

-- SAMPLE TYPE: SURFACE WATER --

	SEP-3	SEP-4	SEP-6
SITE CODE			
SAMPLE DATE	08/01/2001	07/31/2001	08/01/2001
SAMPLE TIME	10:45	16:15	10:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011123009	L011122015	L011123007
REMARKS	DUPLICATE		
SAMPLE NUMBER	EPRI-0108-258	EPRI-0108-200	EPRI-0108-201

## -- PHYSICAL PARAMETERS --

	SEP-3	SEP-4	SEP-6
OXYGEN (O) (FLD) DIS	7.9	10.1	7.7
PH (FLD)	8.2	8.5	8.16
PH	8.2	8.1	8.2
SC (UMHOS/CM AT 25 C)	1046.0	1047.0	1045.0
SC (UMHOS/CM AT 25 C) (FLD)	894.0	1102.0	991.0
TDS (MEASURED AT 180 C)	680.0	652.0	663.0
TOTAL SUSPENDED SOLIDS	187.0	176.0	182.0
TURBIDITY (NTU)	152.0	114.0	127.0
WATER TEMPERATURE (C) (FLD)	27.0	31.3	26.9

## -- MAJOR CONSTITUENTS --

	SEP-3	SEP-4	SEP-6
CALCIUM (CA) DIS	64.0	61.0	64.0
MAGNESIUM (MG) DIS	16.0	16.0	16.0
SODIUM (NA) DIS	125.0	128.0	124.0
POTASSIUM (K) DIS	11.0	7.5	9.5
BICARBONATE (HCO3)	214.0	220.0	214.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	212.0	217.0	212.0
CHLORIDE (CL)	104.0	110.0	105.0
FLUORIDE (F)	0.7	0.72	0.68

## -- NUTRIENTS --

	SEP-3	SEP-4	SEP-6
NITRATE + NITRITE AS N	0.56 J4	0.15	0.55 J4

## -- METALS &amp; MINOR CONSTITUENTS --

	SEP-3	SEP-4	SEP-6
ARSENIC (AS) DIS	0.005	0.005	0.005
ARSENIC (AS) TOT	0.005	0.006	0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	3.1	2.1	3.2
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.004	0.005	0.004
SELENIUM (SE) DIS	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02	<0.02 UJ4	<0.02
ZINC (ZN) TOT	0.021	<0.02 UJ4	0.024

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SURFACE WATER --

SITE CODE	SEP-7	SEP-9	SEP-10
SAMPLE DATE	07/31/2001	07/31/2001	07/31/2001
SAMPLE TIME	15:00	14:30	11:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011122012	L011122011	L011123003
SAMPLE NUMBER	EPRI-0108-202	EPRI-0108-203	EPRI-0108-204

-- PHYSICAL PARAMETERS --

	SEP-7	SEP-9	SEP-10
OXYGEN (O) (FLD) DIS	9.1	8.7	8.3
PH (FLD)	8.38	8.35	8.17
PH	8.2	8.2	8.0
SC (UMHOS/CM AT 25 C)	1045.0	1143.0	1000.0
SC (UMHOS/CM AT 25 C) (FLD)	1083.0	1176.0	1041.0
TDS (MEASURED AT 180 C)	660.0	750.0	657.0
TOTAL SUSPENDED SOLIDS	166.0	158.0	228.0
TURBIDITY (NTU)	101.0	84.5	133.0
WATER TEMPERATURE (C) (FLD)	33.1	31.5	28.3

-- MAJOR CONSTITUENTS --

	SEP-7	SEP-9	SEP-10
CALCIUM (CA) DIS	61.0	69.0	61.0
MAGNESIUM (MG) DIS	16.0	17.0	15.0
SODIUM (NA) DIS	128.0	145.0	119.0
POTASSIUM (K) DIS	7.7	8.6	9.7
BICARBONATE (HCO3)	207.0	215.0	209.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	199.0	245.0	193.0
CHLORIDE (CL)	103.0	110.0	101.0
FLUORIDE (F)	0.67	0.72	0.7

-- NUTRIENTS --

	SEP-7	SEP-9	SEP-10
NITRATE + NITRITE AS N	0.21	0.85	0.15

-- METALS & MINOR CONSTITUENTS --

	SEP-7	SEP-9	SEP-10
ARSENIC (AS) DIS	<0.005	0.006	<0.005
ARSENIC (AS) TOT	<0.005	0.005	<0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	1.3	<0.1
IRON (FE) TOT	2.8	<0.1	2.7
LEAD (PB) DIS	<0.003	0.003	<0.003
LEAD (PB) TOT	0.003	<0.003	0.005
SELENIUM (SE) DIS	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02 UJ4	<0.02 UJ4	<0.02
ZINC (ZN) TOT	<0.02 UJ4	<0.02 UJ4	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
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 R: Rejected.

-- SAMPLE TYPE: SURFACE WATER --

	SITE CODE	SEP-11	SEP-12	SEP-13
SAMPLE DATE		07/31/2001	08/01/2001	08/01/2001
SAMPLE TIME		10:20	09:40	09:00
LAB		TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER		L011123001	L011123006	L011123005
SAMPLE NUMBER		EPRI-0108-205	EPRI-0108-206	EPRI-0108-207

## -- PHYSICAL PARAMETERS --

	SEP-11	SEP-12	SEP-13
OXYGEN (O) (FLD) DIS	8.0	7.4	7.4
PH (FLD)	8.17	8.22	8.03
PH	7.9	8.2	8.3
SC (UMHOS/CM AT 25 C)	1003.0	1027.0	1030.0
SC (UMHOS/CM AT 25 C) (FLD)	1042.0	979.0	985.0
TDS (MEASURED AT 180 C)	654.0	661.0	687.0
TOTAL SUSPENDED SOLIDS	213.0	170.0	180.0
TURBIDITY (NTU)	139.0	167.0	130.0
WATER TEMPERATURE (C) (FLD)	28.2	25.9	26.3

## -- MAJOR CONSTITUENTS --

	SEP-11	SEP-12	SEP-13
CALCIUM (CA) DIS	60.0	65.0	64.0
MAGNESIUM (MG) DIS	15.0	16.0	16.0
SODIUM (NA) DIS	119.0	120.0	120.0
POTASSIUM (K) DIS	8.4	11.0	11.0
BICARBONATE (HCO3)	195.0	205.0	217.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	221.0	214.0	220.0
CHLORIDE (CL)	99.0	100.0	97.0
FLUORIDE (F)	0.68	0.69	0.71

## -- NUTRIENTS --

	SEP-11	SEP-12	SEP-13
NITRATE + NITRITE AS N	0.15	0.4 J4	0.36 J4

## -- METALS &amp; MINOR CONSTITUENTS --

	SEP-11	SEP-12	SEP-13
ARSENIC (AS) DIS	<0.005	0.005	<0.005
ARSENIC (AS) TOT	<0.005	0.005	<0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	3.0	3.1	3.1
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.005	0.004	0.005
SELENIUM (SE) DIS	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02	<0.02	<0.02
ZINC (ZN) TOT	0.023	0.026	0.022

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
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 R:Rejected.

## -- SAMPLE TYPE: SEDIMENT/SOIL --

SITE CODE	SEP-2-SED	SEP-4-SED	SEP-4-SED	SEP-9-SED
SAMPLE DATE	07/31/2001	07/31/2001	07/31/2001	07/31/2001
SAMPLE TIME			16:30	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011129001	L011129005	L011129006	L011129004
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0108-219	EPRI-0108-221	EPRI-0108-255	EPRI-0108-224

-- METALS & MINOR CONSTITUENTS --

	EPRI-0108-219	EPRI-0108-221	EPRI-0108-255	EPRI-0108-224
ARSENIC (AS) TOT	21.0	16.0	22.0	24.0
CADMIUM (CD) TOT	<10.0	<10.0	14.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	270.0	65.0	88.0	120.0
IRON (FE) TOT	15000.0	14000.0	13000.0	11000.0
LEAD (PB) TOT	130.0	63.0	60.0	120.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	65.0 J4	39.0 J4	<10.0 J4	179.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
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 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SEDIMENT/SOIL --

SITE CODE	SEP-10-SED	SEP-11-SED	SEP-12-SED
SAMPLE DATE	07/31/2001	07/31/2001	07/31/2001
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011129003	L011129002	L011129009
SAMPLE NUMBER	EPRI-0108-225	EPRI-0108-226	EPRI-0108-227

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	26.0	12.0	20.0
CADMIUM (CD) TOT	12.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0
COPPER (CU) TOT	92.0	88.0	160.0
IRON (FE) TOT	14000.0	11000.0	13000.0
LEAD (PB) TOT	51.0	50.0	68.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0
ZINC (ZN) TOT	34.0 J4	27.0 J4	36.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
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Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
R:Rejected.

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**SECTION J-7**

**XRF DATA FOR MAY 2000 THROUGH AUGUST 2001**



Group	Condition 1	Condition 2	Condition 3	Condition 4
Control	~95%	~90%	~95%	~100%
MCI	~90%	~85%	~55%	~60%
AD	~85%	~80%	~25%	~30%





**SECTION H-6**

**REMEDIAL INVESTIGATION WATER SAMPLES,  
SUMMER 2001**



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**DATA VALIDATION REPORT**  
**ASARCO EL PASO COPPER SMELTER**  
**REMEDIAL INVESTIGATION**  
**WATER SAMPLES**  
**SUMMER 2001**

Prepared by  
Hydrometrics, Inc.  
2727 Airport Road  
Helena, MT 59601

OCTOBER 2001

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Table 3. Summary of Historical Comparisons

### APPENDIX 2: DATABASE

## GLOSSARY OF TERMS

CCV .....	Continuing Calibration Verification
CLP .....	Contract Laboratory Program
CRDL.....	Contract Required Detection Limit
DI .....	Deionized Water
Diff.....	Difference
% Diff.....	Percent difference
Diss .....	Dissolved
DTWL.....	Depth to Water Level
Dup.....	Duplicate
LCS .....	Laboratory Control Sample
NO3+NO2.....	Nitrate + Nitrite as N
PDLG .....	Project Detection Limit Goal
QAPP .....	Quality Assurance Project Plan
QC .....	Quality Control
RPD.....	Relative Percent Difference
SOW.....	Statement of Work
SC.....	Specific Conductivity
TDS.....	Total Dissolved Solids
Tot.....	Total
TSS.....	Total Suspended Solids
XRF .....	X-ray Fluorescence

## SUMMARY

This report covers the validation of data for quarterly monitoring water and sediment samples collected during July and August 2001 (Summer 2001 monitoring event) for the Asarco El Paso Copper Smelter Remedial Investigation. The validation has been carried out according to the Asarco El Paso Copper Smelter Remedial Investigation Work Plan (Hydrometrics 1996) requirements. Deviations from prescribed quality control procedures and/or exceedances of quality control samples have been noted, and results have been flagged in the database. Data validation codes are defined in Appendix 1, Table 1. Appendix 1 also includes the summary of flagged data (Table 2) and the summary of a statistical historical comparison (Table 3). The validated database for this data set is in Appendix 2.

The following measurements were taken in the field: static water levels, dissolved oxygen, pH, conductivity, turbidity, and water temperature. Samples were sent to Asarco's Technical Services laboratory in Salt Lake City for the following analyses:

Matrix	Laboratory Batches	Physical Parameters	Major Constituents	Metals (Total & Dissolved)
Water	L011027	pH	Calcium	Arsenic
	L011038	Conductivity	Magnesium	Cadmium
	L011066	TDS	Sodium	Chromium
	L011102	TSS	Potassium	Copper
	L011103		Bicarbonate	Iron
	L011122		Carbonate	Lead
	L011123		Sulfate	Zinc
			Chloride	
			Fluoride	
			NO <sub>3</sub> +NO <sub>2</sub> as N	
Sediment	L0111202	Total Metals – XRF (same metals as for water)		

Since the Fall 1999 sampling event, only total metals were analyzed for most of the sites. However, for this sampling event, dissolved metals were analyzed in addition to total metals in order to gather more data for each site. Where the turbidity was less than 10 NTU, the total metals portion submitted to the laboratory was unfiltered; for turbidities greater than 10 NTU, the total metals portion was filtered. For the statistical calculations summarized in Table 3, Appendix 1, the total metals results were calculated separately from the dissolved metals data (for groundwater) and from the total recoverable metals data (for surface water).

For this monitoring event, sediment samples were collected at seven of the surface water sites. The sediment samples were analyzed by XRF using a matrix-specific calibration for arsenic, cadmium, chromium, iron, lead and zinc, and using a fundamental parameters calibration for copper and selenium. Laboratory control standards (LCS) were run for all analytes and continuing calibration verification (CCV) standards were run for arsenic, cadmium, chromium, iron, lead and zinc.

**Summary of groundwater and surface water quality control results:**

**Laboratory quality control violation resulted in a total of 97 flags:**

- Thirty-seven total zinc results were flagged for two matrix spike quality control exceedances.
- Twenty dissolved zinc results were flagged for a matrix spike quality control violation.
- Twenty total iron results were flagged for a matrix spike quality control violation.
- Fourteen total selenium results flagged for a laboratory control standard exceedance.
- Six total zinc results were flagged for a laboratory control standard exceedance.

**Field quality control violations resulted in a total of 88 flags:**

- Six total lead results were flagged for a field duplicate exceedance.
- Two nitrate + nitrite results were flagged for a field duplicate exceedance.
- Eight out of 14 field duplicate samples had measurements that were out of control limits. These violations resulted in a total of 80 flags. Following is a summary of the parameters that were out of control limits, and the number of flags associated with the violations.

Parameter	Number of Flags
Chloride	8
Iron (tot)	5
Oxygen (dis)	16
Lead (tot)	11
Nitrate+Nitrite	24
Total Suspended Solids	16

### **Anomalous Data**

- Four field specific conductivity (SC) results were flagged as anomalous due to comparisons to laboratory SC results, TDS results and historical data.

### **Summary of sediment quality control results:**

**Laboratory quality control violations for the sediment XRF analyses resulted in a total of 19 flags:**

- Nine total zinc results were flagged for a laboratory control standard exceedance.
- Ten total zinc results were flagged for a XRF confirmation sample exceedance.

**Field quality control violations resulted in a total of 6 flags.**

- Six total zinc results were flagged for a field duplicate exceedance.

**All sites were visited according to the work plan.**

- Groundwater site EP-99 was not sampled due to a dry (or near dry) well.
- Surface water site SEP-14 was not sampled because it was dry. No sediment sample was collected at this site.
- Turbidity was not recorded at site EP-29.
- Dissolved oxygen was not measured at sites EP-23, EP-51, EP-52, EP-73, EP-75, EP-76, and EP-100 due to a malfunctioning instrument

Completeness for this project is calculated by the number of rejected (or anomalous) data divided by the number of planned data. The completeness for the Summer 2001 sampling event was measured at 99.8% (4 results were flagged as anomalous and 8 measurements were not recorded out of 4914 planned measurements) and 96.1% (197 out of 4906 results) of the data may be used without qualification. In conclusion, with the exception of the anomalous results, the data for the Asarco El Paso Copper Smelter Remedial Investigation Summer 2001 sampling event are deemed acceptable for the purposes of the project, provided that the flagged data are considered with appropriate caution. When using the data, any possible bias and/or lack of reproducibility indicated by the flags should be taken into account.



## DATA VALIDATION REPORT

### 1. INTRODUCTION

- This validation applies to inorganic analytes from 147 samples collected during the Summer 2001 (July 2001) for the Asarco El Paso Copper Smelter Remedial Investigation. Sites EP-99 and SEP-14 were dry and therefore not sampled. The total number of samples submitted for analyses were:

- 12 Field blanks (deionized water)
- 16 Field duplicates (2 surface water, 12 groundwater, and 2 sediment)
- 1 XRF confirmation sample (sediment)
- 11 Non-quality control (QC) surface water samples
- 100 Non-QC groundwater samples
- 7 Non-QC sediment samples

- Validation procedures used are generally consistent with:
  - ☒ EPA CLP National Functional Guidelines for Inorganics Data Review
  - ☒ Asarco El Paso Copper Smelter Remedial Investigation Work Plan, El Paso, Texas (November 1996)
  - ☐ Other
- Overall level of validation:
  - ☐ Contract Laboratory Program (CLP)
  - ☒ Standard – see notes
  - ☐ Visual

**Notes:** The validation consisted of a visual check of lab and field data, and an evaluation of laboratory and field quality control samples with flagging for any QC samples that were out of control limits.

### 2. DELIVERABLES

- All laboratory document deliverables were present as specified in the CLP-Statement of Work (CLP-SOW), EPA, 1993 and/or the project contract.
  - ☒ Yes
  - ☐ No
- Field measurements and field documentation were complete.
  - ☒ Yes – see notes
  - ☐ No

**Notes:** Sample EPRI-0108-158 (EP-94) was recorded as EPRI-0108-149 on the water sampling form (HF-FORM-430). Sample EPRI-0108-155 (EP-89) was recorded as EPRI-0108-125 on the water sampling form. Sample EPRI-0108-204 (SEP-10) was recorded as EPRI-0108-225 on the field sampling form. All samples were recorded correctly in the field book and on the chain of custodies.

### 3. FIELD QUALITY CONTROL SAMPLES

The field quality control samples required by the work plan are one field blank (DI) and one field duplicate per day or per 20 samples, whichever is more frequent. At least one field duplicate per matrix is required.

- **Field Blanks:** Please note that the highest blank value associated with any particular analyte is the blank value used for the flagging process.

DI, trip, rinsate, or any other field blanks have been carried out at the proper frequency.

☒ Yes

☐ No

Reported results on the field blanks are less than the contract required detection limits (CRDL) or the project detection limits goal (PDLG) if project detection limits have been specified.

☐ Yes

☒ No

**Notes:** When an analyte is detected in a blank, associated results up to 5 times the blank level are flagged with "UJI" to indicate that the results may be biased high due to contamination. Results "associated" with a field blank are generally results for samples collected on the same day as the blank. For this sampling event the laboratory's reporting limit was used instead of the PDLG. This was done to be consistent with prior data validation reports, which the reporting limit was used as the criteria for determining blank contamination.

Samples were not flagged for blank contamination involving TDS, SC, bicarbonate, carbonate, and TSS. These constituents are often present at low levels in blanks (although, in theory, should be absent from blanks) and may not be meaningful in evaluating the quality of the data.

Following is a summary of field (DI) blank detections:

Sample	Sample Date	Analyte	Result (mg/L)	5 times Blank Result (mg/L)	PDLG (mg/L)	# of Flags
EPRI-0108-238	7/18/01	Chloride	1.4	7.0	1.0	0 <sup>(1)</sup>
		Lead (tot)	0.003	0.015	0.003	6
EPRI-0108-240	7/19/01	Nitrate+Nitrite (NO <sub>3</sub> +NO <sub>2</sub> )	0.092	0.46	0.05 <sup>(2)</sup>	2

**Notes:**

- 1) No associated sample results were less than 5 times the blank value.
- 2) Reporting limit. PDLG for this analyte is 0.10 mg/L.

- **Field duplicates**

Field duplicates have been collected at the proper frequency.

☒ Yes

☐ No

Field duplicate relative percent differences (RPDs) were within the required control limits (RPD of 20% or less for water matrix and 35% for soil matrix). If the sample or duplicate result is less than 5 times the PDLG for water or 2 times the PDLG for soil, the RPD criteria are not used. In these cases, the difference between the sample and the duplicate results must be within  $\pm$  the PDLG for water matrix. As with the field blank samples, the laboratory's reporting limit was used instead of the PDLG (refer to Field Blanks in Section 3).

☐ Yes

☒ No – see notes

**Notes:** Associated sample results were flagged with "UJ4" or "J4" to indicate a possible lack of reproducibility. Associated samples were of the same matrix and collected the same day as the duplicate.

Following is a summary of field duplicate exceedances:

Sample / Duplicate	Site	Sample Date	Analyte	Sample/ Dup Result (mg/L)	PDLG (mg/L)	RPD/Diff (mg/L)	# of Flags
EPRI-0108-108 / 235	EP-20	7/17/01	TSS <sup>(1)</sup>	336 / 267	1.0 <sup>(2)</sup>	22.9 RPD	6
EPRI-0108-156 / 239	EP-90	7/19/01	TSS <sup>(1)</sup>	103 / 151	1.0 <sup>(2)</sup>	37.8 RPD	10
			NO <sub>3</sub> +NO <sub>2</sub>	25 / 35	0.05 <sup>(3)</sup>	33.3 RPD	11
			Lead (tot)	0.014 / <0.003	0.003	0.011 Diff	11
EPRI-0108-159 / 243	EP-95	7/24/01	Chloride	395 / 301	1	27.0 RPD	8
EPRI-0108-183 / 249	EP-119	7/27/01	NO <sub>3</sub> +NO <sub>2</sub>	3.9 / 6.2	0.05 <sup>(3)</sup>	45.5 RPD	5
EPRI-0108-133 / 251	EP-65	7/30/01	Iron (tot)	0.35 / 0.19	0.1	59.3 RPD	5
			Oxygen (dis)	1.1 / 3.6	0.1	106.4 RPD	11
EPRI-0108-209 / 253	EM-1	7/31/01	Oxygen (dis)	2.7 / 1.9	0.1	37.8 RPD	5
EPRI-0108-184 / 259	EP-120	8/1/01	NO <sub>3</sub> +NO <sub>2</sub>	3.3 / 7.3	0.05 <sup>(3)</sup>	75.4 RPD	8

**Notes:**

1) TSS = Total Suspended Solids

2) Reporting limit. PDLG for this analyte is 10 mg/L.

