pad Effluent (4th QTR 1999)	*Standards (mg/l)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Alkalinity (Total as $CaCO_3$)	-	62	56	50.8	64.0
Aluminum	0.05 - 0.2	<0.025	0.195	0.111	0.155
Antimony	0.006	<0.003	0.009	0.005	0.006
Arsenic	0.05	0.248	0.180	0.127	0.173
Barium	2.0	<0.050	<0.050	0.233	<0.050
Beryllium	0.004	<0.004	<0.004	<0.002	<0.002
Bismuth	-	<0.050	<0.050	<0.050	<0.050
Boron	-	0.204	0.516	0.464	0.494
Cadmium	0.005	<0.003	<0.003	<0.003	<0.003
Calcium	-	288	295	331	392
Chloride	250 - 400	76.7	70.0	66.7	66
Chromium	0.1	0.014	0.014	0.020	0.017
Cobalt	-	0.360	0.330	0.333	0.392
Copper	1.3	0.030	0.028	0.059	0.022
Fluoride	2 - 4	4.0	1.9	1.8	1.5
Gallium	-	<0.250	<0.250	<0.250	<0.250
Iron	0.3 - 0.6	0.125	0.055	0.114	0.184
Lead	0.015	<0.007	<0.007	0.008	<0.007
Lithium	-	<0.010	0.049	<0.010	<0.010
Magnesium	125 - 150	19.5	11.7	10.4	12.5
Manganese	0.05 - 0.10	0.010	0.010	<0.010	0.015
Mercury	0.002	<0.002	<0.002	<0.001	<0.001
Molybdenum	-	<0.250	<0.250	<0.250	<0.250
Nickel	0.1	<0.025	<0.025	<0.025	<0.025
Nitrate (NO_3 + NO_2 as N)	10	228	191	195	199
**pH (± 0.1 units)	6.5 - 8.5	8.22	8.61	8.40	7.69
Phosphorous	-	0.250	<0.250	<0.250	<0.250
Potassium	-	19.5	24.3	30.3	18.4
Scandium	-	0.100	<0.100	<0.100	<0.100
Selenium	0.05	0.141	0.085	0.090	0.114
Silver	0.10	<0.035	<0.035	<0.035	<0.035
Sodium	-	641	633	846	819
Strontium	-	0.316	0.350	0.370	0.349
Sulfate	250 - 500	1317	1042	1093	1220
Thallium	0.002	0.001	0.008	0.007	0.010
Tin	-	<0.100	<0.100	<0.100	<0.100
Titanium	-	<0.100	<0.100	<0.100	<0.100
Total Dissolved Solids	500 - 1000	3340	3355	3705	3988
Vanadium	-	<0.100	<0.100	<0.100	<0.100
W.A.D. Cyanide	0.2	0.23	0.22	0.26	0.19
Zinc	5.0	<0.050	<0.050	<0.050	<0.050

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
Director of Laboratory Services

Company Name: Alta Gold Company
Laboratory Number: P045-02
Date: February 28, 2000

Purchase Order Number: 18883 EJ
Calendar Year 2000

NDEP Profile II

Sample Date: 2-9-00 Sample Location: Easy Junior Pad Effluent	*Standards (mg/l)	RESULTS (mg/l)
Alkalinity (Total as $CaCO_3$)	-	64
Aluminum	0.05 - 0.2	0.125
Antimony	0.006	0.005
Arsenic	0.05	0.173
Barium	2.0	0.336
Beryllium	0.004	<0.002
Bismuth	-	0.154
Boron	-	0.336
Cadmium	0.005	<0.003
Calcium	-	385
Chloride	250 - 400	61.2
Chromium	0.1	0.019
Cobalt	-	0.385
Copper	1.3	0.018
Fluoride	2 - 4	1.2
Gallium	-	<0.200
Iron	0.3 - 0.6	0.180
Lead	0.015	<0.007
Lithium	-	<0.010
Magnesium	125 - 150	12.7
Manganese	0.05 - 0.10	0.013
Mercury	0.002	0.003
Molybdenum	-	<0.250
Nickel	0.1	<0.025
Nitrate (NO_3 + NO_2 as N)	10	174
**pH (± 0.1 units)	6.5 - 8.5	7.68
Phosphorous	-	<0.250
Potassium	-	22.6
Scandium	-	<0.050
Selenium	0.05	0.094
Silver	0.10	<0.035
Sodium	-	777
Strontium	-	0.342
Sulfate	250 - 500	1010
Thallium	0.002	0.009
Tin	-	<0.100
Titanium	-	<0.100
Total Dissolved Solids	500 - 1000	3452
Vanadium	-	<0.100
W.A.D. Cyanide	0.2	0.14
Zinc	5.0	<0.050

* Standards are for reference purposes only

**Reported in S.I. units.

Wayne M. Colwell
Director of Laboratory Services

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/12/2002
Client: CDM-147
Taken by: P. B.
Report: 50299
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200211-1199	EJ LP EFF	11/22/2002	8:25 AM	11/22/2002