3) Reporting limit. PDLG for this analyte is 0.1 mg/L

#### 4. LABORATORY PROCEDURES

- **Laboratory procedures followed**

☐ CLP-SOW

☒ SW-846

☒ Methods for Chemical Analysis of Water and Wastes

☒ XRF Standard Operating Procedures

- **Holding times met**

☒ Yes

☐ No

- **Consistency with project requirements**

Analyses were carried out as requested.

☒ Yes

☐ No

Project specified methods were used.

☒ Yes

☐ No

#### 5. DETECTION LIMITS

- Reporting detection limits met project detection limit goals (PDLGs).

☐ Yes

☒ No – see notes

**Notes:**

**Water:** The PDLG for sulfate has been set at 1 mg/L and the laboratory's reporting detection limit for sulfate was 2 mg/L. This deficiency was not a concern since all non-blank sample results were well above the reporting level.

**Sediment:** As shown in the following table, the PDLG was not met for chromium, copper, iron and selenium using the XRF method. Iron and copper were not concerns since all XRF results were well above the reporting level for iron.

Analyte	Reporting Detection Limit	PDLG
Chromium	80 mg/kg	20 mg/kg
Copper	20 mg/kg	10 mg/kg
Iron	50 mg/kg	20 mg/kg
Selenium	20 mg/kg	10 mg/kg

Following is a table showing samples with results less than the reporting limit but greater than the PDLG.

Site	Sample	Analyte	Result (mg/kg)	PDLG (mg/kg)
SEP-2-SED	EPRI-0108-219	Chromium	<80	20
		Selenium	<20	10
SEP-4-SED	EPRI-0108-221	Chromium	<80	20
		Selenium	<20	10
SEP-4-SED DUP	EPRI-0108-255	Chromium	<80	20
		Selenium	<20	10
SEP-9-SED	EPRI-0108-224	Chromium	<80	20
		Selenium	<20	10
SEP-10-SED	EPRI-0108-225	Chromium	<80	20
		Selenium	<20	10
SEP-11-SED	EPRI-0108-226	Chromium	<80	20
		Selenium	<20	10
SEP-12-SED	EPRI-0108-227	Chromium	<80	20
		Selenium	<20	10
SEP-13-SED	EPRI-0108-228	Chromium	<80	20
		Selenium	<20	10
SEP-13-SED DUP	EPRI-0108-257	Chromium	<80	20
		Selenium	<20	10

## 6. LABORATORY BLANKS

Please note that the highest blank value associated with any particular analyte is the blank value used for the flagging process.

- **Preparation blanks**

Preparation blanks were prepared and analyzed at the required frequency.

X Yes

   No

All the analytes in the preparation blank were less than the CRDL (or the PDLG if a project detection limit goal has been specified).

X Yes

   No

## 7. LABORATORY MATRIX SPIKES

- A matrix spike sample (pre-digestion) was analyzed for each digestion batch and/or matrix, or as required in the CLP-SOW.

X Yes

   No

- Matrix spike recoveries were within the required control limits (75-125%).

   Yes

X No – see notes on following page

**Notes:** Sample results associated with matrix spike exceedances were flagged with "UJ4" or "J4" to indicate a possible bias. Associated samples were analyzed with the same batch and on the same day as the matrix spike. Following is a table summarizing matrix spike exceedances:

Batch	QC Sample	Analytical Date	Analyte	Recovery Rate	Bias	# of Flags
L011102	WG010847-1	8/29/01	Iron (tot)	73%	Low	20
L011103	WG010848-1	8/30/01	Zinc (tot)	72%	Low	17
L011122	WG010852-1	9/5/01	Zinc (tot)	75%	Low	20
			Zinc (dis)	67%	Low	20

#### 8. LABORATORY DUPLICATES

- Laboratory duplicate samples were analyzed at the proper frequency.  
☒ Yes  
☐ No
- The laboratory duplicate relative percent differences (RPDs) were within the required control limits (RPD of 20% or less for water matrix, 35% or less for soil matrix). For low concentration data, where the sample or duplicate result is less than 5 times the PDLG, the RPD criteria are not used. In these cases, the difference between the sample and the duplicate results must be within plus or minus the PDLG for water matrix, within plus or minus two times the PDLG for sediment or soil matrix.  
☒ Yes  
☐ No

#### 9. LABORATORY CONTROL STANDARDS

- LCSs were prepared and analyzed at the proper frequency.  
☒ Yes  
☐ No
- LCS recoveries were within the required control limits (80-120% for water, 75-125% for sediment samples analyzed by XRF).  
☐ Yes  
☒ No – see notes

**Notes:** Samples associated with LCS recoveries that were out of control limits, were flagged with "UJ4" or "J4" to indicate a possible bias. Associated samples were analyzed in the same batch and on the same date as the LCS. On the following page is a summary of LCS recovery exceedances:

### LCS Recovery Exceedances

Matrix	Batch	LCS Sample	Analytical Date	Analyte	% Recovery	Bias	# of Results Flagged
Water	L011103	WG010848-3	8/30/01	Selenium (tot)	123%	High	14
Water	L011038	WG010837-9	6/5/01	Zinc (tot)	124%	High	6
Sediment	L010734	LCS287	6/5/01	Zinc (tot)	28%	Low	9

#### 10. CONTINUING CALIBRATION VERIFICATION (CCV) SAMPLES (SEDIMENT SAMPLES ONLY)

- CCVs were analyzed at the proper frequency.  
☒ Yes  
☐ No
- CCV recoveries were within the required control limits (75-125% for arsenic, cadmium, chromium, lead, iron and zinc analyzed by XRF).  
☒ Yes  
☐ No

#### 11. XRF CONFIRMATION SAMPLE

Splits of samples analyzed by XRF are submitted for wet chemistry analyses in order to "confirm" the XRF results. XRF confirmation samples are submitted at a rate of 1 per 20 samples analyzed by XRF.

- XRF confirmation samples were analyzed at the proper frequency.  
☒ Yes  
☐ No
- The XRF confirmation sample relative percent differences (RPDs) were within the required control limits (35% or less). For low concentration data, that is if the sample or duplicate result is less than 5 times the PDLG, the RPD criteria are not used. In these cases, the difference between the sample and the duplicate results must be within plus or minus two times the PDLG.  
☐ Yes  
☒ No – see notes

**Notes:** Sample results associated with the XRF confirmation sample exceedance were flagged with "UJ4" or "J4" to indicate a possible variance or bias with the result. Associated samples were all samples analyzed by XRF. On the following page is a summary of the confirmation sample exceedance:

## XRF Confirmation Sample Exceedance

Site	Sample Code	Orig/Split Lab Codes	Analyte	Orig /Split Results (mg/kg)	PDLG (mg/kg)	RPD	# of Flags
SEP-13-SED	EPRI-0108-228	L011129007 / L011202001	Zinc (tot)	95 / 147	10	43%	10

### 12. INTERPARAMETER RELATIONSHIPS

- The following relationships have been checked:

☒ Lab pH vs. field pH.

☒ Lab SC vs. field SC

☒ TDS vs. SC

**Lab pH vs. field pH:** This relationship was in order. Rounded off to the nearest percent, the percent differences were distributed as follows:

equal to or less than 10% .....94 samples

11 to 20% .....31 samples

>20% (21%) .....0 sample

**Lab SC vs. Field SC:** This relationship was generally in order except for six samples. Four field SC values were flagged as anomalous ("A") due a large % difference, TDS/SC ratios and historical comparisons. Following is a summary of the data with lab and field SC percent differences greater than 20.

Site	Sample Code	Sample Date	Lab SC (mg/L)	Field SC (mg/L)	% Diff	TDS Result (mg/L)	Action
EP-43	EPRI-0108-117	7/30/01	8110	5710	29.6%	5344	No Action
EP-62	EPRI-0108-130	7/27/01	4220	5240	24.2%	3043	No Action
EP-63	EPRI-0108-131	7/27/01	7130	1393	80.5%	5328	Flagged Field SC with "A"
EP-66	EPRI-0108-134	7/27/01	7380	1290	82.5%	6231	Flagged Field SC with "A"
EP-124	EPRI-0108-188	7/27/01	4200	883	78.9%	2887	Flagged Field SC with "A"
EP-132	EPRI-0108-196	7/27/01	4000	780	80.5%	2937	Flagged Field SC with "A"



Rounded to the nearest percent, the distribution of the percent differences for SC's was as follows:

less than 10% .....111 samples  
11 to 20% .....8 samples  
>20% .....6 samples

**TDS vs. Lab SC:** The ratio of TDS to lab SC should lie between 0.55 and 0.75. In natural waters with high sulfate, the ratio may be as high as 0.96. This ratio is intended to be a check on the accuracy of the TDS and lab SC measurements. (It should be noted that these measurements are less accurate in dilute waters.)

This relationship was in order. The distribution for TDS vs. Lab SC ratios are following:

less than 55% ..... 0 samples  
56 to 75% ..... 85 samples  
76 to 100% ..... 40 samples\*

\*All were surface water samples or had high sulfate concentrations.

### 13. HISTORICAL COMPARISON

The data for the Summer 2001 monitoring were compared with historical results. Table 3 in Appendix 1 contains a summary of the historical comparison. This table lists all cases where the current value differs by three or more standard deviations from the comparison period mean or where the current value was highest or lowest over the entire database period

### 14. DATA QUALITY OBJECTIVES

- **Project data quality objectives (DQOs).**

Data quality objectives for this project are for the quality control samples to be within control limits. Evaluation of field and laboratory QC samples gives a measure of the actual precision and accuracy obtained.

#### **Accuracy**

The ability to recover a known amount of an analyte is a measure of accuracy.

Accuracy for water samples is evaluated by recoveries on laboratory matrix spikes and laboratory control samples for higher analyte concentrations, and by blanks for analyte concentrations less than five times the PDLG.

- For laboratory matrix spike samples, 97.8% of the results were within control limits (4 out of 180 matrix spike results were out of control limits). Following is a summary of analytes that were out of control limits for matrix spikes. All other analytes were within control limits 100% of the time.

Analyte	# of Matrix Spike Samples	# Out of Control Limits	% Within Control Limits
Iron (tot)	7	1	85.7%
Zinc (dis)	7	1	85.7%
Zinc (tot)	7	2	71.4%

- For LCS', 99.2% of the results were within control limits (2 out of 242 LCS results were out of control limits). Following is a summary of analytes that were out of control limits for LCS'. All other analytes were within control limits 100% of the time.

Analyte	# of LCS Samples	# Out of Control Limits	% Within Control Limits
Selenium (tot)	7	1	85.7%
Zinc (tot)	7	1	85.7%

- For laboratory blanks, 100% of the results were less than the detection limit.
- For field blanks, 99.2% of the results were less than the detection limits (3 out of 360 results were above the detection limit). Following is a summary of individual analyte results for field blanks. Analytes not listed in the following table were not detected in any of the field blank samples.

Analyte	# Field Blank Samples	# of Detections	% Without Detections
Chloride	12	1	91.7%
Lead	12	1	91.7%
NO <sub>3</sub> +NO <sub>2</sub>	12	1	91.7%

Accuracy for sediment samples is evaluated by recoveries for laboratory reference standards, which in this case included continuing calibration verification samples and laboratory control standards. Continuing calibration verification sample information was not provided for copper and selenium. Laboratory control standard information was provided for all analytes.

- One LCS was run for all sediment samples. Zinc was the only analyte out of control limits for an overall completeness of 87.5% (1 out of 8 LCS results were out of control limits).
- One CCV was run and recoveries were within control limits 100% of the time.

### Precision

Reproducibility of results is a measure of precision. Precision is evaluated by performance on laboratory and field duplicates.

#### Precision for water samples:

- For laboratory duplicates, 100% of the results were within control limits.
- For field duplicates 97.9% results were within control limits (10 out of 479 results were out of control limits). Following a summary of precision for individual analytes. The analytes not listed were in control limits 100% of the time.

Analyte	# Field Duplicate Samples	# Out of Control Limits	% Within Control Limits
Chloride	14	1	92.9%
Iron (tot)	14	1	92.9%
NO <sub>3</sub> +NO <sub>2</sub>	14	3	78.6%
Oxygen (dis)	14	2	85.7%
Lead (tot)	14	1	92.9%
TSS	14	2	85.7%

#### Precision for sediment samples:

- One laboratory duplicate sample was run. The results were within control limits 100% of the time.
- Two field duplicate samples were submitted. The results were within control limits 93.8% of the time (1 zinc result out of 16 total results was out of control limits).

### Completeness (water and sediment are evaluated together)

The number of valid samples per number of planned samples quantitatively measures completeness. Completeness for the Summer 2001 sampling event was measured at 99.8% (4 anomalous results and 8 measurements not recorded out of 4914 planned measurements).

The number of flagged results per number of measurements can also measure completeness. This was calculated as 96.0% (197 flagged results out of 4906 total results).

Following is a summary of the overall completeness of the data, broke down by parameter.

Parameter	# of Planned Measurements	# Valid Results	Valid per Planned Results	# of Results Not Flagged	% of Results Not Flagged
DTWL*	102	102	100%	102	100%
Oxygen	125	118	94.4%	102	86.4%
pH(field)	125	125	100%	125	100%
SC(field)	125	121	96.8%	121	96.8%
Turbidity	114	113	99.1%	113	100%
Water Temp.	125	125	100%	125	100%
pH(lab)	137	137	100%	137	100%
SC(lab)	137	137	100%	137	100%
TDS	137	137	100%	137	100%
TSS	137	137	100%	121	88.3%
Calcium	137	137	100%	137	100%
Magnesium	137	137	100%	137	100%
Sodium	137	137	100%	137	100%
Potassium	137	137	100%	137	100%
Bicarbonate	137	137	100%	137	100%
Carbonate	137	137	100%	137	100%
Sulfate	137	137	100%	137	100%
Chloride	137	137	100%	129	94.1
Fluoride	137	137	100%	137	100%
NO <sub>3</sub> +NO <sub>2</sub> as N	137	137	100%	113	82.5%
Arsenic (tot)	147	147	100%	147	100%
Arsenic (dis)	137	137	100%	137	100%
Cadmium (tot)	147	147	100%	147	100%
Cadmium (dis)	137	137	100%	137	100%
Chromium (tot)	147	147	100%	147	100%
Chromium (dis)	137	137	100%	137	100%
Copper (tot)	147	147	100%	147	100%
Copper (dis)	137	137	100%	137	100%
Iron (tot)	147	147	100%	127	86.4%
Iron (dis)	137	137	100%	132	96.4%
Lead (tot)	147	147	100%	130	88.4%
Lead (dis)	137	137	100%	137	100%
Selenium (tot)	147	147	100%	133	90.5%
Selenium (dis)	137	137	100%	137	100%
Zinc (tot)	147	147	100%	94	63.9%
Zinc (dis)	137	137	100%	117	85.4%

Notes: \* DTWL = Depth to Water Level

## **APPENDIX 1**

### **TABLES**

TABLE 1.

DATA VALIDATION CODES AND DEFINITIONS

<u>CODE</u>	<u>DEFINITION</u>
J -	<p>The associated numerical value is an estimated quantity because quality control criteria were not met.</p> <p>Subscripts for the "J" qualifier:</p> <ul style="list-style-type: none"><li>2 - Calibration range exceeded or significant deviation from known value. Possible bias.</li><li>3 - Holding time not met. Indicates possible bias.</li><li>4 - Other QC outside control limits.</li></ul>
UJ -	<p>The material was analyzed for, but was not detected above the associated value.</p> <p>Subscripts for the "UJ" qualifier:</p> <ul style="list-style-type: none"><li>1 - Blank contamination. Indicates possible high bias and/or false positive.</li><li>2 - Calibration range exceeded or significant deviation from known value. Possible bias.</li><li>3 - Holding time not met. Indicates possible bias.</li><li>4 - Other QC outside control limits.</li></ul>
R -	<p>Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis are necessary for verification.</p>
E -	<p>Estimated. (Not an EPA code.)</p>
A -	<p>Anomalous data.. No apparent explanation for discrepancy in data. (Not an EPA code.)</p>

**TABLE 2. SUMMARY OF FLAGGED DATA  
EL PASO RI  
SUMMER 2001**

Site	Sample No	Lab No	Date	Parameter	Result (ppm)	Flag Code	QC Sample	Exceedance
DI	EPRI-0108-246	L011103013	07/25/2001	ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
DI	EPRI-0108-248	L011103015	07/26/2001	ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
DI	EPRI-0108-250	L011103017	07/27/2001	ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
DI	EPRI-0108-252	L011122008	07/30/2001	ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
DI	EPRI-0108-256	L011122016	07/31/2001	ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EM-1	EPRI-0108-209	L011122009	07/31/2001	OXYGEN (O) (FLD) DIS	2.7	J4	Field Duplicate	34.8 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.026	J4	Matrix Spike	67% Recovery
EM-1	EPRI-0108-253	L011122010	07/31/2001	OXYGEN (O) (FLD) DIS	1.9	J4	Field Duplicate	34.8 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.025	J4	Matrix Spike	67% Recovery
EM-2	EPRI-0108-210	L011038005	07/18/2001	LEAD (PB) TOT	0.006	UJ1	DI Blank	Result (0.003 ppm) > PDLG
EM-5	EPRI-0108-212	L011038020	07/19/2001	TOTAL SUSPENDED SOLIDS	4.4	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	0.24	UJ1, J4	DI Blank, Field Duplicate	Result (0.092 ppm) > PDLG, 33.3 RPD
				LEAD (PB) TOT	0.005	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
EM-6	EPRI-0108-213	L011038021	07/19/2001	TOTAL SUSPENDED SOLIDS	1.0	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	7.5	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	0.004	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
				ZINC (ZN) TOT	0.032	J4	LCS	124% Recovery
EP-12	EPRI-0108-104	L011122007	07/30/2001	OXYGEN (O) (FLD) DIS	0.9	J4	Field Duplicate	106.4 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.024	J4	Matrix Spike	67% Recovery
EP-13	EPRI-0108-105	L011038009	07/18/2001	LEAD (PB) TOT	0.006	UJ1	DI Blank	Result (0.003 ppm) > PDLG
EP-14	EPRI-0108-106	L011038007	07/18/2001	LEAD (PB) TOT	0.004	UJ1	DI Blank	Result (0.003 ppm) > PDLG
EP-15	EPRI-0108-107	L011038018	07/19/2001	TOTAL SUSPENDED SOLIDS	65.0	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	28.0	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	<0.003	UJ4	Field Duplicate	Diff (0.011 ppm) > PDLG
EP-20	EPRI-0108-108	L011027010	07/17/2001	TOTAL SUSPENDED SOLIDS	336.0	J4	Field Duplicate	22.9 RPD
EP-20 Dup	EPRI-0108-235	L011027011	07/17/2001	TOTAL SUSPENDED SOLIDS	267.0	J4	Field Duplicate	22.9 RPD
EP-21	EPRI-0108-109	L011102001	07/30/2001	OXYGEN (O) (FLD) DIS	1.8	J4	Field Duplicate	106.4 RPD
				IRON (FE) TOT	2.4	J4	Matrix Spike	73% Recovery
EP-22	EPRI-0108-110	L011038026	07/19/2001	TOTAL SUSPENDED SOLIDS	41.0	J4	Field Duplicate	37.8 RPD
				LEAD (PB) TOT	0.045	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
				ZINC (ZN) TOT	0.5	J4	LCS	124% Recovery

**TABLE 2. SUMMARY OF FLAGGED DATA**  
**EL PASO RIVER**  
**SUMMER 2001**

Site	Sample No	Lab No	Date	Parameter	Result (ppm)	Flag Code	QC Sample	Exceedance
EP-24	EPRI-0108-112	L011102002	07/30/2001	OXYGEN (O) (FLD) DIS	1.6	J4	Field Duplicate	106.4 RPD
				IRON (FE) TOT	0.27	J4	Field Duplicate, Matrix Spike	59.3 RPD, 73% Recovery
EP-25	EPRI-0108-113	L011102003	07/30/2001	OXYGEN (O) (FLD) DIS	1.0	J4	Field Duplicate	106.4 RPD
				IRON (FE) TOT	1.3	J4	Matrix Spike	73% Recovery
EP-26	EPRI-0108-114	L011102004	07/26/2001	IRON (FE) TOT	0.5	J4	Matrix Spike	73% Recovery
EP-35	EPRI-0108-116	L011027012	07/17/2001	TOTAL SUSPENDED SOLIDS	191.0	J4	Field Duplicate	22.9 RPD
EP-43	EPRI-0108-117	L011122006	07/30/2001	OXYGEN (O) (FLD) DIS	0.7	J4	Field Duplicate	106.4 RPD
				IRON (FE) DIS	0.24	J4	Field Duplicate	59.3 RPD
				ZINC (ZN) DIS	0.028	J4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.05	J4	Matrix Spike	67% Recovery
EP-49	EPRI-0108-118	L011102005	07/26/2001	IRON (FE) TOT	1.7	J4	Matrix Spike	73% Recovery
EP-53	EPRI-0108-121	L011102006	07/30/2001	OXYGEN (O) (FLD) DIS	4.2	J4	Field Duplicate	106.4 RPD
				IRON (FE) TOT	10.0	J4	Matrix Spike	73% Recovery
EP-54	EPRI-0108-122	L011102007	07/26/2001	IRON (FE) TOT	7.8	J4	Matrix Spike	73% Recovery
EP-55	EPRI-0108-123	L011102008	07/26/2001	IRON (FE) TOT	292.0	J4	Matrix Spike	73% Recovery
EP-56	EPRI-0108-124	L011102009	07/26/2001	IRON (FE) TOT	60.0	J4	Matrix Spike	73% Recovery
EP-57	EPRI-0108-125	L011122005	07/30/2001	OXYGEN (O) (FLD) DIS	1.0	J4	Field Duplicate	106.4 RPD
				IRON (FE) DIS	<0.1	UJ4	Field Duplicate	59.3 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EP-58	EPRI-0108-126	L011122004	07/30/2001	OXYGEN (O) (FLD) DIS	1.3	J4	Field Duplicate	106.4 RPD
				ZINC (ZN) DIS	0.023	J4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.034	J4	Matrix Spike	67% Recovery
EP-59	EPRI-0108-127	L011102010	07/27/2001	IRON (FE) TOT	0.67	J4	Matrix Spike	73% Recovery
EP-60	EPRI-0108-128	L011102011	07/27/2001	IRON (FE) TOT	3.0	J4	Matrix Spike	73% Recovery
EP-61	EPRI-0108-129	L011122003	07/30/2001	OXYGEN (O) (FLD) DIS	2.8	J4	Field Duplicate	106.4 RPD
				IRON (FE) DIS	0.2	J4	Field Duplicate	59.3 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EP-62	EPRI-0108-130	L011102012	07/27/2001	IRON (FE) TOT	0.24	J4	Matrix Spike	73% Recovery
EP-63	EPRI-0108-131	L011102013	07/27/2001	IRON (FE) TOT	<0.1	J4	Matrix Spike	73% Recovery
				SC UMHOS/CM (FLD)	883	A	Interparameter and Historical Comparisons	Field vs Lab Diff = 80%; Field SC > 3 times the historical mean
EP-64	EPRI-0108-132	L011102014	07/27/2001	IRON (FE) TOT	<0.1	J4	Matrix Spike	73% Recovery
EP-65	EPRI-0108-133	L011122001	07/30/2001	OXYGEN (O) (FLD) DIS	1.1	J4	Field Duplicate	106.4 RPD
				IRON (FE) DIS	<0.1	J4	Field Duplicate	59.3 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery



TABLE 2. SUMMARY OF FLAGGED DATA

EL PASO RI  
SUMMER 2001

Site	Sample No	Lab No	Date	Parameter	Result (ppm)	Flag Code	QC Sample	Exceedance
EP-65 Dup	EPRI-0108-251	L011122002	07/30/2001	OXYGEN (O) (FLD) DIS	3.6	J4	Field Duplicate	106.4 RPD
				IRON (FE) DIS	<0.1	J4	Field Duplicate	59.3 RPD
				ZINC (ZN) DIS	0.021	J4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EP-66	EPRI-0108-134	L011102015	07/27/2001	IRON (FE) TOT	<0.1	J4	Matrix Spike	73% Recovery
				SC UMHOS/CM (FLD)	1290	A	Interparameter and Historical Comparisons	Field vs Lab Diff = 83%; Field SC > 3 times the historical mean
EP-68	EPRI-0108-136	L011027018	07/17/2001	TOTAL SUSPENDED SOLIDS	17.0	J4	Field Duplicate	22.9 RPD
EP-77	EPRI-0108-143	L011038019	07/19/2001	TOTAL SUSPENDED SOLIDS	32.0	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	0.69	UJ1, J4	DI Blank, Field Duplicate	Result (0.092 ppm) > PDLG, 33.3 RPD
				LEAD (PB) TOT	0.004	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
EP-78	EPRI-0108-144	L011102016	07/25/2001	IRON (FE) TOT	0.52	J4	Matrix Spike	73% Recovery
EP-79	EPRI-0108-145	L011102017	07/25/2001	IRON (FE) TOT	1.3	J4	Matrix Spike	73% Recovery
EP-80	EPRI-0108-146	L011102018	07/25/2001	IRON (FE) TOT	0.27	J4	Matrix Spike	73% Recovery
EP-81	EPRI-0108-147	L011102019	07/25/2001	IRON (FE) TOT	<0.1	J4	Matrix Spike	73% Recovery
EP-82	EPRI-0108-148	L011102020	07/25/2001	IRON (FE) TOT	<0.1	J4	Matrix Spike	73% Recovery
EP-83	EPRI-0108-149	L011066013	07/24/2001	CHLORIDE (CL)	374.0	J4	Field Duplicate	27.0 RPD
EP-84	EPRI-0108-150	L011066016	07/24/2001	CHLORIDE (CL)	295.0	J4	Field Duplicate	27.0 RPD
EP-85	EPRI-0108-151	L011103001	07/25/2001	SELENIUM (SE) TOT	0.14	J4	LCS	123% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EP-86	EPRI-0108-152	L011103002	07/25/2001	SELENIUM (SE) TOT	0.032	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.023	J4	Matrix Spike	67% Recovery
EP-86	EPRI-0108-245	L011103012	07/25/2001	SELENIUM (SE) TOT	0.033	J4	LCS	123% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EP-88	EPRI-0108-154	L011038023	07/19/2001	TOTAL SUSPENDED SOLIDS	30.0	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	5.3	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	0.004	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
				ZINC (ZN) TOT	0.026	J4	LCS	124% Recovery
EP-89	EPRI-0108-155	L011027016	07/17/2001	TOTAL SUSPENDED SOLIDS	2.3	J4	Field Duplicate	22.9 RPD
EP-90	EPRI-0108-156	L011038015	07/19/2001	TOTAL SUSPENDED SOLIDS	103.0	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	25.0	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	0.014	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
EP-90	EPRI-0108-239	L011038016	07/19/2001	TOTAL SUSPENDED SOLIDS	151.0	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	35.0	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	<0.003	UJ4	Field Duplicate	Diff (0.011 ppm) > PDLG
EP-93	EPRI-0108-157	L011066019	07/24/2001	CHLORIDE (CL)	517.0	J4	Field Duplicate	27.0 RPD
EP-95	EPRI-0108-159	L011066010	07/24/2001	CHLORIDE (CL)	395.0	J4	Field Duplicate	27.0 RPD
EP-95 Dup	EPRI-0108-243	L011066011	07/24/2001	CHLORIDE (CL)	301.0	J4	Field Duplicate	27.0 RPD

TABLE 2. SUMMARY OF FLAGGED DATA

EL PASO RI  
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Site	Sample No	Lab No.	Date	Parameter	Result (ppm)	Flag Code	QC Sample	Exceedance
EP-96	EPRI-0108-160	L011066018	07/24/2001	CHLORIDE (CL)	511.0	J4	Field Duplicate	27.0 RPD
EP-97	EPRI-0108-161	L011066015	07/24/2001	CHLORIDE (CL)	548.0	J4	Field Duplicate	27.0 RPD
EP-101	EPRI-0108-165	L011038010	07/18/2001	LEAD (PB) TOT	0.007	UJ1	DI Blank	Result (0.003 ppm) > PDLG
EP-102	EPRI-0108-166	L011038011	07/18/2001	LEAD (PB) TOT	0.01	UJ1	DI Blank	Result (0.003 ppm) > PDLG
EP-103	EPRI-0108-167	L011038017	07/19/2001	TOTAL SUSPENDED SOLIDS	<1.0	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	5.6	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	<0.003	UJ4	Field Duplicate	Diff (0.011 ppm) > PDLG
EP-104	EPRI-0108-168	L011038013	07/18/2001	LEAD (PB) TOT	0.006	UJ1	DI Blank	Result (0.003 ppm) > PDLG
EP-105	EPRI-0108-169	L011038014	07/19/2001	TOTAL SUSPENDED SOLIDS	3.9	J4	Field Duplicate	37.8 RPD
				NITRATE + NITRITE AS N	8.5	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	0.005	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
EP-107	EPRI-0108-171	L011027019	07/17/2001	TOTAL SUSPENDED SOLIDS	9.5	J4	Field Duplicate	22.9 RPD
EP-108	EPRI-0108-172	L011103003	07/25/2001	SELENIUM (SE) TOT	0.045	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.023	J4	Matrix Spike	67% Recovery
EP-109	EPRI-0108-173	L011103004	07/25/2001	SELENIUM (SE) TOT	0.07	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.023	J4	Matrix Spike	67% Recovery
EP-111	EPRI-0108-175	L011122019	07/31/2001	OXYGEN (O) (FLD) DIS	0.1	J4	Field Duplicate	34.8 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.025	J4	Matrix Spike	67% Recovery
EP-115	EPRI-0108-179	L011038022	07/16/2001	ZINC (ZN) TOT	0.45	J4	LCS	124% Recovery
EP-119	EPRI-0108-183	L011103005	07/27/2001	NITRATE + NITRITE AS N	3.9	J4	Field Duplicate	45.5 RPD
				SELENIUM (SE) TOT	0.28	J4	LCS	123% Recovery
EP-119	EPRI-0108-183	L011103005	07/27/2001	ZINC (ZN) TOT	0.048	J4	Matrix Spike	67% Recovery
EP-119	EPRI-0108-249	L011103016	07/27/2001	NITRATE + NITRITE AS N	6.2	J4	Field Duplicate	45.5 RPD
				SELENIUM (SE) TOT	0.28	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.051	J4	Matrix Spike	67% Recovery
EP-120	EPRI-0108-184	L011123011	08/01/2001	NITRATE + NITRITE AS N	3.3	J4	Field Duplicate	75.4 RPD
EP-120 Dup	EPRI-0108-259	L011123012	08/01/2001	NITRATE + NITRITE AS N	7.3	J4	Field Duplicate	75.4 RPD
EP-121	EPRI-0108-185	L011123010	08/01/2001	NITRATE + NITRITE AS N	6.7	J4	Field Duplicate	75.4 RPD
EP-122	EPRI-0108-186	L011103006	07/27/2001	NITRATE + NITRITE AS N	6.4	J4	Field Duplicate	45.5 RPD
				SELENIUM (SE) TOT	0.19	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.079	J4	Matrix Spike	67% Recovery
EP-123	EPRI-0108-187	L011103007	07/25/2001	SELENIUM (SE) TOT	0.074	J4	LCS	123% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EP-124	EPRI-0108-188	L011103008	07/27/2001	NITRATE + NITRITE AS N	0.56	J4	Field Duplicate	45.5 RPD
				SELENIUM (SE) TOT	0.005	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.044	J4	Matrix Spike	67% Recovery
				SC UMHS/CM (FLD)	883	A	Interparameter Comparison	Field vs Lab Diff = 79%

TABLE 2. SUMMARY OF FLAGGED DATA

EL PASO RI  
SUMMER 2001

Site	Sample No	Lab No	Date	Parameter	Result (ppm)	Flag Code	QC Sample	Exceedance
EP-125	EPRI-0108-189	L011038025	07/19/2001	NITRATE + NITRITE AS N	9.5	J4	Field Duplicate	33.3 RPD
				ZINC (ZN) TOT	1.5	J4	LCS	124% Recovery
EP-126	EPRI-0108-190	L011038024	07/19/2001	NITRATE + NITRITE AS N	35.0	J4	Field Duplicate	33.3 RPD
				LEAD (PB) TOT	0.004	J4	Field Duplicate	Diff (0.011 ppm) > PDLG
				ZINC (ZN) TOT	0.064	J4	LCS	124% Recovery
EP-127	EPRI-0108-191	L011122020	07/31/2001	OXYGEN (O) (FLD) DIS	0.8	J4	Field Duplicate	34.8 RPD
				ZINC (ZN) DIS	0.021	J4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.026	J4	Matrix Spike	67% Recovery
EP-128	EPRI-0108-192	L011122017	07/31/2001	OXYGEN (O) (FLD) DIS	8.7	J4	Field Duplicate	34.8 RPD
				ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
EP-129	EPRI-0108-193	L011066017	07/24/2001	CHLORIDE (CL)	362.0	J4	Field Duplicate	27.0 RPD
EP-130	EPRI-0108-194	L011103009	07/26/2001	SELENIUM (SE) TOT	0.22	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.072	J4	Matrix Spike	67% Recovery
EP-130 Dup	EPRI-0108-247	L011103014	07/26/2001	SELENIUM (SE) TOT	0.23	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.075	J4	Matrix Spike	67% Recovery
EP-131	EPRI-0108-195	L011103010	07/26/2001	SELENIUM (SE) TOT	0.1	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.048	J4	Matrix Spike	67% Recovery
EP-132	EPRI-0108-196	L011103011	07/27/2001	NITRATE + NITRITE AS N	13.0	J4	Field Duplicate	45.5 RPD
				SELENIUM (SE) TOT	0.28	J4	LCS	123% Recovery
				ZINC (ZN) TOT	0.021	J4	Matrix Spike	67% Recovery
				SC UMHOS/CM (FLD)	780	A	Interparameter Comparison	Field vs Lab Diff = 81%
SEP-1	EPRI-0108-197	L011122013	07/31/2001	ZINC (ZN) DIS	<0.02	UUJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.024	J4	Matrix Spike	67% Recovery
SEP-1	EPRI-0108-254	L011122014	07/31/2001	ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.028	J4	Matrix Spike	67% Recovery
SEP-2	EPRI-0108-198	L011122018	07/31/2001	ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	0.024	J4	Matrix Spike	67% Recovery
SEP-2-SED	EPRI-0108-219	L011129001	07/31/2001	ZINC (ZN) TOT	65.0	J4	Lab Duplicate, LCS, XRF Conf.	Diff (29 ppm) > PDLG, 28% Recovery, 43.0 RPD
SEP-3	EPRI-0108-199	L011123008	08/01/2001	NITRATE + NITRITE AS N	0.56	J4	Field Duplicate	75.4 RPD
SEP-3	EPRI-0108-258	L011123009	08/01/2001	NITRATE + NITRITE AS N	0.56	J4	Field Duplicate	75.4 RPD
SEP-4	EPRI-0108-200	L011122015	07/31/2001	ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
SEP-4-SED	EPRI-0108-221	L011129005	07/31/2001	ZINC (ZN) TOT	39.0	J4	Lab Duplicate, LCS, XRF Conf.	Diff (29 ppm) > PDLG, 28% Recovery, 43.0 RPD
SEP-4-SED Dup	EPRI-0108-255	L011129006	07/31/2001	ZINC (ZN) TOT	<10.0	J4	Lab Duplicate, LCS, XRF Conf.	Diff (29 ppm) > PDLG, 28% Recovery, 43.0 RPD

TABLE 2. SUMMARY OF FLAGGED DATA

EL PASO RI  
SUMMER 2001

Site	Sample No	Lab No	Date	Parameter	Result (ppm)	Flag Code	QC Sample	Exceedance
SEP-6	EPRI-0108-201	L011123007	08/01/2001	NITRATE + NITRITE AS N	0.55	J4	Field Duplicate	75.4 RPD
SEP-7	EPRI-0108-202	L011122012	07/31/2001	ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
SEP-9	EPRI-0108-203	L011122011	07/31/2001	ZINC (ZN) DIS	<0.02	UJ4	Matrix Spike	67% Recovery
				ZINC (ZN) TOT	<0.02	UJ4	Matrix Spike	67% Recovery
SEP-9-SED	EPRI-0108-224	L011129004	07/31/2001	ZINC (ZN) TOT	170.0	J4	LCS, XRF Conf.	28% Recovery, 43.0 RPD
SEP-10-SED	EPRI-0108-225	L011129003	07/31/2001	ZINC (ZN) TOT	34.0	J4	Lab Duplicate, LCS, XRF Conf.	Diff (29 ppm) > PDLG, 28% Recovery, 43.0 RPD
SEP-11-SED	EPRI-0108-226	L011129002	07/31/2001	ZINC (ZN) TOT	27.0	J4	Lab Duplicate, LCS, XRF Conf.	Diff (29 ppm) > PDLG, 28% Recovery, 43.0 RPD
SEP-12	EPRI-0108-206	L011123006	08/01/2001	NITRATE + NITRITE AS N	0.4	J4	Field Duplicate	75.4 RPD
SEP-12-SED	EPRI-0108-227	L011129009	07/31/2001	ZINC (ZN) TOT	36.0	J4	Lab Duplicate, LCS, XRF Conf.	Diff (29 ppm) > PDLG, 28% Recovery, 43.0 RPD
SEP-13	EPRI-0108-207	L011123005	08/01/2001	NITRATE + NITRITE AS N	0.36	J4	Field Duplicate	75.4 RPD
SEP-13-SED	EPRI-0108-228	L011129007	08/01/2001	ZINC (ZN) TOT	95.0	J4	LCS, XRF Conf.	28% Recovery, 43.0 RPD
SEP-13-SED Split	EPRI-0108-228	L011202001	08/01/2001	ZINC (ZN) TOT	147.0	J4	XRF Conf.	43.0 RPD
SEP-13-SED Dup	EPRI-0108-257	L011129008	08/01/2001	ZINC (ZN) TOT	91.0	J4	LCS, XRF Conf.	28% Recovery, 43.0 RPD

TABLE 3. SUMMARY OF HISTORICAL COMPARISONS

SUMMARY OF THE COMPARISON OF SAMPLING PERIOD DATA TO THE DATABASE PERIOD DATA, SHOWING PARAMETERS THAT ARE HIGHEST OR  
OR LOWEST OR THREE OR MORE STANDARD DEVIATIONS FROM THE MEAN OF THE DATABASE PERIOD AND THE RELATIONSHIP TO THESE DATA

DataMan Program

ASARCO, EL PASO

SITE	SAMPLE DATE	RESULT mg/L	PARAMETER	COMPARISON		MIN (mg/L)	MEAN (mg/L)	MAX (mg/L)	STD DEVS FROM MEAN	RELATION TO DATABASE PERIOD
				DATABASE PERIOD	N					
EM-4	07/18/2001	122.0	BICARBONATE (HCO <sub>3</sub> )	08/26/1997-05/07/2001	16	142.0	152.3750	168.0	4.01	LOWEST
		0.65	NITRATE + NITRITE AS N	08/26/1997-05/07/2001	16	0.15	0.2594	0.66	3.10	
		0.024	ARSENIC (AS) TOT	08/06/1999-05/07/2001	8	<0.005	0.0070	0.012	6.36	HIGHEST
EP-5	07/16/2001	0.1	ARSENIC (AS) DIS	08/06/1997-08/02/1999	9	0.033	0.0518	0.069	4.20	HIGHEST
EP-6	07/16/2001	240.0	OXYGEN (O) (FLD) DIS	08/06/1997-05/04/2001	15	1.03	2.2960	5.0	> 10	HIGHEST
EP-13	07/18/2001	0.47	CADMIUM (CD) DIS	08/07/1997-08/03/1999	9	0.65	0.7256	.82	4.20	LOWEST
EP-15	07/19/2001	0.23	SELENIUM (SE) DIS	08/07/1997-08/03/1999	9	0.12	0.1600	0.20	3.13	HIGHEST
EP-20	07/17/2001	336.0	TOTAL SUSPENDED SOLIDS	08/07/1997-05/16/2001	16	17.0	81.7500	185.0	5.29	HIGHEST
		0.063	CADMIUM (CD) DIS	08/07/1997-08/02/1999	9	0.03	0.0394	0.048	3.94	HIGHEST
		6.8	IRON (FE) TOT	08/02/1999-05/16/2001	8	0.46	1.5100	3.4	4.83	HIGHEST
		0.011	LEAD (PB) TOT	08/02/1999-05/16/2001	8	<0.003	0.0044	0.006	5.09	HIGHEST
EP-20	07/17/2001	267.0	TOTAL SUSPENDED SOLIDS	08/07/1997-05/16/2001	16	17.0	81.7500	185.0	3.85	HIGHEST
		238.0	BICARBONATE (HCO <sub>3</sub> )	08/07/1997-05/16/2001	16	250	352.8125	403.0	3.19	LOWEST
		0.063	CADMIUM (CD) DIS	08/07/1997-08/02/1999	9	0.03	0.0394	0.048	3.94	HIGHEST
		6.3	IRON (FE) TOT	08/02/1999-05/16/2001	8	0.46	1.5100	3.4	4.37	HIGHEST
		0.011	LEAD (PB) TOT	08/02/1999-05/16/2001	8	<0.003	0.0044	0.006	5.09	HIGHEST
EP-21	07/30/2001	109.0	TURBIDITY (NTU)	05/08/2000-05/16/2001	5	21.2	37.9600	70.1	3.39	HIGHEST
EP-22	07/19/2001	3.7	ARSENIC (AS) DIS	08/15/1997-11/16/1998	6	0.008	0.0382	0.096	> 10	HIGHEST
		0.051	COPPER (CU) DIS	08/15/1997-11/16/1998	6	<0.025	0.0292	0.035	4.60	HIGHEST
		0.074	COPPER (CU) TOT	01/26/2000-05/09/2001	6	0.026	0.0355	0.046	5.36	HIGHEST
		1.6	SELENIUM (SE) DIS	08/15/1997-11/16/1998	6	0.054	0.2812	0.59	5.49	HIGHEST
EP-24	07/30/2001	696.0	CHLORIDE (CL)	08/15/1997-05/16/2001	16	806.0	1034.1250	1228.0	3.01	LOWEST
EP-25	07/30/2001	5060.0	SC (UMHOS/CM AT 25 C) (FLD)	08/15/1997-05/16/2001	7	5450	5617.1429	5870	3.41	LOWEST
EP-26	07/26/2001	1.3	SELENIUM (SE) DIS	08/11/1997-08/04/1999	9	0.050	0.1867	0.64	5.80	HIGHEST
EP-35	07/17/2001	0.074	CHROMIUM (CR) TOT	08/02/1999-05/16/2001	8	0.011	0.0245	0.044	3.92	HIGHEST
EP-43	07/30/2001	>100.0	TURBIDITY (NTU)	11/14/2000-05/17/2001	3	13.80	14.6000	16.0	> 10	LOWEST
EP-49	07/26/2001	PUMPING.0	DEPTH TO WATER LEVEL (FEET)	11/19/1997-05/10/2001	14	63.53	67.2093	69.33	> 10	LOWEST
		2.5	OXYGEN (O) (FLD) DIS	01/29/2000-05/10/2001	6	0.100	0.3167	0.600	> 10	HIGHEST
		21.0	ARSENIC (AS) DIS	11/19/1997-05/14/1999	7	207.0	332.8571	464.0	3.57	LOWEST
		0.035	CADMIUM (CD) DIS	11/19/1997-05/14/1999	7	26.0	37.4286	43.0	5.27	LOWEST
		0.83	IRON (FE) DIS	11/19/1997-05/14/1999	7	1266.0	1701.4286	2381.0	4.88	LOWEST
EP-51	07/20/2001	13980.0	SC (UMHOS/CM AT 25 C)	08/26/1997-05/10/2001	16	9060.0	10775.0000	12220.0	3.10	HIGHEST
		587.0	MAGNESIUM (MG) DIS	08/26/1997-05/10/2001	16	324.0	415.6250	536.0	3.01	HIGHEST
		171.0	BICARBONATE (HCO <sub>3</sub> )	08/26/1997-05/10/2001	16	215.0	242.6250	307.0	3.02	LOWEST
EP-52	07/20/2001	0.81	ARSENIC (AS) TOT	08/05/1999-05/10/2001	8	1.3	1.5250	1.7	5.15	LOWEST
		0.17	SELENIUM (SE) DIS	11/06/1997-08/05/1999	7	0.25	0.3229	0.38	3.24	LOWEST
EP-53	07/30/2001	>200.0	TURBIDITY (NTU)	08/04/1999-02/21/2001	4	157	164.5000	176	> 10	LOWEST
		30.0	ARSENIC (AS) DIS	08/11/1997-08/04/1999	8	44.	56.0000	63.0	3.92	LOWEST
		0.19	CADMIUM (CD) DIS	08/11/1997-08/04/1999	8	0.46	1.3200	1.7	3.02	LOWEST
EP-54	07/26/2001	133.0	TURBIDITY (NTU)	08/04/1999-05/10/2001	6	33.0	56.2500	88.0	3.40	HIGHEST
EP-55	07/26/2001	5010.0	TOTAL SUSPENDED SOLIDS	08/15/1997-05/11/2001	16	178.0	1077.3125	5379.0	5.26	HIGHEST
		2501.0	BICARBONATE (HCO <sub>3</sub> )	08/15/1997-05/11/2001	16	561	896.7500	1403.0	7.86	HIGHEST

NOTES: All quantities in mg/L (Water) or mg/kg (Soil) unless noted. All results LABORATORY unless field (FLD) or calculated (CALC).