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
Alkalinity, Total	SM 2320 B	59	mg/L CaCO3	1	Kobza	11/27/2002
Alkalinity/Bicarbonate	SM 2320 B	59	mg/L CaCO3	1	Kobza	11/27/2002
Alkalinity/Carbonate	SM 2320 B	<1	mg/L CaCO3	1	Kobza	11/27/2002
Alkalinity/Hydroxide	SM 2320 B	<1	mg/L CaCO3	1	Kobza	11/27/2002
pH	SM 4500 H+B	8.03	pH Units	1	Kobza	11/22/2002
pH - Temperature	SM 4500 H+B	14.2	°C	0	Kobza	11/22/2002
T Dissolved Solids	SM 2540 C	3800	mg/L	10	Eastwood	11/26/2002
N .e-N - Ion Chromatography	EPA 300.0	230	mg/L N	0.5	Henderson	11/22/2002
Phosphorus - Total	EPA 365.3	0.06	mg/L	0.02	Kleinworth	12/5/2002
Calcium - ICP-OES	EPA 200.7	380	mg/L	1	Hellmann	12/9/2002
Magnesium - ICP-OES	EPA 200.7	13	mg/L	0.2	Hellmann	12/9/2002
Potassium - ICP-OES	EPA 200.7	27	mg/L	1	Hellmann	12/9/2002
Sodium - ICP-OES	EPA 200.7	680	mg/L	5	Hellmann	12/9/2002
Chloride - Ion Chromatography	EPA 300.0	80	mg/L	5	Henderson	11/22/2002
Cyanide,Total	SM 4500 CN C	0.71	mg/L	0.005	Farrell	12/6/2002
Cyanide, WAD	SM 4500 CN I	0.098	mg/L	0.005	Farrell	12/9/2002
Fluoride - Ion Chromatography	EPA 300.0	1.8	mg/L	1	Henderson	11/26/2002
Sulfate - Ion Chromatography	EPA 300.0	1500	mg/L	20	Henderson	11/26/2002
Total Recoverable Metals - Acid	EPA 200.2	Completed			Kleinworth	11/27/2002
Titanium ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Antimony - ICP-MS	EPA 200.8	0.007	mg/L	0.005	Li	12/2/2002
Aluminum - ICP-OES	EPA 200.7	0.3	mg/L	0.05	Hellmann	12/5/2002
Arsenic - ICP-MS	EPA 200.8	0.15	mg/L	0.005	Li	12/2/2002
Barium - ICP-MS	EPA 200.8	0.023	mg/L	0.005	Li	12/2/2002
Beryllium - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Bismuth - ICP-OES	EPA 200.7	0.1	mg/L	0.05	Hellmann	12/4/2002
Boron - ICP-OES	EPA 200.7	0.13	mg/L	0.05	Hellmann	12/5/2002
Cadmium - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Chromium - ICP-MS	EPA 200.8	0.022	mg/L	0.005	Li	12/2/2002
Gallium - ICP-OES	EPA 200.7	<0.1	mg/L	0.1	Hellmann	12/4/2002
Silver - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Cobalt - ICP-MS	EPA 200.8	0.39	mg/L	0.005	Li	12/2/2002

John Kobza, Ph D
Laboratory Director

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Phone (775) 857-2400
FAX (775) 857-2404
sem@sem-analytical.com

John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Analysis Report

Sierra Environmental Monitoring, Inc.

CDM Engineers & Consultants
Attn: Kevin Ryan
7025 Longley Lane, Suite 20
Reno, NV 89511

Date: 12/12/2002
Client: CDM-147
Taken by: P. B.
Report: 50299
PO #:

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200211-1199	EJ LP EFF	11/22/2002	8:25 AM	11/22/2002

Parameter	Method	Result	Units Of Measure	Reporting Limit	Analyst	Date Analyzed
Copper - ICP-MS	EPA 200.8	0.022	mg/L	0.005	Li	12/2/2002
Iron - ICP-OES	EPA 200.7	0.29	mg/L	0.05	Hellmann	12/5/2002
Lanthanum - ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Lead - ICP-MS	EPA 200.8	<0.005	mg/L	0.005	Li	12/2/2002
Lithium - ICP-OES	EPA 200.7	<0.1	mg/L	0.1	Hellmann	12/4/2002
Manganese - ICP-MS	EPA 200.8	0.018	mg/L	0.005	Li	12/2/2002
M[illegible]ury - AA Cold Vapor	EPA 245.1	0.0059	mg/L	0.0004	Layman	11/26/2002
M[illegible]odenum - ICP-MS	EPA 200.8	0.043	mg/L	0.005	Li	12/2/2002
Nickel - ICP-MS	EPA 200.8	0.029	mg/L	0.005	Li	12/2/2002
Scandium - ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Selenium - ICP-MS	EPA 200.8	0.12	mg/L	0.005	Li	12/2/2002
Strontium - ICP-OES	EPA 200.7	0.36	mg/L	0.05	Hellmann	12/4/2002
Thallium - ICP-MS	EPA 200.8	0.011	mg/L	0.0025	Li	12/2/2002
Tin - ICP-OES	EPA 200.7	<0.05	mg/L	0.05	Hellmann	12/4/2002
Vanadium -ICP-MS	EPA 200.8	0.013	mg/L	0.005	Li	12/2/2002
Zinc - ICP-MS	EPA 200.8	<0.05	mg/L	0.05	Li	12/2/2002

Metals: the reporting limits for some metals were greater than half MCL due to matrix interference.

Approved By: John Kobza
Sierra Environmental Monitoring, Inc

Date: 12/12/02

John Kobza, Ph D
Laboratory Director

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Reno, NV 89502-2348
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sem@sem-analytical.com

John C. Seher
Special Consultant
Quality Assurance Manager

Appendix F

Sample Heap Leach Pad Reclamation Proposal

Easy Junior Mine Site

White Pine County, Nevada

December 2003

Prepared for:

Sacramento District
Army Corps of Engineers
Restoration of Abandoned Mine Sites (RAMS)
Contract No. DACW05-00-D-006
Task Order No. 005

Prepared by:

CDM Federal Programs
Sacramento, CA

CDM Constructors Inc.
Reno, NV

Easy Junior Mine Site
Appendix F
Sample Heap Leach Pad Reclamation Proposal

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none

Appendix F - Sample Heap Leach Pad Reclamation Proposal

This appendix provides a description of the recommended heap leach pad reclamation plan and a suggested contracting strategy and associated Contractor performance parameters.

1.0 Description of Heap Leach Pad & Effluent Drainfield

1.1 Heap Leach Pad Construction and Operation

The heap leach pad, estimated to be approximately 978,000 square feet (22.5 acres) in area, was constructed in 1989 and 1990. The pad was constructed with a composite liner system of 80-mil HDPE plastic over-lying compacted silt with a permeability of approximately 2×10^{-7} cm/sec. Leak detection monitors consisting of 4-inch perforated drain pipe were placed under the HDPE liner on 400 foot centers across the pad. These monitor lines drain to monitor sumps on the periphery of the pad.