: Number of samples in comparison data set; 50% of data set must be above lab detection limit before mean, median, & SD calculation.

All Data was used for Statistics

The detection limit was used in calculations.

TABLE  
SUMMARY OF THE COMPARISON OF SAMPLING PERIOD DATA TO THE DATABASE PERIOD DATA, SHOWING PARAMETERS THAT ARE HIGHEST OR  
OR LOWEST OR THREE OR MORE STANDARD DEVIATIONS FROM THE MEAN OF THE DATABASE PERIOD AND THE RELATIONSHIP TO THESE DATA

DataMan Program

ASARCO, EL PASO

SITE	SAMPLE DATE	RESULT mg/L	PARAMETER	COMPARISON		MIN (mg/L)	MEAN (mg/L)	MAX (mg/L)	STD DEVS FROM MEAN	RELATION TO DATABASE PERIOD
				DATABASE PERIOD	N					
		92.0	ARSENIC (AS) TOT	08/10/1999-05/11/2001	8	29.	51.2500	63.0	3.26	HIGHEST
		8.7	CADMIUM (CD) TOT	08/10/1999-05/11/2001	8	0.16	0.7888	2.3	> 10	HIGHEST
		292.0	IRON (FE) TOT	08/10/1999-05/11/2001	8	31.0	53.2500	89.0	> 10	HIGHEST
		1.1	LEAD (PB) TOT	08/10/1999-05/11/2001	8	0.028	0.2174	0.60	4.23	HIGHEST
		923.0	ZINC (ZN) TOT	08/10/1999-05/11/2001	8	27.	67.2500	177.0	> 10	HIGHEST
EP-60	07/27/2001	0.022	ARSENIC (AS) DIS	08/08/1997-08/03/1999	9	<0.005	0.0074	0.009	> 10	HIGHEST
		0.025	ARSENIC (AS) TOT	08/03/1999-05/15/2001	8	0.008	0.0115	0.021	3.21	HIGHEST
EP-63	07/27/2001	5.0	OXYGEN (O) (FLD) DIS	08/09/1997-05/15/2001	16	0.200	1.4081	3.20	3.65	HIGHEST
		1393.0	SC (UMHOS/CM AT 25 C) (FLD)	08/09/1997-05/15/2001	16	880	7576.2500	9590	3.09	
		0.041	ARSENIC (AS) DIS	08/09/1997-08/03/1999	9	.019	0.0217	0.027	7.31	HIGHEST
		0.047	ARSENIC (AS) TOT	08/03/1999-05/15/2001	8	0.021	0.0266	0.041	3.09	HIGHEST
EP-64	07/27/2001	0.1	ARSENIC (AS) DIS	08/09/1997-08/03/1999	9	.025	0.0394	0.048	9.26	HIGHEST
		0.11	ARSENIC (AS) TOT	08/03/1999-05/15/2001	8	0.038	0.0544	0.096	3.13	HIGHEST
EP-65	07/30/2001	30.0	TURBIDITY (NTU)	02/07/2000-05/16/2001	6	3.52	5.9067	7.0	> 10	HIGHEST
EP-65	07/30/2001	3.6	OXYGEN (O) (FLD) DIS	08/16/1997-05/16/2001	16	0.270	0.9263	2.60	3.83	HIGHEST
EP-66	07/27/2001	1290.0	SC (UMHOS/CM AT 25 C) (FLD)	08/08/1997-05/15/2001	16	5920	7734.3750	9020	7.48	LOWEST
EP-68	07/17/2001	0.013	ARSENIC (AS) TOT	08/05/1999-05/07/2001	8	<0.005	0.0055	0.008	7.02	HIGHEST
EP-70	07/18/2001	59.87	DEPTH TO WATER LEVEL (FEET)	08/12/1997-05/07/2001	17	59.81	61.8476	62.65	3.15	
		<0.005	CADMIUM (CD) DIS	08/26/1997-08/05/1999	9	0.009	0.0121	0.015	3.15	LOWEST
EP-72	07/18/2001	11940.0	SC (UMHOS/CM AT 25 C)	08/12/1997-05/07/2001	12	5700.	6560.0000	8520.0	6.48	HIGHEST
		11670.0	SC (UMHOS/CM AT 25 C) (FLD)	08/12/1997-05/07/2001	12	5560	6691.6667	8400	5.77	HIGHEST
		11307.0	TDS (MEASURED AT 180 C)	08/12/1997-05/07/2001	12	4539.	5490.7500	7586.0	6.70	HIGHEST
		558.0	MAGNESIUM (MG) DIS	08/12/1997-05/07/2001	12	148.	191.1667	337.0	6.81	HIGHEST
		2256.0	SODIUM (NA) DIS	08/12/1997-05/07/2001	12	900.	1076.7500	1655.0	5.91	HIGHEST
		403.0	BICARBONATE (HCO3)	08/12/1997-05/07/2001	12	282.0	309.6667	351.0	3.38	HIGHEST
		6639.0	SULFATE (SO4)	08/12/1997-05/07/2001	12	2209.0	2925.8333	4662.0	4.92	HIGHEST
		86.0	NITRATE + NITRITE AS N	08/12/1997-05/07/2001	12	34.0	46.9167	68.0	3.44	HIGHEST
		0.094	ARSENIC (AS) DIS	08/12/1997-11/10/1998	6	0.45	0.4850	0.50	> 10	LOWEST
		<0.005	CADMIUM (CD) DIS	08/12/1997-11/10/1998	6	0.20	0.2067	0.22	> 10	LOWEST
		16.0	SELENIUM (SE) DIS	08/12/1997-11/10/1998	6	0.36	0.4150	.51	> 10	HIGHEST
		15.0	SELENIUM (SE) TOT	01/24/2000-05/07/2001	6	1.8	5.4167	9.4	3.82	HIGHEST
		0.078	ZINC (ZN) DIS	08/12/1997-11/10/1998	6	.45	0.5000	0.54	> 10	LOWEST
EP-73	07/20/2001	13.6	TURBIDITY (NTU)	08/05/1999-05/09/2001	8	4.50	7.8738	9.78	3.40	HIGHEST
EP-78	07/25/2001	27.1	TURBIDITY (NTU)	08/09/1999-05/14/2001	7	1.55	8.5457	16.80	3.13	HIGHEST
		3.4	ARSENIC (AS) DIS	08/13/1997-08/09/1999	9	4.7	5.7000	6.4	4.51	LOWEST
EP-79	07/25/2001	77.0	TURBIDITY (NTU)	08/09/1999-05/14/2001	7	1.40	6.2271	9.99	> 10	HIGHEST
		0.024	ARSENIC (AS) TOT	08/09/1999-05/14/2001	8	0.006	0.0086	0.014	6.14	HIGHEST
EP-81	07/25/2001	0.55	ARSENIC (AS) DIS	08/13/1997-08/09/1999	9	0.089	0.2388	0.40	3.62	HIGHEST
		0.31	SELENIUM (SE) DIS	08/13/1997-08/09/1999	9	0.19	0.2256	0.26	3.68	HIGHEST
EP-82	07/25/2001	0.019	ARSENIC (AS) TOT	08/09/1999-05/14/2001	8	0.006	0.0089	0.011	6.95	HIGHEST
EP-83	07/24/2001	0.014	ARSENIC (AS) DIS	08/13/1997-08/09/1999	9	<0.005	0.0068	0.010	3.53	HIGHEST
EP-85	07/25/2001	2.1	ARSENIC (AS) DIS	08/13/1997-08/09/1999	9	2.5	2.8889	3.2	3.58	LOWEST
EP-86	07/25/2001	0.013	ARSENIC (AS) DIS	08/13/1997-08/09/1999	9	<0.005	0.0069	.011	3.11	HIGHEST

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N: Number of samples in comparison data set; 50% of data set must be above lab detection limit before mean, median, & SD calculation.  
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DataMan Program

ASARCO, EL PASO

SITE	SAMPLE DATE	RESULT mg/L	PARAMETER	COMPARISON DATABASE PERIOD	N	MIN (mg/L)	MEAN (mg/L)	MAX (mg/L)	STD DEVS FROM MEAN	RELATION TO DATABASE PERIOD
EP-86	07/25/2001	0.014	ARSENIC (AS) DIS	08/13/1997-08/09/1999	9	<0.005	0.0069	.011	3.62	HIGHEST
		0.012	ARSENIC (AS) TOT	08/09/1999-05/14/2001	8	<0.005	0.0065	0.009	3.64	HIGHEST
EP-88	07/19/2001	0.087	SELENIUM (SE) TOT	08/05/1999-05/09/2001	8	0.035	0.0495	0.067	3.58	HIGHEST
EP-90	07/19/2001	194.0	TURBIDITY (NTU)	08/05/1999-05/08/2001	8	7.91	33.1263	61.0	8.59	HIGHEST
EP-93	07/24/2001	217.0	TURBIDITY (NTU)	05/01/2000-05/11/2001	5	16.5	66.1000	112	3.52	HIGHEST
EP-96	07/24/2001	0.039	ARSENIC (AS) TOT	10/13/1999-05/11/2001	7	0.005	0.0126	0.023	4.00	HIGHEST
EP-97	07/24/2001	3.0	NITRATE + NITRITE AS N	10/18/1999-05/14/2001	7	<0.050	0.2776	0.46	> 10	HIGHEST
		0.096	SELENIUM (SE) TOT	10/18/1999-05/14/2001	7	<0.005	0.0097	0.020	> 10	HIGHEST
EP-102	07/18/2001	0.17	CADMIUM (CD) TOT	10/21/1999-05/08/2001	7	0.050	0.0824	0.11	3.72	HIGHEST
EP-103	07/19/2001	216.0	CHLORIDE (CL)	10/21/1999-05/08/2001	7	154.	176.5714	190.0	3.12	HIGHEST
		0.04	ARSENIC (AS) TOT	10/21/1999-05/08/2001	7	0.005	0.0149	0.023	3.59	HIGHEST
EP-106	07/18/2001	63.07	DEPTH TO WATER LEVEL (FEET)	10/21/1999-05/09/2001	7	59.98	60.4957	61.15	6.27	HIGHEST
		6070.0	SC (UMHOS/CM AT 25 C)	10/21/1999-05/09/2001	7	4180.	4758.5714	4960.0	4.73	HIGHEST
		4825.0	TDS (MEASURED AT 180 C)	10/21/1999-05/09/2001	7	3328.	3735.7143	3951.0	5.18	HIGHEST
		391.0	CALCIUM (CA) DIS	10/21/1999-05/09/2001	7	210.0	234.2857	263.0	8.62	HIGHEST
		174.0	MAGNESIUM (MG) DIS	10/21/1999-05/09/2001	7	96.0	106.0000	119.0	7.36	HIGHEST
		181.0	BICARBONATE (HCO3)	10/21/1999-05/09/2001	7	293.0	301.0000	309.0	> 10	LOWEST
		931.0	CHLORIDE (CL)	10/21/1999-05/09/2001	7	354.0	404.7143	474.0	> 10	HIGHEST
		68.0	NITRATE + NITRITE AS N	10/21/1999-05/09/2001	7	6.6	9.4429	12.0	> 10	HIGHEST
		0.049	ARSENIC (AS) TOT	10/21/1999-05/09/2001	7	<0.005	0.0087	0.017	8.42	HIGHEST
		0.52	SELENIUM (SE) TOT	10/21/1999-05/09/2001	7	0.087	0.1096	0.12	> 10	HIGHEST
EP-107	07/17/2001	60.01	DEPTH TO WATER LEVEL (FEET)	10/21/1999-05/08/2001	7	63.04	63.5943	64.02	> 10	LOWEST
		4610.0	SC (UMHOS/CM AT 25 C)	10/21/1999-05/08/2001	7	5770.0	6160.0000	6450.	5.19	LOWEST
		3648.0	TDS (MEASURED AT 180 C)	10/21/1999-05/08/2001	7	4482.0	4682.2857	4874.0	6.84	LOWEST
		5.11	TURBIDITY (NTU)	01/24/2000-05/08/2001	6	0.41	2.1050	3.07	3.23	HIGHEST
		248.0	CALCIUM (CA) DIS	10/21/1999-05/08/2001	7	335.	362.7143	436.	3.34	LOWEST
		112.0	MAGNESIUM (MG) DIS	10/21/1999-05/08/2001	7	156.0	172.8571	211.	3.36	LOWEST
		284.0	BICARBONATE (HCO3)	10/21/1999-05/08/2001	7	177.0	188.5714	200.0	> 10	HIGHEST
		400.0	CHLORIDE (CL)	10/21/1999-05/08/2001	7	695.0	913.8571	1085.	3.88	LOWEST
		0.78	FLUORIDE (F)	10/21/1999-05/08/2001	7	0.89	0.9829	1.1	3.04	LOWEST
		11.0	NITRATE + NITRITE AS N	10/21/1999-05/08/2001	7	64.0	77.8571	90.	5.73	LOWEST
		0.11	SELENIUM (SE) TOT	10/21/1999-05/08/2001	7	0.42	0.4429	0.49	> 10	LOWEST
EP-108	07/25/2001	6.4	OXYGEN (O) (FLD) DIS	01/28/2000-05/14/2001	6	1.50	2.5833	3.80	5.07	HIGHEST
EP-109	07/25/2001	6.9	OXYGEN (O) (FLD) DIS	01/28/2000-05/14/2001	6	3.0	3.4833	4.10	7.26	HIGHEST
		0.026	ARSENIC (AS) TOT	10/26/1999-05/14/2001	7	0.007	0.0134	0.019	3.33	HIGHEST
EP-110	07/17/2001	0.013	ARSENIC (AS) TOT	10/29/1999-05/07/2001	7	<0.005	0.0071	0.009	4.35	HIGHEST
EP-116	07/16/2001	6661.0	TOTAL SUSPENDED SOLIDS	11/18/1999-05/04/2001	7	423.0	1603.1429	2965.0	5.30	HIGHEST
		1879.0	BICARBONATE (HCO3)	11/18/1999-05/04/2001	7	451.0	781.5714	1049.0	4.28	HIGHEST
		11.0	ARSENIC (AS) TOT	11/18/1999-05/04/2001	7	1.5	3.9000	6.2	3.89	HIGHEST
		3.2	CADMIUM (CD) TOT	11/18/1999-05/04/2001	7	0.40	1.0800	1.6	4.59	HIGHEST
		0.12	CHROMIUM (CR) TOT	11/18/1999-05/04/2001	7	<0.010	0.0323	0.069	4.19	HIGHEST
		70.0	COPPER (CU) TOT	11/18/1999-05/04/2001	7	1.9	14.4429	38.0	3.92	HIGHEST
		170.0	IRON (FE) TOT	11/18/1999-05/04/2001	7	11.0	48.5714	90.	3.90	HIGHEST
		9.5	LEAD (PB) TOT	11/18/1999-05/04/2001	7	0.55	2.4357	4.2	4.61	HIGHEST
		15.0	ZINC (ZN) TOT	11/18/1999-05/04/2001	7	2.3	5.1714	7.4	4.52	HIGHEST
EP-117	07/16/2001	7.3	PH	11/18/1999-05/04/2001	7	7.5	7.7571	7.9	3.27	LOWEST

NOTES: All quantities in mg/L (Water) or mg/kg (Soil) unless noted. All results LABORATORY unless field (FLD) or calculated (CALC).  
N: Number of samples in comparison data set; 50% of data set must be above lab detection limit before mean, median, & SD calculation.  
All Data was used for Statistics The detection limit was used in calculations.

TABLE  
SUMMARY OF THE COMPARISON OF SAMPLING PERIOD DATA TO THE DATABASE PERIOD DATA, SHOWING PARAMETERS THAT ARE HIGHEST OR  
OR LOWEST OR THREE OR MORE STANDARD DEVIATIONS FROM THE MEAN OF THE DATABASE PERIOD AND THE RELATIONSHIP TO THESE DATA

DataMan Program

ASARCO, EL PASO

SITE	SAMPLE DATE	RESULT mg/L	PARAMETER	COMPARISON		MIN (mg/L)	MEAN (mg/L)	MAX (mg/L)	STD DEVS FROM MEAN	RELATION TO DATABASE PERIOD
				DATABASE PERIOD	N					
SEP-1	07/31/2001	98.8	TURBIDITY (NTU)	11/01/1999-05/16/2001	7	12.65	30.3357	52.1	5.47	HIGHEST
SEP-1	07/31/2001	98.1	TURBIDITY (NTU)	11/01/1999-05/16/2001	7	12.65	30.3357	52.1	5.42	HIGHEST
SEP-2	07/31/2001	210.0	TURBIDITY (NTU)	11/01/1999-05/17/2001	7	13.0	27.2429	64.0	> 10	HIGHEST
SEP-2-SED	07/31/2001	270.0	COPPER (CU) TOT	08/20/1999-05/17/2001	8	<20	57.2500	110	5.59	HIGHEST
SEP-3	08/01/2001	157.0	TURBIDITY (NTU)	11/01/1999-05/16/2001	7	17.2	30.8286	51.0	> 10	HIGHEST
SEP-3	08/01/2001	152.0	TURBIDITY (NTU)	11/01/1999-05/16/2001	7	17.2	30.8286	51.0	> 10	HIGHEST
SEP-4	07/31/2001	114.0	TURBIDITY (NTU)	11/01/1999-05/17/2001	7	15.0	33.9429	56.8	5.06	HIGHEST
SEP-6	08/01/2001	127.0	TURBIDITY (NTU)	11/01/1999-05/16/2001	7	16.8	31.2571	56.0	7.42	HIGHEST
SEP-7	07/31/2001	101.0	TURBIDITY (NTU)	11/01/1999-05/16/2001	7	14.15	30.1357	54.0	5.46	HIGHEST
SEP-9	07/31/2001	84.5	TURBIDITY (NTU)	11/01/1999-05/17/2001	7	11.8	23.6214	60.5	3.54	HIGHEST
SEP-10	07/31/2001	133.0	TURBIDITY (NTU)	11/01/1999-05/17/2001	7	13.0	30.5429	86.0	4.03	HIGHEST
SEP-11	07/31/2001	139.0	TURBIDITY (NTU)	11/02/1999-05/17/2001	7	16.0	29.3714	74.9	5.27	HIGHEST
SEP-12	08/01/2001	167.0	TURBIDITY (NTU)	11/01/1999-05/17/2001	7	16.0	31.3429	57.0	9.21	HIGHEST
SEP-12-SED	07/31/2001	160.0	COPPER (CU) TOT	08/20/1999-05/17/2001	8	<20.0	43.6250	73.0	6.09	HIGHEST
SEP-13	08/01/2001	130.0	TURBIDITY (NTU)	11/01/1999-05/17/2001	7	13.2	28.3286	51.2	7.90	HIGHEST

NOTES: All quantities in mg/L (Water) or mg/kg (Soil) unless noted. All results LABORATORY unless field (FLD) or calculated (CALC).  
N: Number of samples in comparison data set; 50% of data set must be above lab detection limit before mean, median, & SD calculation.  
All Data was used for Statistics The detection limit was used in calculations.



## APPENDIX 2

## DATABASE



## TABLE OF CONTENTS BY SITE TYPE

Page	Site Code	Site Name	Site Type	Elevation MP	Well Depth
1	EM-1	EM-1	Groundwater	3784.99	84.75
1	EM-2	EM-2	Groundwater	3776.02	76.31
1	EM-4	EM-4	Groundwater	3774.29	115
2	EM-5	EM-5	Groundwater	3776.50	21.32
2	EM-6	EM-6	Groundwater	3770.64	89.50
2	EP-4	EP-4	Groundwater	3715.96	15.33
3	EP-5	EP-5	Groundwater	3716.92	8.30
3	EP-6	EP-6	Groundwater	3716.22	8.94
3	EP-7	EP-7	Groundwater	3722.10	8.78
4	EP-12	EP-12	Groundwater	3773.23	80.00
4	EP-13	EP-13	Groundwater	3776.22	90.00
4	EP-14	EP-14	Groundwater	3774.98	72.05
5	EP-15	EP-15	Groundwater	3773.19	70.00
5	EP-20	EP-20	Groundwater	3724.55	29.58
5	EP-21	EP-21	Groundwater	3778.62	50.00
6	EP-22	EP-22	Groundwater	3787.82	68.94
6	EP-23	EP-23	Groundwater	3775.32	47.00
6	EP-24	EP-24	Groundwater	3774.87	58.00
7	EP-25	EP-25	Groundwater	3786.72	70.00
7	EP-26	EP-26	Groundwater	3773.43	78.63
7	EP-29	EP-29	Groundwater	3727.25	36.44
8	EP-35	EP-35	Groundwater	3725.74	33.17
8	EP-43	EP-43	Groundwater	3772.17	90.00
8	EP-49	EP-49	Groundwater	3785.59	83.10
9	EP-51	EP-51	Groundwater	3774.66	71.00
9	EP-52	EP-52	Groundwater	3787.38	71.00
9	EP-53	EP-53	Groundwater	3805.64	79.71
10	EP-54	EP-54	Groundwater	3787.37	81.25
10	EP-55	EP-55	Groundwater	3788.23	60.34
10	EP-56	EP-56	Groundwater	3772.09	58.00
11	EP-57	EP-57	Groundwater	3723.52	30.00
11	EP-58	EP-58	Groundwater	3726.67	30.00
11	EP-59	EP-59	Groundwater	3728.37	20.00
12	EP-60	EP-60	Groundwater	3722.52	17.00
12	EP-61	EP-61	Groundwater	3722.95	20.00
12	EP-62	EP-62	Groundwater	3720.64	17.48
13	EP-63	EP-63	Groundwater	3719.52	17.00
13	EP-64	EP-64	Groundwater	3724.00	17.13
13	EP-65	EP-65	Groundwater	3721.39	20.00
14	EP-66	EP-66	Groundwater	3722.88	17.00
14	EP-67	EP-67	Groundwater	3761.07	60.35
14	EP-68	EP-68	Groundwater	3783.76	84.26
15	EP-70	EP-70	Groundwater	3777.67	84.20
15	EP-71	EP-71	Groundwater	3765.19	67.36
15	EP-72	EP-72	Groundwater	3778.50	78.46
16	EP-73	EP-73	Groundwater	3787.45	83.20
16	EP-75	EP-75	Groundwater	3814.50	87.76
16	EP-76	EP-76	Groundwater	3817.64	84.32
17	EP-77	EP-77	Groundwater	3776.88	57.70
17	EP-78	EP-78	Groundwater	3773.46	47.40
17	EP-79	EP-79	Groundwater	3793.94	56.50
18	EP-80	EP-80	Groundwater	3726.59	24.50
18	EP-81	EP-81	Groundwater	3734.09	28.30
18	EP-82	EP-82	Groundwater	3773.65	33.00
19	EP-83	EP-83	Groundwater	3803.73	53.00
19	EP-84	EP-84	Groundwater	3797.52	15.48
19	EP-85	EP-85	Groundwater	3741.91	26.60
20	EP-86	EP-86	Groundwater	3819.99	77.80
20	EP-88	EP-88	Groundwater	3776.56	43.00
20	EP-89	EP-89	Groundwater	3734.73	42.65
21	EP-90	EP-90	Groundwater	3777.83	71.00
21	EP-93	EP-93	Groundwater		60.39
21	EP-94	EP-94	Groundwater		70.13
22	EP-95	EP-95	Groundwater		62.70
22	EP-96	EP-96	Groundwater		72.34
22	EP-97	EP-97	Groundwater		15.34
23	EP-98	EP-98	Groundwater		30.29
23	EP-99	EP-99	Groundwater		75.35
23	EP-100	EP-100	Groundwater		55.12
24	EP-101	EP-101	Groundwater		75.11
24	EP-102	EP-102	Groundwater		75.47

## TABLE OF CONTENTS BY SITE TYPE

Page	Site Code	Site Name	Site Type	Elevation MP	Well Depth
24	EP-103	EP-103	Groundwater		73.89
25	EP-104	EP-104	Groundwater		80.00
25	EP-105	EP-105	Groundwater		64.84
25	EP-106	EP-106	Groundwater		83.00
26	EP-107	EP-107	Groundwater		82.24
26	EP-108	EP-108	Groundwater		43.34
26	EP-109	EP-109	Groundwater		43.07
27	EP-110	EP-110	Groundwater		28.00
27	EP-111	EP-111	Groundwater		19.78
27	EP-112	EP-112	Groundwater		21.33
28	EP-113	EP-113	Groundwater		20.70
28	EP-114	EP-114	Groundwater		20.17
28	EP-115	EP-115	Groundwater		15.70
29	EP-116	EP-116	Groundwater		23.58
29	EP-117	EP-117	Groundwater		27.18
29	EP-118	EP-118	Groundwater		34.29
30	EP-119	EP-119	Groundwater		22.80
30	EP-120	EP-120	Groundwater		
31	EP-121	EP-121	Groundwater		
31	EP-122	EP-122	Groundwater		22.74
31	EP-123	EP-123	Groundwater		53.30
32	EP-124	EP-124	Groundwater		40.29
32	EP-125	EP-125	Groundwater		53.00
32	EP-126	EP-126	Groundwater		43.20
33	EP-127	EP-127	Groundwater		21.95
33	EP-128	EP-128	Groundwater		23.00
33	EP-129	EP-129	Groundwater		38.50
34	EP-130	EP-130	Groundwater		82.90
34	EP-131	EP-131	Groundwater		72.56
34	EP-132	EP-132	Groundwater		27.60
35	DI	DI BLANK	Quality Control		
41	SEP-2-SED	SEP-2 SOIL SEDIMENT	SEDIMENT/SOIL		
41	SEP-4-SED	SEP-4 SOIL SEDIMENT	SEDIMENT/SOIL		
41	SEP-9-SED	SEP-9 SOIL SEDIMENT	SEDIMENT/SOIL		
42	SEP-10-SED	SEP-10 SOIL SEDIMENT	SEDIMENT/SOIL		
42	SEP-11-SED	SEP-11 SOIL SEDIMENT	SEDIMENT/SOIL		
42	SEP-12-SED	SEP-12 SOIL SEDIMENT	SEDIMENT/SOIL		
43	SEP-13-SED	SEP-13 SOIL SEDIMENT	SEDIMENT/SOIL		
37	SEP-1	SEP-1	Surface Water		
37	SEP-2	SEP-2	Surface Water		
37	SEP-3	SEP-3	Surface Water		
38	SEP-4	SEP-4	Surface Water		
38	SEP-6	SEP-6	Surface Water		
39	SEP-7	SEP-7	Surface Water		
39	SEP-9	SEP-9	Surface Water		
39	SEP-10	SEP-10	Surface Water		
40	SEP-11	SEP-11	Surface Water		
40	SEP-12	SEP-12	Surface Water		
40	SEP-13	SEP-13	Surface Water		

## -- SAMPLE TYPE, GROUNDWATER --

	EM-1	EM-1	EM-2	EM-4
SITE CODE	EM-1	EM-1	EM-2	EM-4
SAMPLE DATE	07/31/2001	07/31/2001	07/18/2001	07/18/2001
SAMPLE TIME	13:50	14:00	09:40	10:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011122009	L011122010	L011038005	L011038006
REMARKS	DUPLICATE			
SAMPLE NUMBER	EPRI-0108-209	EPRI-0108-253	EPRI-0108-210	EPRI-0108-211

## -- PHYSICAL PARAMETERS --

	EM-1	EM-1	EM-2	EM-4
DEPTH TO WATER LEVEL (FEET)	64.83		61.85	61.0
OXYGEN (O) (FLD) DIS	2.7 J4	1.9 J4	2.4	2.8
PH (FLD)	7.25	7.26	6.93	7.23
PH	7.8	7.8	7.7	7.5
SC (UMHOS/CM AT 25 C)	5600.0	5620.0	4140.0	9210.0
SC (UMHOS/CM AT 25 C) (FLD)	5860.0	5940.0	3870.0	9370.0
TDS (MEASURED AT 180 C)	4154.0	4188.0	3061.0	5925.0
TOTAL SUSPENDED SOLIDS	15.0	17.0	3.6	1.7
TURBIDITY (NTU)	3.93		1.26	0.67
WATER TEMPERATURE (C) (FLD)	26.6	24.0	25.3	23.9

## -- MAJOR CONSTITUENTS --

	EM-1	EM-1	EM-2	EM-4
CALCIUM (CA) DIS	208.0	212.0	173.0	367.0
MAGNESIUM (MG) DIS	121.0	123.0	55.0	162.0
SODIUM (NA) DIS	914.0	902.0	615.0	1356.0
POTASSIUM (K) DIS	29.0	30.0	11.0	28.0
BICARBONATE (HCO3)	221.0	214.0	273.0	122.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	2043.0	2027.0	1581.0	400.0
CHLORIDE (CL)	781.0	726.0	389.0	3162.0
FLUORIDE (F)	0.8	0.82	1.5	1.1

## -- NUTRIENTS --

	EM-1	EM-1	EM-2	EM-4
NITRATE + NITRITE AS N	0.27	0.31	29.0	0.65

## -- METALS &amp; MINOR CONSTITUENTS --

	EM-1	EM-1	EM-2	EM-4
ARSENIC (AS) DIS	<0.005	<0.005	0.99	0.019
ARSENIC (AS) TOT	<0.005	<0.005	1.1	0.024
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	0.54	0.56	<0.1	<0.1
IRON (FE) TOT	2.4	2.6	0.26	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.008	0.009	0.006 UJ1	<0.003
SELENIUM (SE) DIS	<0.005	<0.005	0.11	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	0.11	<0.005
ZINC (ZN) DIS	<0.02 UJ4	<0.02 UJ4	0.032	0.039
ZINC (ZN) TOT	0.026 J4	0.025 J4	0.04	0.045

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EM-5	EM-6	EP-4
SAMPLE DATE	07/19/2001	07/19/2001	07/16/2001	
SAMPLE TIME	10:40	11:00	12:45	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011038020	L011038021	L011027002	
SAMPLE NUMBER	EPRI-0108-212	EPRI-0108-213	EPRI-0108-100	
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	17.39	39.15	7.12	
OXYGEN (O) (FLD) DIS	2.5	3.0	2.2	
PH (FLD)	7.44	7.17	7.45	
PH	7.9	8.2	7.9	
SC (UMHOS/CM AT 25 C)	3200.0	4200.0	1858.0	
SC (UMHOS/CM AT 25 C) (FLD)	3120.0	4080.0	1819.0	
TDS (MEASURED AT 180 C)	2250.0	2943.0	1245.0	
TOTAL SUSPENDED SOLIDS	4.4 J4	1.0 J4	294.0	
TURBIDITY (NTU)	3.33	0.69	164.0	
WATER TEMPERATURE (C) (FLD)	25.7	24.9	23.4	
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	123.0	109.0	116.0	
MAGNESIUM (MG) DIS	30.0	67.0	31.0	
SODIUM (NA) DIS	539.0	767.0	243.0	
POTASSIUM (K) DIS	35.0	12.0	14.0	
BICARBONATE (HCO3)	143.0	390.0	305.0	
CARBONATE AS CO3	<1.0	<1.0	<1.0	
SULFATE (SO4)	1335.0	1578.0	377.0	
CHLORIDE (CL)	353.0	474.0	248.0	
FLUORIDE (F)	4.1	1.9	0.68	
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.24 UJ1 J4	7.5 J4	<0.05	
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS	1.5	0.04	0.095	
ARSENIC (AS) TOT	1.5	0.042	0.11	
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	
CADMIUM (CD) TOT	0.006	<0.005	<0.005	
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	
COPPER (CU) DIS	<0.025	<0.025	<0.025	
COPPER (CU) TOT	<0.025	<0.025	0.047	
IRON (FE) DIS	1.2	<0.1	0.63	
IRON (FE) TOT	1.4	<0.1	6.6	
LEAD (PB) DIS	<0.003	<0.003	<0.003	
LEAD (PB) TOT	0.005 J4	0.004 J4	0.038	
SELENIUM (SE) DIS	0.011	0.088	<0.005	
SELENIUM (SE) TOT	0.007	0.088	<0.005	
ZINC (ZN) DIS	0.061	0.039	<0.02	
ZINC (ZN) TOT	0.075	0.032 J4	0.09	

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-5	EP-6	EP-7	EP-7
SAMPLE DATE	07/16/2001	07/16/2001	07/16/2001	07/16/2001	07/16/2001
SAMPLE TIME	13:15	13:30	13:50	14:00	14:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011027003	L011027004	L011027005	L011027006	L011027006
REMARKS					DUPLICATE
SAMPLE NUMBER	EPRI-0108-101	EPRI-0108-102	EPRI-0108-103	EPRI-0108-234	

-- PHYSICAL PARAMETERS --

	EP-5	EP-6	EP-7	EP-7
DEPTH TO WATER LEVEL (FEET)	6.02	6.98	6.15	
OXYGEN (O) (FLD) DIS	2.5	240.0	1.9	1.8
PH (FLD)	7.34	7.59	7.58	7.6
PH	7.9	7.9	7.9	8.0
SC (UMHOS/CM AT 25 C)	4300.0	4100.0	2710.0	2710.0
SC (UMHOS/CM AT 25 C) (FLD)	4690.0	4400.0	2710.0	2716.0
TDS (MEASURED AT 180 C)	2924.0	2924.0	1832.0	1835.0
TOTAL SUSPENDED SOLIDS	60.0	6.1	13.0	10.0
TURBIDITY (NTU)	18.6	7.13	8.38	
WATER TEMPERATURE (C) (FLD)	27.9	27.8	25.5	25.6

-- MAJOR CONSTITUENTS --

	EP-5	EP-6	EP-7	EP-7
CALCIUM (CA) DIS	100.0	182.0	88.0	88.0
MAGNESIUM (MG) DIS	46.0	65.0	27.0	27.0
SODIUM (NA) DIS	903.0	686.0	475.0	468.0
POTASSIUM (K) DIS	13.0	17.0	7.5	7.7
BICARBONATE (HCO3)	854.0	422.0	310.0	293.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	808.0	1260.0	704.0	785.0
CHLORIDE (CL)	575.0	365.0	324.0	272.0
FLUORIDE (F)	2.6	2.0	1.7	1.7

-- NUTRIENTS --

	EP-5	EP-6	EP-7	EP-7
NITRATE + NITRITE AS N	0.053	3.4	<0.05	<0.05

-- METALS & MINOR CONSTITUENTS --

	EP-5	EP-6	EP-7	EP-7
ARSENIC (AS) DIS	0.1	0.03	0.058	0.049
ARSENIC (AS) TOT	0.1	0.034	0.076	0.068
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	0.029	<0.025	<0.025	<0.025
COPPER (CU) TOT	0.053	<0.025	<0.025	<0.025
IRON (FE) DIS	0.21	<0.1	0.98	0.85
IRON (FE) TOT	0.64	<0.1	2.0	1.9
LEAD (PB) DIS	0.005	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.016	<0.003	0.004	<0.003
SELENIUM (SE) DIS	<0.005	0.038	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	0.03	<0.005	<0.005
ZINC (ZN) DIS	0.028	<0.02	<0.02	<0.02
ZINC (ZN) TOT	0.1	0.035	0.041	0.039

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-12	EP-13	EP-14
SAMPLE DATE	07/30/2001	07/18/2001	07/18/2001	
SAMPLE TIME	18:00	13:30	10:45	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011122007	L011038009	L011038007	
SAMPLE NUMBER	EPRI-0108-104	EPRI-0108-105	EPRI-0108-106	

## -- PHYSICAL PARAMETERS --

	EP-12	EP-13	EP-14
DEPTH TO WATER LEVEL (FEET)	60.4	61.27	59.95
OXYGEN (O) (FLD) DIS	0.9 J4	2.8	0.1
PH (FLD)	6.9	7.05	6.87
PH	7.6	7.7	7.8
SC (UMHOS/CM AT 25 C)	5810.0	10000.0	5530.0
SC (UMHOS/CM AT 25 C) (FLD)	4790.0	9760.0	5420.0
TDS (MEASURED AT 180 C)	4490.0	8082.0	4470.0
TOTAL SUSPENDED SOLIDS	154.0	4.4	1.4
TURBIDITY (NTU)	>100	4.49	2.7
WATER TEMPERATURE (C) (FLD)	26.0	30.9	25.5

## -- MAJOR CONSTITUENTS --

	EP-12	EP-13	EP-14
CALCIUM (CA) DIS	310.0	323.0	395.0
MAGNESIUM (MG) DIS	115.0	66.0	101.0
SODIUM (NA) DIS	989.0	2093.0	832.0
POTASSIUM (K) DIS	16.0	70.0	57.0
BICARBONATE (HCO3)	793.0	323.0	377.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2085.0	4051.0	2600.0
CHLORIDE (CL)	562.0	720.0	400.0
FLUORIDE (F)	1.2	1.3	1.5

## -- NUTRIENTS --

	EP-12	EP-13	EP-14
NITRATE + NITRITE AS N	16.0	122.0	26.0

## -- METALS &amp; MINOR CONSTITUENTS --

	EP-12	EP-13	EP-14
ARSENIC (AS) DIS	0.71	30.0	1.5
ARSENIC (AS) TOT	0.96	28.0	1.5
CADMIUM (CD) DIS	<0.005	0.47	<0.005
CADMIUM (CD) TOT	<0.005	0.52	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	0.028	<0.025
COPPER (CU) TOT	<0.025	0.026	<0.025
IRON (FE) DIS	0.47	<0.1	0.33
IRON (FE) TOT	2.5	0.22	0.39
LEAD (PB) DIS	0.003	<0.003	0.003
LEAD (PB) TOT	0.01	0.006 UJ1	0.004 UJ1
SELENIUM (SE) DIS	0.032	4.5	0.34
SELENIUM (SE) TOT	0.097	4.6	0.33
ZINC (ZN) DIS	<0.02 UJ4	0.041	<0.02
ZINC (ZN) TOT	0.024 J4	0.045	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-15	EP-20	EP-20	EP-21
SAMPLE DATE	07/19/2001	07/17/2001	07/17/2001	07/30/2001	
SAMPLE TIME	09:15	08:45	08:50	09:30	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011038018	L011027010	L011027011	L011102001	
REMARKS			DUPLICATE		
SAMPLE NUMBER	EPRI-0108-107	EPRI-0108-108	EPRI-0108-235	EPRI-0108-109	

-- PHYSICAL PARAMETERS --

	EP-15	EP-20	EP-20	EP-21
DEPTH TO WATER LEVEL (FEET)	59.84	13.31		32.69
OXYGEN (O) (FLD) DIS	2.6	2.6	2.9	1.8 J4
PH (FLD)	7.07	7.09	7.12	7.06
PH	7.8	7.2	7.3	8.0
SC (UMHOS/CM AT 25 C)	4520.0	9190.0	9160.0	4860.0
SC (UMHOS/CM AT 25 C) (FLD)	4380.0	8800.0	8810.0	4520.0
TDS (MEASURED AT 180 C)	3284.0	7921.0	7868.0	2769.0
TOTAL SUSPENDED SOLIDS	65.0 J4	336.0 J4	267.0 J4	135.0
TURBIDITY (NTU)	28.2	151.0		109.0
WATER TEMPERATURE (C) (FLD)	24.0	22.6	22.2	25.4

-- MAJOR CONSTITUENTS --

	EP-15	EP-20	EP-20	EP-21
CALCIUM (CA) DIS	190.0	462.0	455.0	58.0
MAGNESIUM (MG) DIS	69.0	230.0	235.0	42.0
SODIUM (NA) DIS	791.0	1606.0	1646.0	868.0
POTASSIUM (K) DIS	12.0	51.0	54.0	186.0
BICARBONATE (HCO3)	366.0	268.0	238.0	1806.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	1576.0	4218.0	3999.0	131.0
CHLORIDE (CL)	438.0	675.0	656.0	699.0
FLUORIDE (F)	0.95	2.6	2.5	5.1

-- NUTRIENTS --

	EP-15	EP-20	EP-20	EP-21
NITRATE + NITRITE AS N	28.0 J4	118.0	122.0	0.13

-- METALS & MINOR CONSTITUENTS --

	EP-15	EP-20	EP-20	EP-21
ARSENIC (AS) DIS	0.015	0.97	0.96	0.01
ARSENIC (AS) TOT	0.013	0.96	0.96	0.039
CADMIUM (CD) DIS	0.005	0.063	0.063	<0.005
CADMIUM (CD) TOT	<0.005	0.073	0.073	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	0.2
IRON (FE) TOT	1.8	6.8	6.3	2.4 J4
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003 UJ4	0.011	0.011	0.006
SELENIUM (SE) DIS	0.23	0.39	0.39	0.005
SELENIUM (SE) TOT	0.2	0.35	0.35	0.01
ZINC (ZN) DIS	0.022	0.032	0.031	<0.02
ZINC (ZN) TOT	0.026	0.055	0.055	0.38