During operation, which commenced in 1990, pregnant leach solutions were drained from the pad at the ore/liner interface by 12-inch perforated pipes placed against berms built into the pad. These drainage pipes channeled the pregnant solution to two solution collection sumps on the west end of the leach pad. At the pad sumps, the pregnant solution entered 16-inch HDPE pipes which flowed to a 20,000 gallon steel sump. From the steel sump, pregnant solution flowed into the process building where the precious metals were extracted using conventional carbon columns. Gold extraction from the loaded carbon was performed offsite. The barren leach solution gravity flowed to the small settling pond (312,000 gallon capacity) for lime addition before being stored in the barren pond (3,500,000 gallon capacity) and ultimately being returned to the heap. An overflow (storm) pond (4,007,000 gallon capacity) was hydraulically connected to the barren pond and heap to capture flows during operational upsets or large storm events. Figure F-1 shows the operational layout of the heap leach pad, process ponds, and carbon columns.

1.2 Heap Leach Pad Closure and Current Configuration

In October 1996, Alta Gold ceased adding cyanide and began circulating solution and rinsing of the spent ore. By June 1997, Alta Gold deemed the spent ore was rinsed and stopped application of solution to the heap.

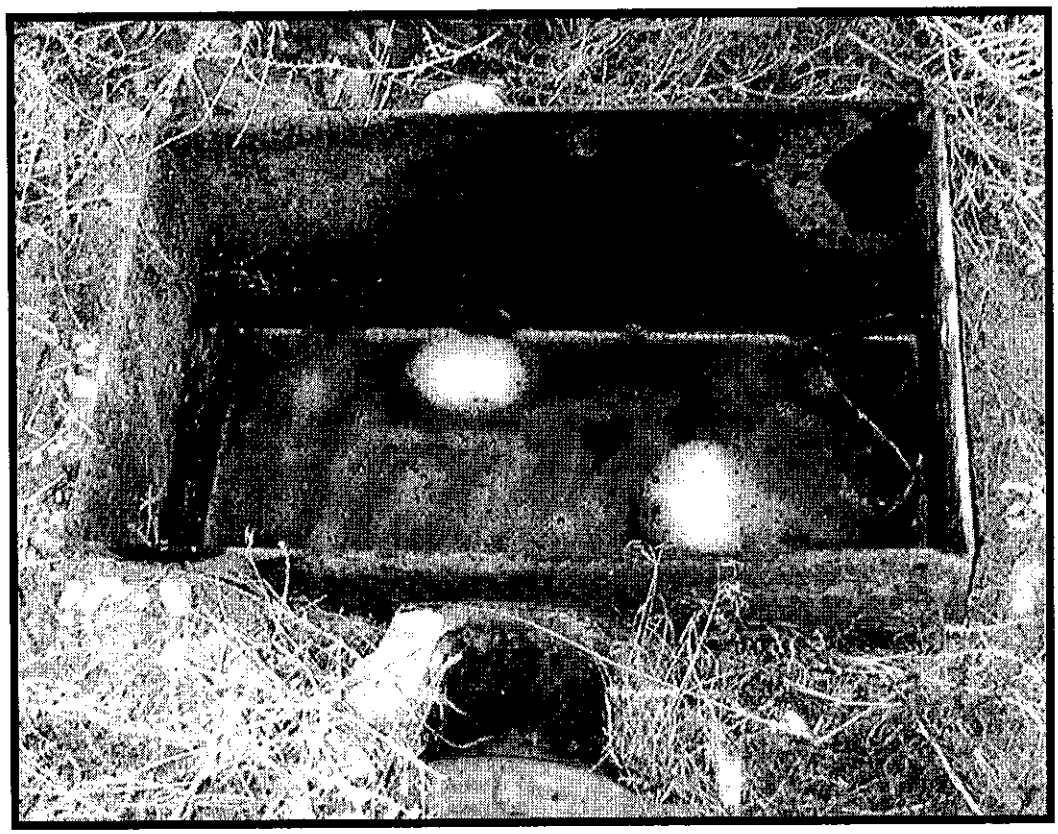
During the heap rinsing and drain down, approximately 5.7 million gallons of solution had accumulated in the process ponds. From April to September of 1998, with regulatory approval, Alta Gold land applied approximately 5.7 million gallons of drain-down solution to an area immediately south of the leach pad as shown on Figure F-1.

During the land application of the accumulated rinse/drain-down solution, Alta Gold hydraulically disconnected the heap from the process ponds and installed the heap effluent drainfield for long-term infiltration of heap effluent.

1.2.1 Existing Heap Effluent Drainfield

The heap effluent drainfield is comprised of two 6-inch pipes which flow from the northwest and south west corners of the leach pad. The two 6-inch pipes apparently join together subsurface upstream of the distribution box and a single 6-inch pipe discharges to the distribution box as shown below.

Distribution Box for Heap Leach Infiltration Field (looking west)



From the distribution box, four 1.25-inch diameter pipes run to a leach field west of the distribution box. The leach field was constructed similar to a septic system with perforated pipes discharging effluent into gravel-filled trenches for infiltration into the native soil.

Since September 1998, the heap system has been comprised of only two components; the heap leach pad and the heap effluent drainfield.

2.0 Recommended Heap Reclamation Plan

As described in the previous section, the process ponds were disconnected from the heap leach pad in 1998. The heap system is now comprised of only two components, the heap leach pad and the heap effluent drainfield. This section addresses reclamation recommendations for these two facilities only. Development of reclamation and closure plans for other Site facilities such as the waste dump, haul roads, crusher site, process ponds, and other facilities was not in CDM's scope of work for the Investigation Report.

2.1 Heap Regrading Plan

The goals of heap regrading are to provide a reclaimed topographic surface that provides long-term stability and can be cover-soiled and seeded with minimal material movement.

The decision matrix below summarizes the parameters considered to evaluate three regrading alternatives. The Moderate slope configuration (3h:1v, no catch bench) serves as the base case for relative comparisons.

Although the Steep configuration reduces the regrading quantities significantly, the steepness precludes efficient down-slope scraper unloading of cover soil and preferred on-contour seed broadcasting and harrowing. The additional cost for the Shallow configuration (3h:1v, with catch bench) is not considered necessary given the successful results of the similarly configured Easy Junior waste rock dump that has demonstrated good reclamation results on the cover-soiled slopes. Based upon these parameters the Moderate configuration (3h:1v, no catch bench) is the recommended regrading plan for the heap.

The heap regrading would be performed by dozers pushing spent ore generally downward to establish shallower slopes that can be efficiently cover soiled and seeded. The goal of regrading is to not create smooth and straight-lined topographic surfaces, but produce natural-looking undulating surfaces with rounded crests, by utilizing existing shallow slopes and undulations.

Decision Matrix for Reclaimed Heap Side Slopes

	Steep	Moderate	Shallow
Finished Slope	2.5h:1v	3.0h:1v	3.0h:1v
Catch Bench	No	No	Yes
Approximate Relative Regrade (cy)	-14%	Base Case	+27%
Approximate Relative Topsoil (cy)	-11%	Base Case	+8%
Cover soil Application Method	Inefficient. Scrapers dump at crest for dozer spreading down slope	Efficient. Scrapers can unload & spread down slope.	Efficient. Scrapers can unload & spread down slope.
Seed Application Method	Not Preferred. Equipment must broadcast and harrow down-slope, increasing rilling	Preferred. Equipment can broadcast and harrow on contour, minimizing rilling.	Preferred. Equipment can broadcast and harrow on contour, minimizing rilling
Approximate Relative Cost	-2%	Base Case	+12%

Figure F-2 depicts the approximate configuration of the existing heap based on information contained in the 1999 Alta Gold Reclamation Plan. This configuration is based upon interpretation of Alta Gold's plan view and cross sectional maps. The maps available from Alta Gold showed the leach pad toes and crests overlaid on a topographic base map, but plan view elevations of the toes and crests were not provided. Additionally, the actual configuration of the leach pad does not appear to match the maps provided by Alta Gold. Therefore, Figure F-2 must be considered as a planning tool representative of the best available information, but it is not a surveyed asbuilt drawing and cannot be relied upon to provide accurate topographic and area interpretation. Figure F-3 is a conceptual drawing representing a potential 3h:1v regrade configuration. It should be noted that there is opportunity to improve this regraded configuration in the field and still meet the reclamation goal of a regraded surface with rounded crests and slopes of 3h:1v.

2.2 Permanent Cover for Solution Collection Sumps

For the long term, heap effluent will be collected by the leach pad and piped to the heap effluent drainfield located west of the pad. It is recommended that the two solution collection sumps on the western edge of the pad have a constructed cover system installed prior to regrading of the heap leach pad. A cover system comprised of clean, coarse durable rock overlain by a filter fabric or graded soil filter to prevent infiltration of fines into the coarse rock layer is suggested.

2.3 Rationale for Placing Spent Ore Off-Containment

Currently all of the spent ore is on-containment, residing on the composite-lined leach pad. Meteoric water infiltrates into the spent ore and generates heap effluent that is conducted by the leach pad drainage system to the heap effluent drainfield for final disposal.

After the heap is regraded and the designed cover soil cap is placed, there would be two types of effluent from meteoric water that infiltrates through the soil cap and into the spent ore; on-containment and off-containment.

On-containment effluent would be collected by the existing leach pad drain network and ultimately report to the existing heap effluent drainfield that was approved in 1998 by the NDEP-BMRR. Although some 1998 effluent constituents exceeded USEPA drinking water standards, waters of the State would not be degraded by long-term infiltration of heap effluent since the depth to groundwater in the project vicinity is over 1,300 feet below ground surface (bgs). Therefore, continued discharge to the effluent drainfield should pose no additional risk to degradation of waters of the State.

Off-containment effluent would flow through a much shorter column of spent ore (due to the regraded slope) and then infiltrate directly into the ground under the off-containment spent ore. This is similar to the land application of approximately 5.7 million gallons of rinse/drain-down solution that was performed in 1998. Approval for land application of rinse/drain-down solution was also granted in 1998 by NDEP-BMRR based upon the ground water depth being over 1,300 feet bgs. Therefore, allowing the off-containment effluent to directly infiltrate represents minimal or no impact to waters of the State. There are no other significant environmental issues associated with spent ore being pushed off-containment. Therefore, pushing spent ore off-containment during regrading should be considered environmentally acceptable.

2.4 Soil Cover

As discussed in Section 2 of the Easy Junior Mine Site FINAL Investigation Report, the HELP model evaluation led to a recommendation for a 12-inch thick cover soil cap using material from the onsite soil stockpile or Soil Borrow #1. In addition to

minimizing infiltration of meteoric waters into the heap, the cover soil cap will also provide growth medium for revegetation. This is critical as the Easy Junior ore and waste material have minimal silt and clay components. Virtually no natural volunteer revegetation has occurred on areas of pit rock that have not been treated with cover soil. However, areas of the waste rock dump that did receive cover soil are showing good revegetation. The importance of providing growth medium is also demonstrated by the minimal volunteer growth that has occurred on the heap after 5 years without solution application. The engineered soil cap will provide the heap with an improved growth medium.

A 12-inch thick cover soil cap over the regraded leach pad would require approximately 40,000 c.y. of cover soil material. The onsite cover soil stockpile adjacent to the leach pad contains an estimated 129,000 c.y. and it is anticipated that all cover soil for the leach pad can be obtained from this source.

Scrapers could be utilized to place the cover soil cap, discharging a single 12-inch lift while driving directly down the 3h:1v regraded slope. Compaction of the cover soil must be minimized, so heavily trafficked areas will require scarification prior to revegetation. Minimal finish grading of the cover soil is required as an uneven surface actually enhances vegetation success by providing pockets to hold water and protect young plants.