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-22	EP-23	EP-24
SAMPLE DATE	07/19/2001	07/20/2001	07/30/2001	
SAMPLE TIME	16:00	08:20	10:30	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011038026	L011066001	L01102002	
SAMPLE NUMBER	EPRI-0108-110	EPRI-0108-111	EPRI-0108-112	
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	54.43	30.37	37.24	
OXYGEN (O) (FLD) DIS	2.0	NO MEAS	1.6	J4
PH (FLD)	6.94	7.18	6.87	
PH	7.5	7.9	7.6	
SC (UMHOS/CM AT 25 C)	11000.0	5580.0	4430.0	
SC (UMHOS/CM AT 25 C) (FLD)	10670.0	5240.0	3940.0	
TDS (MEASURED AT 180 C)	9683.0	3411.0	2699.0	
TOTAL SUSPENDED SOLIDS	41.0	58.0	13.0	
TURBIDITY (NTU)	17.0	31.0	9.0	
WATER TEMPERATURE (C) (FLD)	27.9	23.8	26.3	
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	504.0	132.0	112.0	
MAGNESIUM (MG) DIS	262.0	77.0	34.0	
SODIUM (NA) DIS	1951.0	709.0	867.0	
POTASSIUM (K) DIS	143.0	59.0	26.0	
BICARBONATE (HCO3)	611.0	411.0	1366.0	
CARBONATE AS CO3	<1.0	<1.0	<1.0	
SULFATE (SO4)	5515.0	2149.0	220.0	
CHLORIDE (CL)	660.0	553.0	696.0	
FLUORIDE (F)	2.5	2.6	2.5	
-- NUTRIENTS --				
NITRATE + NITRITE AS N	99.0	0.26	0.24	
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS	3.7	0.77	0.022	
ARSENIC (AS) TOT	3.9	0.96	0.042	
CADMIUM (CD) DIS	0.006	<0.005	<0.005	
CADMIUM (CD) TOT	0.007	<0.005	<0.005	
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	
COPPER (CU) DIS	0.051	<0.025	<0.025	
COPPER (CU) TOT	0.074	0.04	<0.025	
IRON (FE) DIS	<0.1	0.37	<0.1	
IRON (FE) TOT	1.1	1.2	0.27	J4
LEAD (PB) DIS	<0.003	<0.003	0.003	
LEAD (PB) TOT	0.045	0.02	<0.003	
SELENIUM (SE) DIS	1.6	0.013	<0.005	
SELENIUM (SE) TOT	1.8	0.018	<0.005	
ZINC (ZN) DIS	0.46	<0.02	<0.02	
ZINC (ZN) TOT	0.5	0.035	<0.02	

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-25	EP-26	EP-29
SAMPLE DATE	07/30/2001	07/26/2001	07/17/2001	
SAMPLE TIME	10:45	10:30	09:40	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011102003	L011102004	L011027013	
SAMPLE NUMBER	EPRI-0108-113	EPRI-0108-114	EPRI-0108-115	

## -- PHYSICAL PARAMETERS --

	EP-25	EP-26	EP-29
DEPTH TO WATER LEVEL (FEET)	51.82	60.28	13.69
OXYGEN (O) (FLD) DIS	1.0 J4	1.4	1.7
PH (FLD)	6.84	6.91	7.77
PH	7.7	8.1	8.1
SC (UMHOS/CM AT 25 C)	5550.0	5090.0	3270.0
SC (UMHOS/CM AT 25 C) (FLD)	5060.0	4980.0	3190.0
TDS (MEASURED AT 180 C)	3243.0	3740.0	2185.0
TOTAL SUSPENDED SOLIDS	242.0	5.1	1144.0
TURBIDITY (NTU)	86.4	8.34	NO MEAS
WATER TEMPERATURE (C) (FLD)	26.9	25.3	23.9

## -- MAJOR CONSTITUENTS --

	EP-25	EP-26	EP-29
CALCIUM (CA) DIS	88.0	218.0	47.0
MAGNESIUM (MG) DIS	26.0	71.0	20.0
SODIUM (NA) DIS	1015.0	894.0	680.0
POTASSIUM (K) DIS	170.0	72.0	16.0
BICARBONATE (HCO3)	1818.0	299.0	439.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	125.0	1740.0	960.0
CHLORIDE (CL)	741.0	568.0	364.0
FLUORIDE (F)	1.8	1.8	2.8

## -- NUTRIENTS --

	EP-25	EP-26	EP-29
NITRATE + NITRITE AS N	0.23	35.0	7.0

## -- METALS &amp; MINOR CONSTITUENTS --

	EP-25	EP-26	EP-29
ARSENIC (AS) DIS	2.8	0.39	0.27
ARSENIC (AS) TOT	7.4	0.38	0.28
CADMIUM (CD) DIS	<0.005	0.43	<0.005
CADMIUM (CD) TOT	<0.005	0.41	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	0.015
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	1.3 J4	0.5 J4	14.0
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.007	<0.003	0.01
SELENIUM (SE) DIS	0.11	1.3	0.16
SELENIUM (SE) TOT	0.16	1.1	0.14
ZINC (ZN) DIS	<0.02	1.4	<0.02
ZINC (ZN) TOT	0.027	1.6	0.037

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC); TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-35	EP-43	EP-49
	SAMPLE DATE	07/17/2001	07/30/2001	07/26/2001
	SAMPLE TIME	09:15	17:30	15:15
	LAB	TSC-SLC	TSC-SLC	TSC-SLC
	LAB NUMBER	L011027012	L011122006	L01102005
	OTHER INFO			Pumping
	SAMPLE NUMBER	EPRI-0108-116	EPRI-0108-117	EPRI-0108-118
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)		13.84	58.24	PUMPING
OXYGEN (O) (FLD) DIS		2.0	0.7 J4	2.5
PH (FLD)		7.01	6.87	6.59
PH		7.9	7.4	7.3
SC (UMHOS/CM AT 25 C)		6330.0	8110.0	10180.0
SC (UMHOS/CM AT 25 C) (FLD)		6110.0	5710.0	9980.0
TDS (MEASURED AT 180 C)		5219.0	5344.0	8050.0
TOTAL SUSPENDED SOLIDS		191.0 J4	88.0	8.3
TURBIDITY (NTU)		66.0	>100	5.85
WATER TEMPERATURE (C) (FLD)		23.1	25.7	30.8
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS		394.0	248.0	505.0
MAGNESIUM (MG) DIS		136.0	116.0	143.0
SODIUM (NA) DIS		1064.0	1326.0	1622.0
POTASSIUM (K) DIS		17.0	39.0	286.0
BICARBONATE (HCO3)		605.0	733.0	992.0
CARBONATE AS CO3		<1.0	<1.0	<1.0
SULFATE (SO4)		2642.0	1509.0	4310.0
CHLORIDE (CL)		465.0	1927.0	847.0
FLUORIDE (F)		0.98	2.2	7.3
-- NUTRIENTS --				
NITRATE + NITRITE AS N		36.0	0.13	19.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS		0.59	0.24	21.0
ARSENIC (AS) TOT		0.68	0.44	11.0
CADMIUM (CD) DIS		<0.005	<0.005	0.035
CADMIUM (CD) TOT		<0.005	<0.005	0.15
CHROMIUM (CR) DIS		<0.01	<0.01	<0.01
CHROMIUM (CR) TOT		0.074	0.031	<0.01
COPPER (CU) DIS		<0.025	<0.025	<0.025
COPPER (CU) TOT		<0.025	0.026	0.11
IRON (FE) DIS		<0.1	0.24 J4	0.83
IRON (FE) TOT		3.2	1.2	1.7 J4
LEAD (PB) DIS		<0.003	0.006	<0.003
LEAD (PB) TOT		0.013	0.022	<0.003
SELENIUM (SE) DIS		0.98	0.01	0.14
SELENIUM (SE) TOT		0.92	0.041	0.14
ZINC (ZN) DIS		<0.02	0.028 J4	10.0
ZINC (ZN) TOT		0.031	0.05 J4	16.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-51	EP-52	EP-53
SAMPLE DATE	07/20/2001	07/20/2001	07/30/2001	
SAMPLE TIME	09:10	10:30	08:45	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011066002	L011066004	L011102006	
SAMPLE NUMBER	EPRI-0108-119	EPRI-0108-120	EPRI-0108-121	

-- PHYSICAL PARAMETERS --

	EP-51	EP-52	EP-53
DEPTH TO WATER LEVEL (FEET)	52.82	54.91	68.87
OXYGEN (O) (FLD) DIS	NO MEAS	NO MEAS	4.2 J4
PH (FLD)	6.69	6.28	7.03
PH	7.6	7.4	7.7
SC (UMHOS/CM AT 25 C)	13980.0	11920.0	6950.0
SC (UMHOS/CM AT 25 C) (FLD)	13100.0	11610.0	6640.0
TDS (MEASURED AT 180 C)	10032.0	10493.0	4942.0
TOTAL SUSPENDED SOLIDS	24.0	13.0	768.0
TURBIDITY (NTU)	21.2	55.0	>200
WATER TEMPERATURE (C) (FLD)	26.0	27.4	25.7

-- MAJOR CONSTITUENTS --

	EP-51	EP-52	EP-53
CALCIUM (CA) DIS	796.0	477.0	221.0
MAGNESIUM (MG) DIS	587.0	292.0	86.0
SODIUM (NA) DIS	1509.0	2207.0	1205.0
POTASSIUM (K) DIS	50.0	21.0	62.0
BICARBONATE (HCO3)	171.0	744.0	575.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2244.0	4690.0	3135.0
CHLORIDE (CL)	3832.0	1193.0	451.0
FLUORIDE (F)	0.84	5.8	4.6

-- NUTRIENTS --

	EP-51	EP-52	EP-53
NITRATE + NITRITE AS N	165.0	121.0	7.3

-- METALS & MINOR CONSTITUENTS --

	EP-51	EP-52	EP-53
ARSENIC (AS) DIS	0.14	0.22	30.0
ARSENIC (AS) TOT	0.29	0.81	27.0
CADMIUM (CD) DIS	0.038	0.4	0.19
CADMIUM (CD) TOT	0.041	0.4	0.22
CHROMIUM (CR) DIS	0.077	<0.01	<0.01
CHROMIUM (CR) TOT	1.5	0.072	<0.01
COPPER (CU) DIS	0.091	0.3	<0.025
COPPER (CU) TOT	0.17	0.42	0.026
IRON (FE) DIS	4.1	0.19	<0.1
IRON (FE) TOT	5.8	4.0	10.0 J4
LEAD (PB) DIS	<0.003	0.05	<0.003
LEAD (PB) TOT	0.014	0.68	0.008
SELENIUM (SE) DIS	0.18	0.17	0.64
SELENIUM (SE) TOT	0.19	0.17	0.52
ZINC (ZN) DIS	0.48	2.3	0.61
ZINC (ZN) TOT	0.56	2.3	0.95

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-54	EP-55	EP-56
SAMPLE DATE	07/26/2001	07/26/2001	07/26/2001	07/26/2001
SAMPLE TIME	14:45	15:45	09:30	09:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011102007	L011102008	L011102009	L011102009
SAMPLE NUMBER	EPRI-0108-122	EPRI-0108-123	EPRI-0108-124	EPRI-0108-124
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	71.38	59.27	51.3	51.3
OXYGEN (O) (FLD) DIS	1.4	0.4	1.6	1.6
PH (FLD)	6.47	6.41	7.24	7.24
PH	7.3	7.0	7.8	7.8
SC (UMHOS/CM AT 25 C)	9330.0	9350.0	3750.0	3750.0
SC (UMHOS/CM AT 25 C) (FLD)	9260.0	9240.0	3650.0	3650.0
TDS (MEASURED AT 180 C)	7315.0	7422.0	2584.0	2584.0
TOTAL SUSPENDED SOLIDS	34.0	8010.0	2782.0	2782.0
TURBIDITY (NTU)	133.0	>1000	>100	>100
WATER TEMPERATURE (C) (FLD)	35.0	28.3	25.0	25.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	447.0	557.0	114.0	114.0
MAGNESIUM (MG) DIS	209.0	230.0	31.0	31.0
SODIUM (NA) DIS	1485.0	1390.0	732.0	732.0
POTASSIUM (K) DIS	278.0	162.0	19.0	19.0
BICARBONATE (HCO3)	1137.0	2501.0	1384.7	1384.7
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	3757.0	4186.0	1229.0	1229.0
CHLORIDE (CL)	789.0	973.0	417.0	417.0
FLUORIDE (F)	9.4	12.0	3.3	3.3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	12.0	0.23	1.0	1.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS	22.0	43.0	3.0	3.0
ARSENIC (AS) TOT	26.0	92.0	3.0	3.0
CADMIUM (CD) DIS	0.34	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	0.45	8.7	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	0.01	0.09	0.02	0.02
COPPER (CU) DIS	0.13	<0.025	<0.025	<0.025
COPPER (CU) TOT	0.37	0.28	0.038	0.038
IRON (FE) DIS	<0.1	16.0	<0.01	<0.01
IRON (FE) TOT	7.8 J4	292.0 J4	60.0 J4	60.0 J4
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.013	1.1	0.038	0.038
SELENIUM (SE) DIS	0.16	0.027	0.002	0.002
SELENIUM (SE) TOT	0.16	0.43	0.027	0.027
ZINC (ZN) DIS	6.9	4.4	<0.02	<0.02
ZINC (ZN) TOT	7.9	923.0	0.089	0.089

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-57	EP-58	EP-59
SAMPLE DATE	07/30/2001	07/30/2001	07/27/2001	
SAMPLE TIME	15:15	14:45	10:30	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011122005	L011122004	L011102010	
SAMPLE NUMBER	EPRI-0108-125	EPRI-0108-126	EPRI-0108-127	

-- PHYSICAL PARAMETERS --

	EP-57	EP-58	EP-59
DEPTH TO WATER LEVEL (FEET)	9.15	12.01	13.73
OXYGEN (O) (FLD) DIS	1.0 J4	1.3 J4	5.3
PH (FLD)	6.89	6.43	6.97
PH	7.7	7.3	7.7
SC (UMHOS/CM AT 25 C)	5090.0	11080.0	4650.0
SC (UMHOS/CM AT 25 C) (FLD)	4800.0	10220.0	5040.0
TDS (MEASURED AT 180 C)	3715.0	8652.0	3412.0
TOTAL SUSPENDED SOLIDS	59.0	162.0	3.1
TURBIDITY (NTU)	12.7	37.0	8.27
WATER TEMPERATURE (C) (FLD)	30.5	27.4	24.9

-- MAJOR CONSTITUENTS --

	EP-57	EP-58	EP-59
CALCIUM (CA) DIS	203.0	492.0	160.0
MAGNESIUM (MG) DIS	152.0	229.0	82.0
SODIUM (NA) DIS	858.0	1764.0	794.0
POTASSIUM (K) DIS	21.0	244.0	87.0
BICARBONATE (HCO3)	1852.0	1221.0	460.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	935.0	4275.0	1607.0
CHLORIDE (CL)	495.0	974.0	451.0
FLUORIDE (F)	1.0	5.0	4.7

-- NUTRIENTS --

	EP-57	EP-58	EP-59
NITRATE + NITRITE AS N	0.19	0.13	3.7

-- METALS & MINOR CONSTITUENTS --

	EP-57	EP-58	EP-59
ARSENIC (AS) DIS	0.17	3.2	2.1
ARSENIC (AS) TOT	0.38	3.3	2.0
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	0.05
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1 UJ4	0.98	0.18
IRON (FE) TOT	2.4	2.9	0.67 J4
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	0.008	<0.003
SELENIUM (SE) DIS	<0.005	0.11	0.24
SELENIUM (SE) TOT	<0.005	0.1	0.21
ZINC (ZN) DIS	<0.02 UJ4	0.023 J4	0.058
ZINC (ZN) TOT	<0.02 UJ4	0.034 J4	0.064

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	EP-60	EP-61	EP-62
SITE CODE	EP-60	EP-61	EP-62
SAMPLE DATE	07/27/2001	07/30/2001	07/27/2001
SAMPLE TIME	13:50	14:15	11:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011102011	L011122003	L011102012
SAMPLE NUMBER	EPRI-0108-128	EPRI-0108-129	EPRI-0108-130
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	9.56	9.62	7.44
OXYGEN (O) (FLD) DIS	0.9	2.8 J4	5.0
PH (FLD)	6.91	6.81	7.1
PH	7.6	7.5	7.9
SC (UMHOS/CM AT 25 C)	8120.0	7790.0	4220.0
SC (UMHOS/CM AT 25 C) (FLD)	7720.0	7200.0	5240.0
TDS (MEASURED AT 180 C)	6921.0	6216.0	3043.0
TOTAL SUSPENDED SOLIDS	10.0	5.8	3.1
TURBIDITY (NTU)	31.5	7.21	3.09
WATER TEMPERATURE (C) (FLD)	26.6	27.0	33.8
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	540.0	337.0	166.0
MAGNESIUM (MG) DIS	206.0	154.0	68.0
SODIUM (NA) DIS	1275.0	1390.0	716.0
POTASSIUM (K) DIS	14.0	18.0	56.0
BICARBONATE (HCO3)	331.0	505.0	429.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	3287.0	2974.0	1482.0
CHLORIDE (CL)	1006.0	748.0	429.0
FLUORIDE (F)	1.6	1.7	3.0
-- NUTRIENTS --			
NITRATE + NITRITE AS N	25.0	67.0	3.2
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) DIS	0.022	0.011	1.1
ARSENIC (AS) TOT	0.025	0.008	1.2
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	0.014	<0.01
CHROMIUM (CR) TOT	0.63	0.012	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	0.2 J4	<0.1
IRON (FE) TOT	3.0 J4	0.48	0.24 J4
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.2	0.3	0.26
SELENIUM (SE) TOT	0.21	0.29	0.24
ZINC (ZN) DIS	0.063	<0.02 UJ4	0.073
ZINC (ZN) TOT	0.071	<0.02 UJ4	0.079

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1, Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



## -- SAMPLE TYPE: GROUNDWATER --

	EP-63	EP-64	EP-65	EP-65
SITE CODE	EP-63	EP-64	EP-65	EP-65
SAMPLE DATE	07/27/2001	07/27/2001	07/30/2001	07/30/2001
SAMPLE TIME	15:30	11:00	13:30	13:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011102013	L011102014	L011122001	L011122002
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0108-131	EPRI-0108-132	EPRI-0108-133	EPRI-0108-251

-- PHYSICAL PARAMETERS --

	EP-63	EP-64	EP-65	EP-65
DEPTH TO WATER LEVEL (FEET)	6.78	10.34	8.35	
OXYGEN (O) (FLD) DIS	5.0	5.6	1.1 J4	3.6 J4
PH (FLD)	6.95	7.47	6.94	7.01
PH	7.7	8.0	7.6	7.6
SC (UMHOS/CM AT 25 C)	7130.0	9010.0	6090.0	6050.0
SC (UMHOS/CM AT 25 C) (FLD)	1393.0 A	9490.0	5580.0	5640.0
TDS (MEASURED AT 180 C)	5328.0	7352.0	4754.0	4742.0
TOTAL SUSPENDED SOLIDS	1.8	2.2	10.0	12.0
TURBIDITY (NTU)	6.3	1.96	30.0	
WATER TEMPERATURE (C) (FLD)	24.3	29.7	28.7	28.9

-- MAJOR CONSTITUENTS --

	EP-63	EP-64	EP-65	EP-65
CALCIUM (CA) DIS	243.0	382.0	255.0	257.0
MAGNESIUM (MG) DIS	154.0	124.0	109.0	111.0
SODIUM (NA) DIS	1333.0	1869.0	1077.0	1068.0
POTASSIUM (K) DIS	34.0	21.0	21.0	22.0
BICARBONATE (HCO3)	670.0	261.0	489.0	499.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	2611.0	3660.0	2281.0	2398.0
CHLORIDE (CL)	793.0	727.0	515.0	499.0
FLUORIDE (F)	1.8	1.8	2.2	2.2

-- NUTRIENTS --

	EP-63	EP-64	EP-65	EP-65
NITRATE + NITRITE AS N	0.089	67.0	19.0	19.0

-- METALS & MINOR CONSTITUENTS --

	EP-63	EP-64	EP-65	EP-65
ARSENIC (AS) DIS	0.041	0.1	0.006	0.005
ARSENIC (AS) TOT	0.047	0.11	0.005	0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1 J4	<0.1 J4
IRON (FE) TOT	<0.1 J4	<0.1 J4	0.35	0.19
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.18	0.5	0.26	0.26
SELENIUM (SE) TOT	0.18	0.46	0.25	0.25
ZINC (ZN) DIS	0.032	0.043	<0.02 UJ4	0.021 J4
ZINC (ZN) TOT	0.03	0.049	<0.02 UJ4	<0.02 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-66	EP-67	EP-68
SAMPLE DATE	07/27/2001	07/17/2001	07/17/2001
SAMPLE TIME	15:00	14:30	15:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L01102015	L011027017	L011027018
SAMPLE NUMBER	EPRI-0108-134	EPRI-0108-135	EPRI-0108-136

## -- PHYSICAL PARAMETERS --

PARAMETER	EP-66	EP-67	EP-68
DEPTH TO WATER LEVEL (FEET)	10.38	40.92	63.18
OXYGEN (O) (FLD) DIS	3.4	1.0	5.6
PH (FLD)	6.98	6.89	7.12
PH	7.8	7.6	7.7
SC (UMHOS/CM AT 25 C)	7380.0	4280.0	5320.0
SC (UMHOS/CM AT 25 C) (FLD) A	1290.0	4200.0	4820.0
TDS (MEASURED AT 180 C)	6231.0	3668.0	4097.0
TOTAL SUSPENDED SOLIDS	2.2	2.3	17.0 J4
TURBIDITY (NTU)	7.57	1.39	9.3
WATER TEMPERATURE (C) (FLD)	31.4	25.1	24.3