2.5 Revegetation

As noted in the previous section, good reclamation success has been achieved at the Site on the waste rock dump slopes that were cover soiled and seeded in 1995. Therefore, the same certified weed-free seed mix (listed below) is recommended for the cover-soiled heap.

Application of the seed would be by mechanical broadcasting from equipment capable of safely working on a 3h:1v slope. The seed would be immediately incorporated into the cover soil by equipment capable of safely pulling the harrow, paralleling contours of the maximum 3h:1v slopes. On-contour harrowing is important to produce small pockets that can capture meteoric water, minimizing rilling, and providing more suitable environments for successful plant growth.

Recommended Seed Mix
Certified Weed Free

Species	Seeds/lb	Seed Rate	
		lbs/ac PLS	Seeds/sqft
Bluebunch Wheatgrass Agropyron spicatum	140,000	4.0	13
Indian Ricegrass Oryzopsis hymenoides	141,000	3.0	10
Thickspike Wheatgrass Agropyron dasystachyum	110,000	4.0	10
Sandberg Bluegrass Poa sandbergii	882,000	0.5	10
Tall Wheatgrass Agropyron elongatum	79,000	5.0	9
Delar Small Burnett Sanquissorba minor	55,000	3.0	4
Remont Sanfoin Onobrychys viciaefolia	30,000	6.0	4
Shadscale Atriplex confertifolia	64,000	4.0	6
Four Wing Saltbrush Atriplex canescens	52,000	4.0	5
Total		**33.5**	**71**

3.0 Sample Performance Parameters for Heap Reclamation Contractor

This section introduces a sample design/build contracting methodology and describes the general conditions and performance parameters for reclamation of the heap leach pad and effluent drainfield system.

3.1 Introduction

Reclamation of the Site's heap leach pad and effluent drainfield system could be accomplished using a design/build contracting method. The design/build contracting method is recommended as the design level for the heap leach pad reclamation is conceptual. Additional engineering and design will be required from the Contractor to complete requirements for reclamation of the heap leach pad. In addition, the design/build method has the advantage of greater flexibility to allow field fitting as work progresses and the project can be completed in less time than a traditional design/bid/build approach.

The contents of this section provide basic performance parameters for the work that would guide the Contractor to efficiently achieve these standards. The performance requirements also provide the BLM with standards to measure conformance with the construction contract and payment should be based on the Contractor achieving those performance standards.

3.2 General Conditions

This section defines the General Conditions for the Easy Junior heap leach pad and effluent drainfield reclamation work. The Contractor must possess a valid State of Nevada Contractor's License for this type of work. The project is subject to Davis-Bacon wage rates for White Pine County, Nevada and the Contractor must demonstrate compliance with payment of Davis-Bacon wages.

3.2.1 Asbuilt Drawings

The Easy Junior project is an abandoned mine and accurate, detailed maps are not available. As discussed in Section 2.1, a conceptual base map, Figure F-2, and conceptual map of the 3h:1v regraded surface, Figure F-3, are provided for planning purposes only. The Contractor is solely responsible for determining the asbuilt configuration of the leach pad, providing a proposed regrading plan that meets the performance specifications, determining the quantity of material to be regraded, determining the quantity of cover soil required to cap the regraded leach pad, and determining the total area to be revegetated in compliance with the performance standards.

The Contractor will provide two drawings in both digital (AutoCAD) and paper (1 inch = 100 foot scale) for two heap leach pad configurations. The two heap leach pad

and effluent drainfield configurations are: 1) Existing (before regrade), and 2) Regraded (after regrading, and prior to capping with cover soil).

1. Existing (before regrade).
    a. Plan-view drawing of existing heap leach pad and infiltration field. This drawing will form the template for the remaining plan maps and designs.
    b. Show topography (2 foot contour intervals) for the spent ore, leach pad and a buffer zone of undisturbed ground 40 ft outside the regraded heap perimeter.
    c. Show detail:
        i. Ore/liner contact
        ii. Liner/soil contact
        iii. Detail for heap effluent off-flow piping.
        iv. Detail of the effluent infiltration distribution box. (Note: excavation is not necessary to determine underground locations, however map surface expressions that could help locate the pipe work.)
2. Regraded (after regrade and prior to placement of soil cap).
    a. Plan-view drawing of the final heap leach pad and final infiltration field.
    b. Show topography (2 foot contour intervals) for the regraded topography and a buffer zone of undisturbed ground 40 ft outside the regraded heap perimeter.
    c. Show detail:
        i. Detail of the infiltration distribution box and pipe work exposed during leveling of the distribution box. (Note: additional excavation is not necessary. Simply map exposed pipe work and surface expressions that could help locate buried pipe work in the future.)

3.2.2 Submittals

Submittals will be comprised of written work plans and drawings with sufficient information for the BLM to evaluate the proposed work. Submittals must be presented and approved prior to performing work in the field. In the event the BLM rejects the submittals, the Contractor will be required to modify the submittal and resubmit to the BLM to obtain approval.

3.2.2.1 Reclamation Project Summary Schedule

The Contractor must provide a summary project schedule for the project's entire duration. The schedule must be presented in Gantt format accompanied by a brief narrative. At a minimum, the schedule must show the following milestones:

1. Contract Award
2. Contract Execution
3. Start of Mobilization
4. Schedule of Submittals and Approvals
5. Start and Completion of Heap Regrading
6. Start and Completion of Soil Cap Construction
7. Start and Completion of Seed Broadcasting and Harrow
8. Final Inspection
9. Completion of Demobilization

3.2.2.2 Environmental Protection Plan

The Contractor will provide a written Environmental Protection Plan that addresses the following environmental issues.

1. Storage and distribution of fuel and lubricants
2. Spill prevention plan
3. Dust control plan
4. Procedures to minimize disturbance of the Site
5. Site maintenance and security
6. Interim and final site clean-up
7. Refuse disposal
8. Storm water control

3.2.2.3 Heath and Safety Plan

The Contractor will provide a written health and safety plan (HASP) that describes the Contractor's standard HASP procedures and specifically addresses the following health and safety issues.