## -- MAJOR CONSTITUENTS --

CONSTITUENT	EP-66	EP-67	EP-68
CALCIUM (CA) DIS	489.0	467.0	299.0
MAGNESIUM (MG) DIS	126.0	131.0	128.0
SODIUM (NA) DIS	1179.0	476.0	816.0
POTASSIUM (K) DIS	44.0	13.0	17.0
BICARBONATE (HCO3)	479.0	245.0	239.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	3236.0	1973.0	1823.0
CHLORIDE (CL)	554.0	389.0	754.0
FLUORIDE (F)	3.2	0.75	0.68

## -- NUTRIENTS --

NUTRIENT	EP-66	EP-67	EP-68
NITRATE + NITRITE AS N	33.0	15.0	35.0

## -- METALS &amp; MINOR CONSTITUENTS --

METAL	EP-66	EP-67	EP-68
ARSENIC (AS) DIS	8.6	0.026	0.011
ARSENIC (AS) TOT	8.4	0.028	0.013
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	0.026	<0.025	<0.025
COPPER (CU) TOT	0.029	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT J4	<0.1	<0.1	0.44
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.31	0.096	0.28
SELENIUM (SE) TOT	0.3	0.09	0.28
ZINC (ZN) DIS	0.042	0.02	<0.02
ZINC (ZN) TOT	0.051	0.025	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-70	EP-71	EP-71	EP-72
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001
SAMPLE TIME	08:45	08:15	08:15	09:10
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011038003	L011038001	L011038002	L011038004
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0108-137	EPRI-0108-138	EPRI-0108-237	EPRI-0108-139

-- PHYSICAL PARAMETERS --

DEPTH TO WATER LEVEL (FEET)	59.87	48.55	48.55	61.09
OXYGEN (O) (FLD) DIS	0.6	0.7	0.7	2.5
PH (FLD)	6.99	6.86	6.86	7.03
PH	7.4	8.0	7.9	7.9
SC (UMHOS/CM AT 25 C)	6480.0	6400.0	6410.0	11940.0
SC (UMHOS/CM AT 25 C) (FLD)	6380.0	6260.0	6260.0	11670.0
TDS (MEASURED AT 180 C)	5216.0	5350.0	5203.0	11307.0
TOTAL SUSPENDED SOLIDS	3.6	1.8	<1.0	1.3
TURBIDITY (NTU)	3.54	1.17	1.17	2.52
WATER TEMPERATURE (C) (FLD)	24.5	24.1	24.1	26.3

-- MAJOR CONSTITUENTS --

CALCIUM (CA) DIS	288.0	350.0	349.0	352.0
MAGNESIUM (MG) DIS	151.0	167.0	167.0	558.0
SODIUM (NA) DIS	1119.0	1008.0	1055.0	2256.0
POTASSIUM (K) DIS	23.0	17.0	18.0	21.0
BICARBONATE (HCO3)	220.0	298.0	303.0	403.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	2932.0	2790.0	2807.0	6639.0
CHLORIDE (CL)	576.0	580.0	489.0	674.0
FLUORIDE (F)	1.1	0.91	0.92	1.3

-- NUTRIENTS --

NITRATE + NITRITE AS N	72.0	80.0	86.0	86.0
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-- METALS & MINOR CONSTITUENTS --

ARSENIC (AS) DIS	0.73	0.11	0.12	0.094
ARSENIC (AS) TOT	0.73	0.12	0.12	0.17
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	0.041
COPPER (CU) TOT	<0.025	<0.025	<0.025	0.035
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	0.12	<0.1	<0.1	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.23	0.24	0.25	16.0
SELENIUM (SE) TOT	0.23	0.26	0.25	15.0
ZINC (ZN) DIS	0.11	<0.02	<0.02	0.078
ZINC (ZN) TOT	0.097	0.02	0.021	0.074

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-73	EP-73	EP-75	EP-76
SAMPLE DATE	07/20/2001	07/20/2001	07/20/2001	07/20/2001
SAMPLE TIME	13:20	13:30	13:50	14:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011066005	L011066006	L011066007	L011066008
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0108-140	EPRI-0108-241	EPRI-0108-141	EPRI-0108-142
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	71.82		71.63	71.89
OXYGEN (O) (FLD) DIS	NO MEAS	NO MEAS	NO MEAS	NO MEAS
PH (FLD)	7.04	7.05	6.96	7.27
PH	7.8	8.0	7.4	8.1
SC (UMHOS/CM AT 25 C)	6100.0	6120.0	19140.0	5140.0
SC (UMHOS/CM AT 25 C) (FLD)	5940.0	5960.0	18240.0	4970.0
TDS (MEASURED AT 180 C)	4759.0	4708.0	18336.0	3698.0
TOTAL SUSPENDED SOLIDS	<1.0	4.2	29.0	<1.0
TURBIDITY (NTU)	13.6		13.0	2.81
WATER TEMPERATURE (C) (FLD)	28.3	28.2	26.7	23.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	218.0	219.0	401.0	161.0
MAGNESIUM (MG) DIS	101.0	99.0	389.0	95.0
SODIUM (NA) DIS	922.0	913.0	3849.0	852.0
POTASSIUM (K) DIS	332.0	331.0	848.0	96.0
BICARBONATE (HCO3)	305.0	296.0	573.0	490.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	2857.0	2996.0	11157.0	1807.0
CHLORIDE (CL)	428.0	426.0	286.0	511.0
FLUORIDE (F)	2.7	2.6	1.8	2.0
-- NUTRIENTS --				
NITRATE + NITRITE AS N	14.0	16.0	259.0	5.8
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS	0.041	0.041	15.0	1.1
ARSENIC (AS) TOT	0.054	0.055	15.0	1.0
CADMIUM (CD) DIS	<0.005	<0.005	0.006	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	0.006	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	0.066	<0.025
COPPER (CU) TOT	<0.025	<0.025	0.062	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	0.35	0.32	0.56	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003	0.003
LEAD (PB) TOT	0.004	0.004	0.016	0.007
SELENIUM (SE) DIS	0.89	0.89	4.2	0.17
SELENIUM (SE) TOT	0.9	0.9	4.2	0.17
ZINC (ZN) DIS	0.031	0.031	0.077	0.045
ZINC (ZN) TOT	0.034	0.035	0.086	0.054

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	EP-77	EP-78	EP-79
SITE CODE	EP-77	EP-78	EP-79
SAMPLE DATE	07/19/2001	07/25/2001	07/25/2001
SAMPLE TIME	10:10	13:30	10:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011038019	L011102016	L011102017
SAMPLE NUMBER	EPRI-0108-143	EPRI-0108-144	EPRI-0108-145

-- PHYSICAL PARAMETERS --

	EP-77	EP-78	EP-79
DEPTH TO WATER LEVEL (FEET)	45.8	33.48	47.85
OXYGEN (O) (FLD) DIS	1.2	0.5	0.6
PH (FLD)	7.23	7.66	7.55
PH	7.9	8.1	8.1
SC (UMHOS/CM AT 25 C)	3820.0	3470.0	4750.0
SC (UMHOS/CM AT 25 C) (FLD)	3720.0	3260.0	4630.0
TDS (MEASURED AT 180 C)	2627.0	2317.0	3259.0
TOTAL SUSPENDED SOLIDS	32.0 J4	19.0	30.0
TURBIDITY (NTU)	26.3	27.1	77.0
WATER TEMPERATURE (C) (FLD)	24.8	25.1	26.2

-- MAJOR CONSTITUENTS --

	EP-77	EP-78	EP-79
CALCIUM (CA) DIS	105.0	61.0	48.0
MAGNESIUM (MG) DIS	30.0	32.0	57.0
SODIUM (NA) DIS	732.0	621.0	981.0
POTASSIUM (K) DIS	19.0	53.0	9.2
BICARBONATE (HCO3)	353.0	378.0	456.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1214.0	1020.0	1337.0
CHLORIDE (CL)	434.0	295.0	587.0
FLUORIDE (F)	3.5	3.1	4.5

-- NUTRIENTS --

	EP-77	EP-78	EP-79
NITRATE + NITRITE AS N	0.69 UJ1 J4	10.0	9.7

-- METALS & MINOR CONSTITUENTS --

	EP-77	EP-78	EP-79
ARSENIC (AS) DIS	5.4	3.4	0.02
ARSENIC (AS) TOT	5.5	3.5	0.024
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	0.011
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	0.74	0.52 J4	1.3 J4
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.004 J4	0.007	<0.003
SELENIUM (SE) DIS	0.022	0.27	0.11
SELENIUM (SE) TOT	0.018	0.23	0.1
ZINC (ZN) DIS	<0.02	<0.02	<0.02
ZINC (ZN) TOT	0.025	0.043	0.023

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-80	EP-81	EP-82
	SAMPLE DATE	07/25/2001	07/25/2001	07/25/2001
	SAMPLE TIME	16:10	08:45	15:15
	LAB	TSC-SLC	TSC-SLC	TSC-SLC
	LAB NUMBER	L011102018	L011102019	L011102020
	SAMPLE NUMBER	EPRI-0108-146	EPRI-0108-147	EPRI-0108-148
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)		10.77	18.4	18.89
OXYGEN (O) (FLD) DIS		0.2	3.6	0.2
PH (FLD)		7.25	7.06	7.12
PH		7.8	7.6	7.6
SC (UMHOS/CM AT 25 C)		5040.0	2900.0	4760.0
SC (UMHOS/CM AT 25 C) (FLD)		4880.0	2920.0	4620.0
TDS (MEASURED AT 180 C)		3656.0	2204.0	3456.0
TOTAL SUSPENDED SOLIDS		6.9	1.7	3.0
TURBIDITY (NTU)		8.8	7.5	3.7
WATER TEMPERATURE (C) (FLD)		25.9	27.6	24.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS		182.0	165.0	169.0
MAGNESIUM (MG) DIS		85.0	82.0	94.0
SODIUM (NA) DIS		916.0	433.0	829.0
POTASSIUM (K) DIS		20.0	24.0	26.0
BICARBONATE (HCO3)		514.0	464.0	421.0
CARBONATE AS CO3		<1.0	<1.0	<1.0
SULFATE (SO4)		1719.0	1034.0	1347.0
CHLORIDE (CL)		449.0	145.0	592.0
FLUORIDE (F)		1.2	2.0	2.2
-- NUTRIENTS --				
NITRATE + NITRITE AS N		0.8	7.7	8.2
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS		0.021	0.55	0.014
ARSENIC (AS) TOT		0.02	0.48	0.019
CADMIUM (CD) DIS		<0.005	<0.005	<0.005
CADMIUM (CD) TOT		<0.005	<0.005	<0.005
CHROMIUM (CR) DIS		<0.01	<0.01	<0.01
CHROMIUM (CR) TOT		<0.01	<0.01	<0.01
COPPER (CU) DIS		<0.025	<0.025	<0.025
COPPER (CU) TOT		<0.025	<0.025	<0.025
IRON (FE) DIS		<0.1	<0.1	<0.1
IRON (FE) TOT		0.27 J4	<0.1 J4	<0.1 J4
LEAD (PB) DIS		<0.003	<0.003	<0.003
LEAD (PB) TOT		<0.003	<0.003	<0.003
SELENIUM (SE) DIS		0.009	0.31	0.14
SELENIUM (SE) TOT		0.01	0.28	0.13
ZINC (ZN) DIS		0.023	0.05	0.023
ZINC (ZN) TOT		0.027	0.054	0.026

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-83	EP-84	EP-85
	SAMPLE DATE	07/24/2001	07/24/2001	07/25/2001
	SAMPLE TIME	09:15	11:00	09:30
	LAB	TSC-SLC	TSC-SLC	TSC-SLC
	LAB NUMBER	L011066013	L011066016	L011103001
	SAMPLE NUMBER	EPRI-0108-149	EPRI-0108-150	EPRI-0108-151

## -- PHYSICAL PARAMETERS --

DEPTH TO WATER LEVEL (FEET)	29.88	9.23	17.29
OXYGEN (O) (FLD) DIS	5.2	4.5	0.1
PH (FLD)	7.43	7.14	7.43
PH	8.2	8.0	7.8
SC (UMHOS/CM AT 25 C)	3760.0	2850.0	3190.0
SC (UMHOS/CM AT 25 C) (FLD)	3610.0	2750.0	3130.0
TDS (MEASURED AT 180 C)	2560.0	2091.0	2209.0
TOTAL SUSPENDED SOLIDS	7.3	<1.0	<1.0
TURBIDITY (NTU)	7.25	2.32	0.9
WATER TEMPERATURE (C) (FLD)	23.1	25.2	23.8

## -- MAJOR CONSTITUENTS --

CALCIUM (CA) DIS	63.0	199.0	104.0
MAGNESIUM (MG) DIS	58.0	92.0	52.0
SODIUM (NA) DIS	722.0	303.0	546.0
POTASSIUM (K) DIS	10.0	8.6	30.0
BICARBONATE (HCO3)	365.0	301.0	377.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1323.0	962.0	1061.0
CHLORIDE (CL)	374.0 J4	295.0 J4	273.0
FLUORIDE (F)	3.0	0.64	3.1

## -- NUTRIENTS --

NITRATE + NITRITE AS N	9.3	8.1	8.7
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## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) DIS	0.014	0.026	2.1
ARSENIC (AS) TOT	0.014	0.027	2.2
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	0.25	<0.1	<0.1
LEAD (PB) DIS	<0.003	0.013	<0.003
LEAD (PB) TOT	0.012	0.019	<0.003
SELENIUM (SE) DIS	0.04	0.02	0.13
SELENIUM (SE) TOT	0.041	0.02	0.14 J4
ZINC (ZN) DIS	<0.02	0.031	<0.02
ZINC (ZN) TOT	<0.02	0.04	<0.02 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-86	EP-86	EP-86	EP-89
SAMPLE DATE	07/25/2001	07/25/2001	07/19/2001	07/17/2001
SAMPLE TIME	10:30	10:45	14:20	14:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011103002	L011103012	L011038023	L011027016
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0108-152	EPRI-0108-245	EPRI-0108-154	EPRI-0108-155

-- PHYSICAL PARAMETERS --

	EP-86	EP-86	EP-86	EP-89
DEPTH TO WATER LEVEL (FEET)	50.11		32.11	14.94
OXYGEN (O) (FLD) DIS	7.7	7.7	0.3	3.2
PH (FLD)	7.7	7.7	7.29	7.16
PH	8.1	8.0	8.1	8.0
SC (UMHOS/CM AT 25 C)	2620.0	2630.0	4860.0	2930.0
SC (UMHOS/CM AT 25 C) (FLD)	2530.0	2520.0	4710.0	2860.0
TDS (MEASURED AT 180 C)	1702.0	1695.0	3465.0	2092.0
TOTAL SUSPENDED SOLIDS	7.9	9.1	30.0 J4	2.3 J4
TURBIDITY (NTU)	7.0		34.6	0.98
WATER TEMPERATURE (C) (FLD)	23.2	23.2	25.8	24.7

-- MAJOR CONSTITUENTS --

	EP-86	EP-86	EP-86	EP-89
CALCIUM (CA) DIS	38.0	37.0	74.0	167.0
MAGNESIUM (MG) DIS	30.0	29.0	53.0	67.0
SODIUM (NA) DIS	500.0	496.0	1000.0	382.0
POTASSIUM (K) DIS	9.1	8.8	6.6	18.0
BICARBONATE (HCO3)	351.0	349.0	495.0	268.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	679.0	636.0	1604.0	772.0
CHLORIDE (CL)	258.0	297.0	446.0	381.0
FLUORIDE (F)	2.6	2.6	1.9	0.73

-- NUTRIENTS --

	EP-86	EP-86	EP-86	EP-89
NITRATE + NITRITE AS N	7.0	6.6	5.3 J4	9.2

-- METALS & MINOR CONSTITUENTS --

	EP-86	EP-86	EP-86	EP-89
ARSENIC (AS) DIS	0.013	0.014	0.025	0.012
ARSENIC (AS) TOT	0.011	0.012	0.024	0.012
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	0.2	0.17	0.95	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	0.004 J4	<0.003
SELENIUM (SE) DIS	0.031	0.031	0.09	0.016
SELENIUM (SE) TOT	0.032 J4	0.033 J4	0.087	0.017
ZINC (ZN) DIS	<0.02	<0.02	<0.02	<0.02
ZINC (ZN) TOT	0.023 J4	<0.02 UJ4	0.026 J4	0.023

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-90	EP-90	EP-93	EP-94
SAMPLE DATE	07/19/2001	07/19/2001	07/24/2001	07/24/2001
SAMPLE TIME	08:10	08:15	15:00	08:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011038015	L011038016	L011066019	L011066012
REMARKS	DUPLICATE			
SAMPLE NUMBER	EPRI-0108-156	EPRI-0108-239	EPRI-0108-157	EPRI-0108-158

-- PHYSICAL PARAMETERS --

	EP-90	EP-90	EP-93	EP-94
DEPTH TO WATER LEVEL (FEET)	58.33		48.0	52.12
OXYGEN (O) (FLD) DIS	0.9	0.8	4.1	3.9
PH (FLD)	6.95	6.96	7.19	7.22
PH	7.8	7.9	8.0	8.1
SC (UMHOS/CM AT 25 C)	5560.0	5580.0	4610.0	4820.0
SC (UMHOS/CM AT 25 C) (FLD)	5420.0	5400.0	4290.0	4600.0
TDS (MEASURED AT 180 C)	4384.0	4398.0	3196.0	3431.0
TOTAL SUSPENDED SOLIDS	103.0 J4	151.0 J4	117.0	<1.0
TURBIDITY (NTU)	194.0		217.0	8.81
WATER TEMPERATURE (C) (FLD)	24.5	24.5	29.8	24.2

-- MAJOR CONSTITUENTS --

	EP-90	EP-90	EP-93	EP-94
CALCIUM (CA) DIS	249.0	257.0	62.0	102.0
MAGNESIUM (MG) DIS	131.0	135.0	58.0	103.0
SODIUM (NA) DIS	938.0	975.0	887.0	870.0
POTASSIUM (K) DIS	11.0	11.0	8.8	16.0
BICARBONATE (HCO3)	382.0	383.0	628.0	418.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	2340.0	2419.0	1355.0	1674.0
CHLORIDE (CL)	467.0	511.0	517.0 J4	647.0
FLUORIDE (F)	0.52	0.51	1.7	1.2

-- NUTRIENTS --

	EP-90	EP-90	EP-93	EP-94
NITRATE + NITRITE AS N	25.0 J4	35.0 J4	5.8	13.0

-- METALS & MINOR CONSTITUENTS --

	EP-90	EP-90	EP-93	EP-94
ARSENIC (AS) DIS	0.14	0.14	0.033	0.015
ARSENIC (AS) TOT	0.15	0.14	0.03	0.015
CADMIUM (CD) DIS	0.01	0.01	<0.005	<0.005
CADMIUM (CD) TOT	0.011	0.011	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	6.2	5.7	4.3	0.2
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.014 J4	<0.003 UJ4	0.012	<0.003
SELENIUM (SE) DIS	1.1	1.1	0.04	0.029
SELENIUM (SE) TOT	1.1	1.1	0.038	0.03
ZINC (ZN) DIS	0.023	0.023	0.029	0.021
ZINC (ZN) TOT	0.037	0.035	0.044	0.026

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: GROUNDWATER --

	EP-95	EP-95	EP-96	EP-97
SITE CODE	EP-95	EP-95	EP-96	EP-97
SAMPLE DATE	07/24/2001	07/24/2001	07/24/2001	07/24/2001
SAMPLE TIME	08:15	08:20	14:20	10:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011066010	L011066011	L011066018	L011066015
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0108-159	EPRI-0108-243	EPRI-0108-160	EPRI-0108-161

-- PHYSICAL PARAMETERS --

	EP-95	EP-95	EP-96	EP-97
DEPTH TO WATER LEVEL (FEET)	23.59		60.44	5.26
OXYGEN (O) (FLD) DIS	6.9	6.8	7.1	6.6
PH (FLD)	7.53	7.53	7.15	7.09
PH	8.2	8.2	8.1	7.8
SC (UMHOS/CM AT 25 C)	3280.0	3280.0	4560.0	5440.0
SC (UMHOS/CM AT 25 C) (FLD)	3150.0	3150.0	4444.0	5260.0
TDS (MEASURED AT 180 C)	2185.0	2159.0	3258.0	4039.0
TOTAL SUSPENDED SOLIDS	<1.0	<1.0	231.0	15.0
TURBIDITY (NTU)	1.9		45.1	19.0
WATER TEMPERATURE (C) (FLD)	21.7	21.7	26.0	27.9

-- MAJOR CONSTITUENTS --

	EP-95	EP-95	EP-96	EP-97
CALCIUM (CA) DIS	36.0	37.0	108.0	154.0
MAGNESIUM (MG) DIS	61.0	60.0	84.0	109.0
SODIUM (NA) DIS	610.0	615.0	819.0	973.0
POTASSIUM (K) DIS	4.8	5.4	13.0	10.0
BICARBONATE (HCO3)	354.0	356.0	453.0	500.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	853.0	930.0	1610.0	2035.0
CHLORIDE (CL)	395.0 J4	301.0 J4	511.0 J4	548.0 J4
FLUORIDE (F)	3.7	3.6	1.1	1.7

-- NUTRIENTS --

	EP-95	EP-95	EP-96	EP-97
NITRATE + NITRITE AS N	8.6	8.0	13.0	3.0

-- METALS & MINOR CONSTITUENTS --

	EP-95	EP-95	EP-96	EP-97
ARSENIC (AS) DIS	0.017	0.017	0.044	0.14
ARSENIC (AS) TOT	0.017	0.018	0.039	0.15
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	0.011
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	0.012
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	0.29
COPPER (CU) TOT	<0.025	<0.025	<0.025	0.32
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	<0.1	<0.1	2.4	0.51
LEAD (PB) DIS	<0.003	<0.003	<0.003	0.017
LEAD (PB) TOT	<0.003	0.004	0.007	0.035
SELENIUM (SE) DIS	0.029	0.029	0.027	0.093
SELENIUM (SE) TOT	0.03	0.03	0.025	0.096
ZINC (ZN) DIS	<0.02	<0.02	<0.02	0.11
ZINC (ZN) TOT	<0.02	<0.02	0.03	0.14