1. Task specific safety training
2. Prevention of inhaled dust
3. Emergency response procedures
4. Employee commuting policies

3.2.2.4 Protective Cover for Solution Collection Sumps

Currently, heap effluent exits the leach pad at two solution collect sumps located on the western edge of the leach pad. After reclamation, these sumps will be permanently covered by spent ore. Therefore, prior to regrading in this area, protective covers must be installed at the two solution collection sumps that will ensure long-term continuity of effluent off-flows.

The Contractor is required to submit a design for a protective cover system for each sump. The submittal should include a brief narrative, plan and cross-sectional drawings, and material specifications.

3.2.2.5 Heap Regrading Plan

The Contractor will submit for approval a final grading plan for the heap leach pad. The plan will contain a basic narrative and the following six drawings (1 inch = 100 foot scale):

1. One plan map showing the existing (before regrade) asbuilt drawing of the heap and leach pad configuration. This is the same map as the "Existing" asbuilt map discussed in the previous section.
2. One plan map showing the regrading design that achieves the regrading and heap capping specifications.
3. One longitudinal cross section through the center of the heap and leach pad looking approximately NNW. This section would show both the existing (before regrade) and final (after regrade) configuration of the spent ore, exposed liner, pad earthwork, and undisturbed ground 40 feet beyond the final toe.
4. Three lateral cross sections through the heap and leach pad looking approximately ENE. These lateral sections should divide the heap into thirds along the longitudinal axis. Similar to the longitudinal section above, each lateral cross section would show both the existing (before regrade) and final (after regrade) configuration of the spent ore, exposed liner, pad earthwork, and undisturbed ground 40 feet beyond the final toe.

3.2.2.6 Revegetation Method

A minimum of six weeks prior to application of revegetation seed, a description of the revegetation method should be submitted to the BLM for approval. The description will define the seed mix, application method, application rate, and systems to control the application rate. Additionally, the submittal should describe seed storage and handling procedures.

3.2.2.7 Leveling of the Effluent Drainfield Distribution Box

The heap effluent flows via 6-inch pipelines from the heap solution collection sumps into an effluent distribution box where the flows are distributed into 4 - 1.25 inch

pipelines that report to four drainfield trenches. The distribution box is currently not level and effluent flows preferentially to the southern-most infiltration trenches.

The Contractor will submit a work plan, comprised of a brief narrative and drawings, to level the distribution box. The heap effluent is not valved upstream of the distribution box, so the narrative must address control of heap effluent during leveling of the distribution box.

3.2.3 Survey Requirements

The Contractor must provide all surveying support of project activities including but not limited to:

1. Research and establish initial control for project surveying.
2. Survey existing topography and detail to support creation of an accurate "Existing" (before regrade) asbuilt drawing.
3. Provide slope staking and survey control to support reclamation activities.
4. Survey final topography and detail for development of an accurate "Regraded" (after regrade and before soil cap) asbuilt drawing.
5. Other surveying as required for execution of the entire reclamation project.

3.2.4 Field Facilities

Easy Junior is a remote site with no utilities. The Contractor will be responsible for providing potable drinking water and dust control water. Portable toilets and sanitary facilities must also be provided. No power is available at the Site, so site generation of electricity will be the Contractor's responsibility.

The contractor must provide adequate communications to manage the site activities, coordinate with the BLM, and respond to emergencies. The BLM will designate a lay-down and equipment maintenance area prior to mobilization. A mobile field office can be established but is not required.

3.3 Reclamation of the Heap Leach Pad

This section provides the minimum performance requirements required of the Contractor to reclaim the heap leach pad.

3.3.1 Emitters and Pipe Disposal

From 1996 to 1998 Alta Gold rinsed the heap and land applied rinse-down solution immediately south of the heap. Irrigation material (pipelines and emitters) from these activities remain on the heap and land application area. These materials need to be dismantled and hauled to an onsite disposal area.

The performance specifications for emitter and pipe disposal are:

1. Dismantle all irrigation items into disposable lengths.
2. Dozer cut disposal benches into the spent ore near the heap's toe, within containment.
3. Haul irrigation debris to the disposal benches.
4. Survey and map the debris locations on the asbuilt drawing.
5. Bury the irrigation debris within the spent ore during heap regrading.

This method will insure that the irrigation debris is deeply buried on containment after the spent ore regrading is completed.

3.3.2 Protective Covers for Solution Collection Sumps

Currently, heap effluent flows into two off-flow sumps located on the western edge of the leach pad. Pipelines conduct the heap effluent from the sump to the drainfield distribution box and ultimately into the drainfield. The two effluent off-flow sumps are currently exposed, but will be covered by spent ore during heap regrading. Since long-term effluent flow from the sumps to the infiltration field must be maintained, the sumps will require installation of a protective cover prior to heap regrading.

The performance specifications for the each protective cover are:

1. Accommodate solution flow of 50gpm indefinitely.
2. Utilize a coarse rock and filter system to prevent long-term migration of fines into the sump's off-flow pipe work and heap effluent drainfield.

This is a critical component of the heap leach pad reclamation and the protective covers for off-flow sumps must be constructed in accordance with the approved submittal for this work.

3.3.3 Regrade Parameters

Regrading of the spent ore has the following performance standards.

1. Regrade existing heap so that final slopes are 3h:1v or shallower.
2. Round crests to better blend in with natural terrain.
3. Eliminate all topographic lows that could impound meteoric water. This is especially a concern for the western portion of the heap where additional spent ore will need to be moved to cover the solution collection sumps.
4. Make use of the existing shallow slopes to produce an undulating natural surface rather than a smooth straight-lined topography.

As the regrading work progresses, the BLM will perform periodic field verification of regrading performance. Final verification and acceptance of the regraded slopes will be done prior to placement of the soil cap by comparing the Existing and Regraded asbuilt maps provided by the Contractor. Deficiencies will be corrected at the

Contractor's expense. The Contractor may suggest alternative slope verification methods, but any alternatives must be approved by the BLM.

3.3.4 Placement of Cover Soil Cap

After the Regraded asbuilt has been accepted by the BLM, the Contractor can commence placement of the soil cap. Performance specifications for the soil cap are:

1. Minimum soil cap thickness: 10 inches.
2. Maximum soil cap thickness: 14 inches.
3. Contractor will place 12-inch fill stakes at acceptable intervals along the regraded heap surface to guide placement of the appropriate cover soil depth. Stakes will be left in place until the area is accepted as complete by the BLM.
4. Maximum rock size on largest dimension: 6 inches.
5. Borrow source will be the onsite soil stockpile immediately north of heap.
6. Topographic lows that could impound meteoric water are not permitted.
7. Minimize compaction of the cover soil cap. Heavily trafficked areas will require scarification prior to revegetation.

The BLM will perform field verification of cover soil cap performance standards. Final acceptance of the cover soil cap will be done prior to revegetation. Deficiencies or verification of cover soil depth not observed by the BLM will be corrected or performed at the Contractor's expense. Soil cap verification and acceptance can be completed by sectors to provide the contractor maximum flexibility in equipment usage.

3.3.5 Revegetation

After all or a portion of the cover soil cap has been accepted by the BLM, the Contractor can commence revegetation activities.

1. Application method: Broadcasting.
2. Application rate: See Section 2.5.
3. Seed mix: See Section 2.5.
4. Incorporation Method: Harrow drag immediately after seeding.
5. Soil Amendments: None.
6. Fertilizer: None.

The Contractor will collect tags from all seed bags for verification of the seed mix for the BLM. Additionally, a system of seed bag counts applied to known sector areas will be used to monitor seed application rate.

3.4 Leveling of the Drainfield Distribution Box

The heap effluent flows from the two heap solution collection sumps into one 6-inch diameter pipe, then into a distribution box where the flows are sent into four 1.25-inch pipelines and ultimately four drainfield trenches. The 28-inch x 18-inch metal distribution box is currently not level and effluent flows preferentially to the southern-most infiltration trenches. The distribution box needs to be leveled.

The performance parameters to level the distribution box are:

1. Level the distribution box.
2. Stabilize the box in the level position for long-term stability.
3. Minimize discharge of heap effluent during leveling.
4. Reconnect pipe work to restore entering and exiting effluent flows.
5. Prepare an asbuilt drawing of the finished product prior to backfilling.

Fresh Water Pond

Crusher Area

Onsite Cover Soil Stock Pile
(approximate location)

INFILTRATION FIELD

NW Solution Collection Sump

SW Solution Collection Sump

Heap Leach Pad

PREGNANT COLLECTION POND

Settling Pond

Barren Pond

BARREN COLLECTION POINT

Storm Pond

1998 Land Application Area

800 x 340 = 272,000 FT²

0.0018 GPM/SF

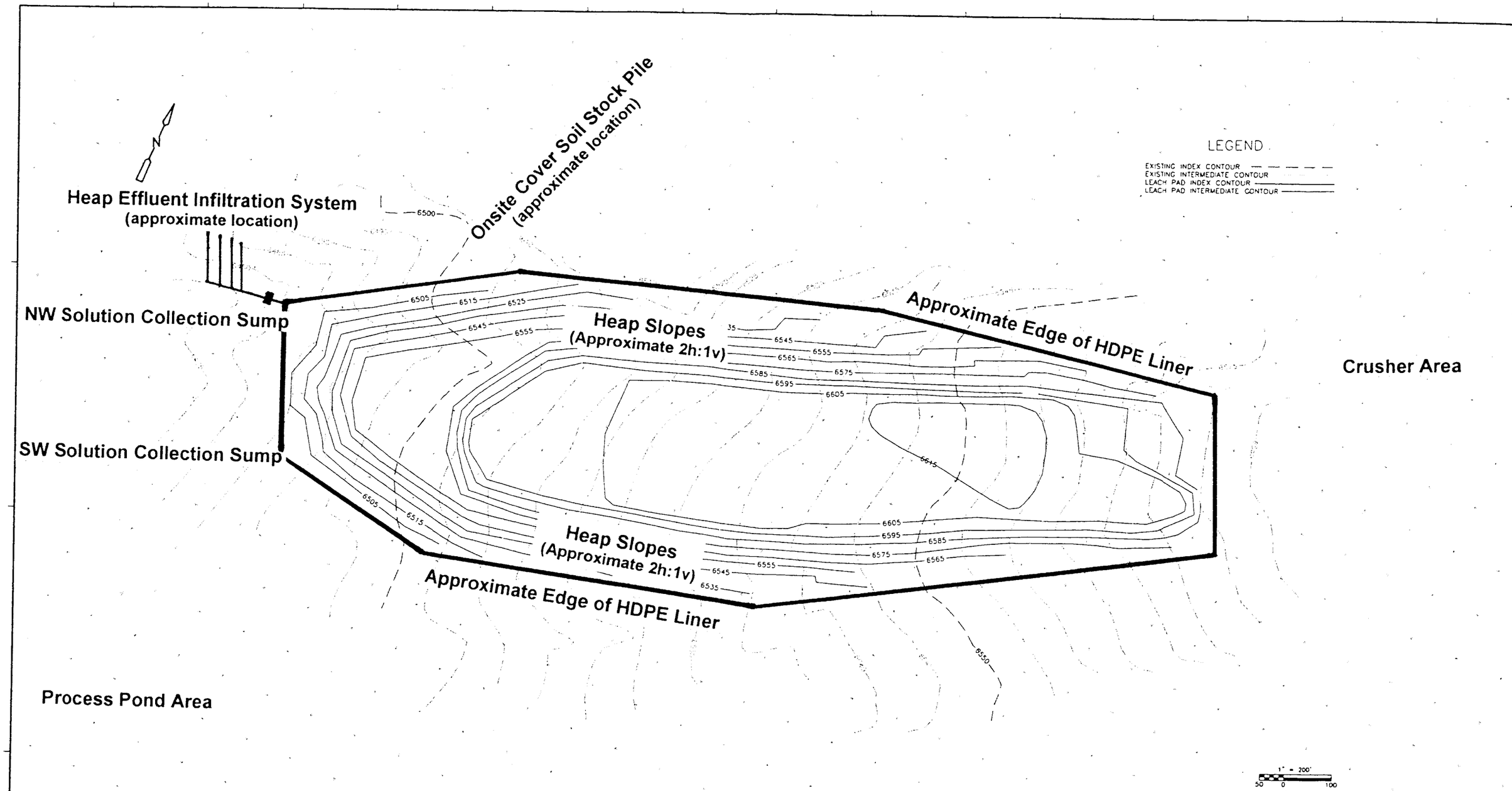
1-27-98

Operational Process Layout 1998

Easy Junior Project
White Pine County, Nevada

CDM

Figure F-1



PLAN

REV NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J.KOTSON
DRAWN BY: J.KOTSON
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
DATE: MAY 2003

CDM Engineers & Constructors Inc.
290 GENTRY WAY
RENO NEVADA 89502-4230
1-775-853-0333

USACE
CONTRACT NUMBER BACW 05-00-D-006
TASK ORDER 005

EASY JUNIOR MINE SITE

Current Heap Leach Pad Configuration
August 2003

Easy Junior Project
White Pine County, Nevada

CDM **Scale 1 in = 200 ft** Figure F-2

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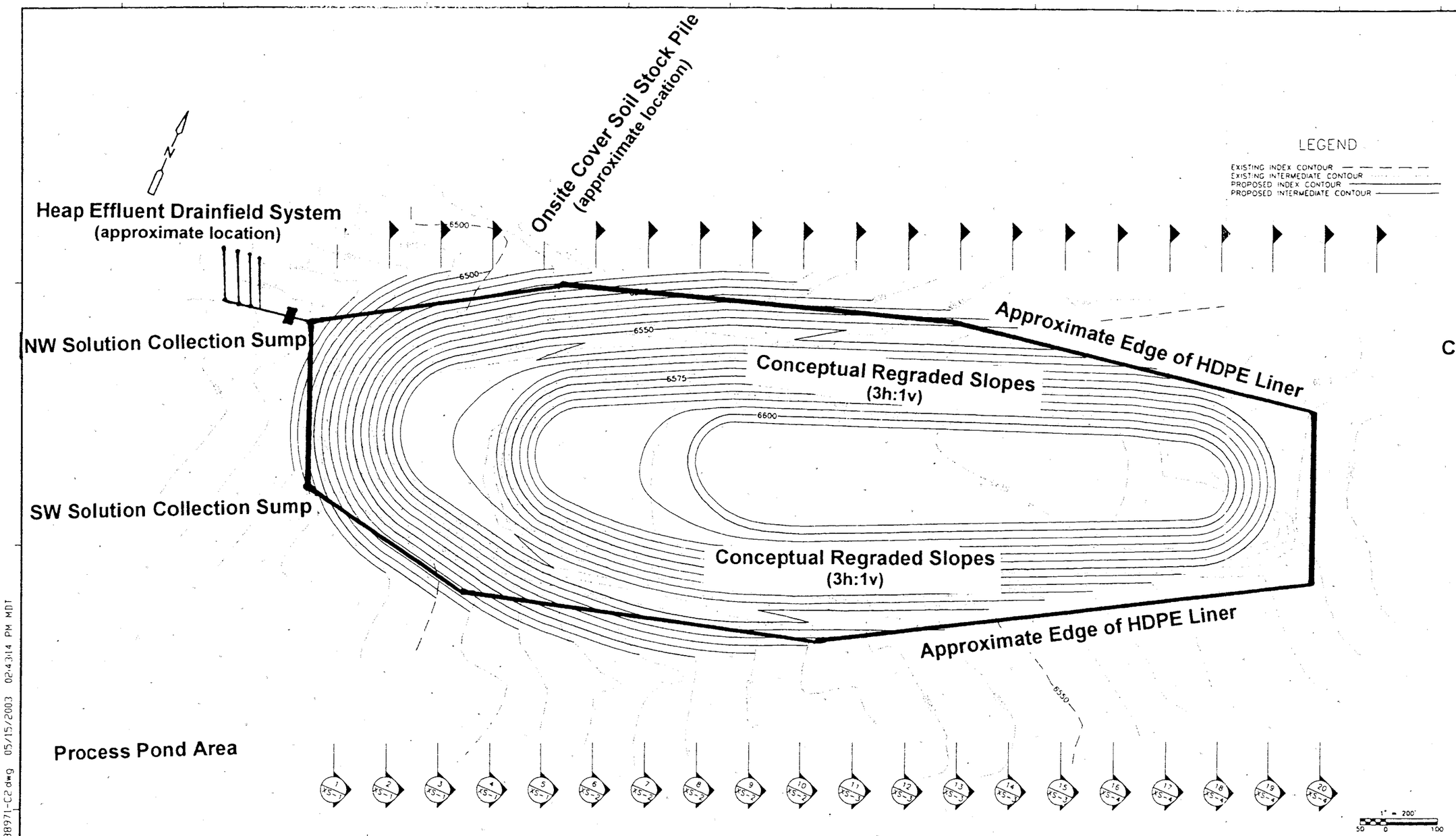

PLAN

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J.KOTSON
DRAWN BY: J.KOTSON
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
DATE: MAY 2003

CDM Engineers & Constructors Inc
290 CENTRY WAY
RENO NEVADA 89502-4230
1-775-853-0333

USACE
CONTRACT NUMBER BACW 05-00-D-006
TASK ORDER 005

EASY JUNIOR MINE SITE

Conceptual Heap Regrade Plan
3h:1v Configuration

Easy Junior Project
White Pine County, Nevada

CDM Scale 1 in = 200 ft Figure F-3

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