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-98	EP-99	EP-100
SAMPLE DATE	07/24/2001	07/26/2001	07/20/2001
SAMPLE TIME	09:45	14:15	09:45
LAB	TSC-SLC	HYDRO	TSC-SLC
LAB NUMBER	L011066014	0108-001	L011066003
REMARKS		NO SAMPLE	
OTHER INFO		Near Dry	
SAMPLE NUMBER	EPRI-0108-162	EPRI-0108-163	EPRI-0108-164

## -- PHYSICAL PARAMETERS --

DEPTH TO WATER LEVEL (FEET)	14.11	75.39	42.77
OXYGEN (O) (FLD) DIS	2.5		NO MEAS
PH (FLD)	7.4		6.7
PH	8.1		7.6
SC (UMHOS/CM AT 25 C)	6210.0		10610.0
SC (UMHOS/CM AT 25 C) (FLD)	5940.0		10120.0
TDS (MEASURED AT 180 C)	4539.0		8575.0
TOTAL SUSPENDED SOLIDS	2.0		25.0
TURBIDITY (NTU)	1.84		38.0
WATER TEMPERATURE (C) (FLD)	26.9		26.0

## -- MAJOR CONSTITUENTS --

CALCIUM (CA) DIS	81.0	677.0
MAGNESIUM (MG) DIS	77.0	364.0
SODIUM (NA) DIS	1255.0	1379.0
POTASSIUM (K) DIS	96.0	36.0
BICARBONATE (HCO3)	416.0	322.0
CARBONATE AS CO3	<1.0	<1.0
SULFATE (SO4)	2380.0	2916.0
CHLORIDE (CL)	584.0	1750.0
FLUORIDE (F)	2.7	0.96

## -- NUTRIENTS --

NITRATE + NITRITE AS N	12.0	265.0
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## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) DIS	0.037	0.023
ARSENIC (AS) TOT	0.037	0.023
CADMIUM (CD) DIS	<0.005	0.015
CADMIUM (CD) TOT	<0.005	0.015
CHROMIUM (CR) DIS	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1
IRON (FE) TOT	<0.1	0.81
LEAD (PB) DIS	<0.003	<0.003
LEAD (PB) TOT	0.006	0.003
SELENIUM (SE) DIS	0.5	0.54
SELENIUM (SE) TOT	0.5	0.55
ZINC (ZN) DIS	0.023	0.12
ZINC (ZN) TOT	0.023	0.13

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-101	EP-102	EP-103
SAMPLE DATE	07/18/2001	07/18/2001	07/19/2001	
SAMPLE TIME	14:00	14:30	08:45	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011038010	L011038011	L011038017	
SAMPLE NUMBER	EPRI-0108-165	EPRI-0108-166	EPRI-0108-167	

## -- PHYSICAL PARAMETERS --

	EP-101	EP-102	EP-103
DEPTH TO WATER LEVEL (FEET)	65.09	57.71	61.39
OXYGEN (O) (FLD) DIS	1.0	4.0	6.6
PH (FLD)	6.85	7.07	7.49
PH	6.9	7.2	8.0
SC (UMHOS/CM AT 25 C)	6540.0	2630.0	1638.0
SC (UMHOS/CM AT 25 C) (FLD)	6320.0	2570.0	1566.0
TDS (MEASURED AT 180 C)	4805.0	1866.0	1054.0
TOTAL SUSPENDED SOLIDS	76.0	26.0	<1.0 J4
TURBIDITY (NTU)	11.4	2.8	1.98
WATER TEMPERATURE (C) (FLD)	30.4	27.4	26.5

## -- MAJOR CONSTITUENTS --

	EP-101	EP-102	EP-103
CALCIUM (CA) DIS	164.0	110.0	72.0
MAGNESIUM (MG) DIS	56.0	24.0	23.0
SODIUM (NA) DIS	1248.0	350.0	221.0
POTASSIUM (K) DIS	51.0	112.0	4.8
BICARBONATE (HCO3)	115.0	238.0	139.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2033.0	811.0	442.0
CHLORIDE (CL)	703.0	210.0	216.0
FLUORIDE (F)	1.3	1.3	0.52

## -- NUTRIENTS --

	EP-101	EP-102	EP-103
NITRATE + NITRITE AS N	72.0	10.0	5.6 J4

## -- METALS &amp; MINOR CONSTITUENTS --

	EP-101	EP-102	EP-103
ARSENIC (AS) DIS	5.3	0.3	0.044
ARSENIC (AS) TOT	5.2	0.3	0.04
CADMIUM (CD) DIS	1.5	0.13	<0.005
CADMIUM (CD) TOT	1.6	0.17	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	0.025	<0.025	<0.025
COPPER (CU) TOT	0.029	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	0.95	1.2	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.007 UJ1	0.01 UJ1	<0.003 UJ4
SELENIUM (SE) DIS	1.7	6.8	0.27
SELENIUM (SE) TOT	1.9	6.4	0.27
ZINC (ZN) DIS	0.28	0.048	<0.02
ZINC (ZN) TOT	0.32	0.07	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-104	EP-105	EP-106
	SAMPLE DATE	07/18/2001	07/19/2001	07/18/2001
	SAMPLE TIME	15:30	09:30	15:00
	LAB	TSC-SLC	TSC-SLC	TSC-SLC
	LAB NUMBER	L011038013	L011038014	L011038012
	SAMPLE NUMBER	EPRI-0108-168	EPRI-0108-169	EPRI-0108-170

## -- PHYSICAL PARAMETERS --

DEPTH TO WATER LEVEL (FEET)	64.7	64.61	63.07
OXYGEN (O) (FLD) DIS	2.3	4.5	3.5
PH (FLD)	7.18	7.23	7.08
PH	8.1	8.1	7.8
SC (UMHOS/CM AT 25 C)	4530.0	4080.0	6070.0
SC (UMHOS/CM AT 25 C) (FLD)	4460.0	3970.0	5730.0
TDS (MEASURED AT 180 C)	3258.0	2982.0	4825.0
TOTAL SUSPENDED SOLIDS	8.1	3.9 J4	<1.0
TURBIDITY (NTU)	22.6	5.71	1.41
WATER TEMPERATURE (C) (FLD)	25.4	26.0	27.6

## -- MAJOR CONSTITUENTS --

CALCIUM (CA) DIS	123.0	165.0	391.0
MAGNESIUM (MG) DIS	75.0	74.0	174.0
SODIUM (NA) DIS	826.0	656.0	780.0
POTASSIUM (K) DIS	20.0	18.0	17.0
BICARBONATE (HCO3)	393.0	317.0	181.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1645.0	1390.0	1983.0
CHLORIDE (CL)	584.0	488.0	931.0
FLUORIDE (F)	2.1	2.5	1.1

## -- NUTRIENTS --

NITRATE + NITRITE AS N	11.0	8.5 J4	68.0
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## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) DIS	0.091	0.94	0.05
ARSENIC (AS) TOT	0.095	0.97	0.049
CADMIUM (CD) DIS	0.013	<0.005	0.073
CADMIUM (CD) TOT	0.013	<0.005	0.07
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	0.026	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	0.36	0.15	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.006 UJ1	0.005 J4	<0.003
SELENIUM (SE) DIS	0.11	0.057	0.53
SELENIUM (SE) TOT	0.11	0.067	0.52
ZINC (ZN) DIS	0.027	0.057	0.052
ZINC (ZN) TOT	0.035	0.067	0.057

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-107	EP-108	EP-109
SAMPLE DATE	07/17/2001	07/25/2001	07/25/2001	
SAMPLE TIME	15:30	14:10	14:45	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L011027019	L011103003	L011103004	
SAMPLE NUMBER	EPRI-0108-171	EPRI-0108-172	EPRI-0108-173	

-- PHYSICAL PARAMETERS --

	EP-107	EP-108	EP-109
DEPTH TO WATER LEVEL (FEET)	60.01	22.87	21.73
OXYGEN (O) (FLD) DIS	1.9	6.4	6.9
PH (FLD)	7.02	7.56	7.37
PH	7.8	8.0	7.8
SC (UMHOS/CM AT 25 C)	4610.0	3410.0	3890.0
SC (UMHOS/CM AT 25 C) (FLD)	4550.0	3360.0	3810.0
TDS (MEASURED AT 180 C)	3648.0	2353.0	2732.0
TOTAL SUSPENDED SOLIDS	9.5 J4	12.0	14.0
TURBIDITY (NTU)	5.11	7.5	4.7
WATER TEMPERATURE (C) (FLD)	28.1	25.6	25.1

-- MAJOR CONSTITUENTS --

	EP-107	EP-108	EP-109
CALCIUM (CA) DIS	248.0	50.0	88.0
MAGNESIUM (MG) DIS	112.0	49.0	69.0
SODIUM (NA) DIS	745.0	657.0	708.0
POTASSIUM (K) DIS	16.0	6.7	18.0
BICARBONATE (HCO3)	284.0	459.0	387.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1802.0	1043.0	1316.0
CHLORIDE (CL)	400.0	323.0	366.0
FLUORIDE (F)	0.78	2.4	2.4

-- NUTRIENTS --

	EP-107	EP-108	EP-109
NITRATE + NITRITE AS N	11.0	8.0	8.5

-- METALS & MINOR CONSTITUENTS --

	EP-107	EP-108	EP-109
ARSENIC (AS) DIS	0.019	1.2	0.033
ARSENIC (AS) TOT	0.022	1.2	0.026
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	0.28	0.48	0.28
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.004	0.003	<0.003
SELENIUM (SE) DIS	0.12	0.045	0.067
SELENIUM (SE) TOT	0.11	0.045 J4	0.07 J4
ZINC (ZN) DIS	0.028	<0.02	<0.02
ZINC (ZN) TOT	0.069	0.023 J4	0.023 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-110	EP-111	EP-112
SAMPLE DATE	07/17/2001	07/31/2001	07/31/2001
SAMPLE TIME	13:20	09:30	10:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011027015	L011122019	L011123002
SAMPLE NUMBER	EPRI-0108-174	EPRI-0108-175	EPRI-0108-176

## -- PHYSICAL PARAMETERS --

PARAMETER	EP-110	EP-111	EP-112
DEPTH TO WATER LEVEL (FEET)	8.64	7.99	6.09
OXYGEN (O) (FLD) DIS	2.6	0.1 J4	0.3
PH (FLD)	7.16	7.1	6.93
PH	8.0	7.7	7.4
SC (UMHOS/CM AT 25 C)	2900.0	5320.0	6900.0
SC (UMHOS/CM AT 25 C) (FLD)	2840.0	5690.0	7380.0
TDS (MEASURED AT 180 C)	2071.0	3796.0	4878.0
TOTAL SUSPENDED SOLIDS	2.2	5.2	<1.0
TURBIDITY (NTU)	1.43	3.81	1.1
WATER TEMPERATURE (C) (FLD)	26.0	24.6	23.1

## -- MAJOR CONSTITUENTS --

CONSTITUENT	EP-110	EP-111	EP-112
CALCIUM (CA) DIS	158.0	220.0	237.0
MAGNESIUM (MG) DIS	66.0	68.0	122.0
SODIUM (NA) DIS	377.0	897.0	1075.0
POTASSIUM (K) DIS	21.0	73.0	104.0
BICARBONATE (HCO3)	276.0	373.0	644.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	876.0	1832.0	2737.0
CHLORIDE (CL)	377.0	543.0	632.0
FLUORIDE (F)	0.77	2.9	1.9

## -- NUTRIENTS --

NUTRIENT	EP-110	EP-111	EP-112
NITRATE + NITRITE AS N	8.7	0.17	0.21

## -- METALS &amp; MINOR CONSTITUENTS --

METAL	EP-110	EP-111	EP-112
ARSENIC (AS) DIS	0.013	0.98	0.03
ARSENIC (AS) TOT	0.013	0.93	0.029
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	1.3	0.21
IRON (FE) TOT	0.12	1.4	0.25
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.016	0.011	0.018
SELENIUM (SE) TOT	0.016	0.008	0.018
ZINC (ZN) DIS	0.026	<0.02 UJ4	<0.02
ZINC (ZN) TOT	0.032	0.025 J4	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



## -- SAMPLE TYPE: GROUNDWATER --

	EP-113	EP-114	EP-115
SITE CODE	EP-113	EP-114	EP-115
SAMPLE DATE	07/31/2001	07/16/2001	07/16/2001
SAMPLE TIME	11:30	14:20	14:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011123004	L011027007	L011038022
SAMPLE NUMBER	EPRI-0108-177	EPRI-0108-178	EPRI-0108-179

## -- PHYSICAL PARAMETERS --

	EP-113	EP-114	EP-115
DEPTH TO WATER LEVEL (FEET)	6.78	13.32	13.95
OXYGEN (O) (FLD) DIS	0.1	0.3	2.8
PH (FLD)	7.24	6.6	6.9
PH	7.6	6.6	7.9
SC (UMHOS/CM AT 25 C)	3580.0	7660.0	7660.0
SC (UMHOS/CM AT 25 C) (FLD)	3870.0	8510.0	6930.0
TDS (MEASURED AT 180 C)	2464.0	6831.0	6595.0
TOTAL SUSPENDED SOLIDS	<1.0	12441.0	35.0
TURBIDITY (NTU)	1.37	>200	9.9
WATER TEMPERATURE (C) (FLD)	23.1	27.6	27.4

## -- MAJOR CONSTITUENTS --

	EP-113	EP-114	EP-115
CALCIUM (CA) DIS	119.0	535.0	530.0
MAGNESIUM (MG) DIS	55.0	240.0	189.0
SODIUM (NA) DIS	599.0	1042.0	1227.0
POTASSIUM (K) DIS	42.0	228.0	80.0
BICARBONATE (HCO3)	350.0	1691.0	839.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1179.0	2991.0	3762.0
CHLORIDE (CL)	342.0	705.0	503.0
FLUORIDE (F)	3.0	8.5	3.2

## -- NUTRIENTS --

	EP-113	EP-114	EP-115
NITRATE + NITRITE AS N	0.15	<0.05	20.0

## -- METALS &amp; MINOR CONSTITUENTS --

	EP-113	EP-114	EP-115
ARSENIC (AS) DIS	0.013	227.0	0.29
ARSENIC (AS) TOT	0.013	280.0	0.29
CADMIUM (CD) DIS	<0.005	0.12	0.13
CADMIUM (CD) TOT	<0.005	2.2	0.13
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	0.15	<0.01
COPPER (CU) DIS	<0.025	<0.025	0.14
COPPER (CU) TOT	<0.025	0.87	0.2
IRON (FE) DIS	0.66	47.0	<0.1
IRON (FE) TOT	0.78	325.0	0.65
LEAD (PB) DIS	<0.003	<0.003	0.025
LEAD (PB) TOT	<0.003	0.41	0.077
SELENIUM (SE) DIS	0.005	0.062	0.1
SELENIUM (SE) TOT	0.005	0.14	0.11
ZINC (ZN) DIS	<0.02	6.9	0.39
ZINC (ZN) TOT	<0.02	76.0	0.45 J4

NOTES: All results in mg/L (Water) or mg/Kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-116	EP-117	EP-118
	SAMPLE DATE	07/16/2001	07/16/2001	07/17/2001
	SAMPLE TIME	15:15	15:30	10:00
	LAB	TSC-SLC	TSC-SLC	TSC-SLC
	LAB NUMBER	L011027008	L011027009	L011027014
	SAMPLE NUMBER	EPRI-0108-180	EPRI-0108-181	EPRI-0108-182
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)		11.42	13.84	11.57
OXYGEN (O) (FLD) DIS		2.6	2.0	2.0
PH (FLD)		7.01	7.37	7.52
PH		7.5	7.3	8.1
SC (UMHOS/CM AT 25 C)		5940.0	3950.0	3670.0
SC (UMHOS/CM AT 25 C) (FLD)		5410.0	3730.0	3670.0
TDS (MEASURED AT 180 C)		4296.0	2972.0	2633.0
TOTAL SUSPENDED SOLIDS		6661.0	2440.0	10133.0
TURBIDITY (NTU)		>200	>200	>200
WATER TEMPERATURE (C) (FLD)		27.7	27.4	25.1
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS		254.0	276.0	111.0
MAGNESIUM (MG) DIS		76.0	39.0	52.0
SODIUM (NA) DIS		970.0	557.0	644.0
POTASSIUM (K) DIS		49.0	99.0	14.0
BICARBONATE (HCO3)		1879.0	1220.0	1098.0
CARBONATE AS CO3		<1.0	<1.0	<1.0
SULFATE (SO4)		1988.0	1360.0	1299.0
CHLORIDE (CL)		517.0	414.0	473.0
FLUORIDE (F)		4.5	3.5	1.5
-- NUTRIENTS --				
NITRATE + NITRITE AS N		16.0	13.0	16.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS		3.2	6.6	0.18
ARSENIC (AS) TOT		11.0	7.4	0.45
CADMIUM (CD) DIS		0.37	0.12	<0.005
CADMIUM (CD) TOT		3.2	0.66	0.026
CHROMIUM (CR) DIS		<0.01	<0.01	<0.01
CHROMIUM (CR) TOT		0.12	0.034	0.073
COPPER (CU) DIS		1.3	<0.025	<0.025
COPPER (CU) TOT		70.0	0.4	0.77
IRON (FE) DIS		<0.1	<0.1	<0.1
IRON (FE) TOT		170.0	46.0	369.0
LEAD (PB) DIS		0.02	0.007	<0.003
LEAD (PB) TOT		9.5	2.0	1.1
SELENIUM (SE) DIS		0.25	1.3	0.28
SELENIUM (SE) TOT		0.36	1.3	0.28
ZINC (ZN) DIS		2.6	0.11	<0.02
ZINC (ZN) TOT		15.0	0.97	1.1

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	EP-119	EP-119	EP-120	EP-120
SITE CODE	EP-119	EP-119	EP-120	EP-120
SAMPLE DATE	07/27/2001	07/27/2001	08/01/2001	08/01/2001
SAMPLE TIME	10:00	10:10	14:30	14:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011103005	L011103016	L011123011	L011123012
REMARKS		DUPLICATE		DUPLICATE
SAMPLE NUMBER	EPRI-0108-183	EPRI-0108-249	EPRI-0108-184	EPRI-0108-259

-- PHYSICAL PARAMETERS --

	EP-119	EP-119	EP-120	EP-120
DEPTH TO WATER LEVEL (FEET)	12.07		21.4	
OXYGEN (O) (FLD) DIS	0.2	0.2	4.5	4.5
PH (FLD)	7.12	7.12	7.45	7.49
PH	7.7	7.8	8.0	7.9
SC (UMHOS/CM AT 25 C)	3510.0	3520.0	3420.0	3430.0
SC (UMHOS/CM AT 25 C) (FLD)	3780.0	3780.0	2900.0	2900.0
TDS (MEASURED AT 180 C)	2520.0	2589.0	2460.0	2850.0
TOTAL SUSPENDED SOLIDS	1.7	<1.0	38.0	37.0
TURBIDITY (NTU)	2.36		51.1	
WATER TEMPERATURE (C) (FLD)	23.3	23.3	24.8	25.1

-- MAJOR CONSTITUENTS --

	EP-119	EP-119	EP-120	EP-120
CALCIUM (CA) DIS	129.0	125.0	89.0	89.0
MAGNESIUM (MG) DIS	52.0	51.0	62.0	63.0
SODIUM (NA) DIS	596.0	596.0	599.0	601.0
POTASSIUM (K) DIS	57.0	57.0	27.0	29.0
BICARBONATE (HCO3)	390.0	398.0	470.0	472.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	1166.0	1223.0	1043.0	1141.0
CHLORIDE (CL)	296.0	304.0	252.0	256.0
FLUORIDE (F)	3.6	3.4	2.5	2.5

-- NUTRIENTS --

	EP-119	EP-119	EP-120	EP-120
NITRATE + NITRITE AS N	3.9 J4	6.2 J4	3.3 J4	7.3 J4

-- METALS & MINOR CONSTITUENTS --

	EP-119	EP-119	EP-120	EP-120
ARSENIC (AS) DIS	2.2	2.2	0.35	0.35
ARSENIC (AS) TOT	2.2	2.3	0.35	0.36
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	<0.1	<0.1	0.67	0.55
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.26	0.26	0.15	0.15
SELENIUM (SE) TOT	0.28 J4	0.28 J4	0.15	0.15
ZINC (ZN) DIS	0.046	0.048	<0.02	<0.02
ZINC (ZN) TOT	0.048 J4	0.051 J4	0.023	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-121	EP-122	EP-123
SAMPLE DATE		08/01/2001	07/27/2001	07/25/2001
SAMPLE TIME		13:45	09:10	11:00
LAB		TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER		L011123010	L011103006	L011103007
SAMPLE NUMBER		EPRI-0108-185	EPRI-0108-186	EPRI-0108-187

-- PHYSICAL PARAMETERS --

	EP-121	EP-122	EP-123
DEPTH TO WATER LEVEL (FEET)	13.91	12.58	41.0
OXYGEN (O) (FLD) DIS	5.0	6.4	0.4
PH (FLD)	7.38	7.14	7.69
PH	7.7	7.8	8.1
SC (UMHOS/CM AT 25 C)	3300.0	3410.0	3080.0
SC (UMHOS/CM AT 25 C) (FLD)	2790.0	3310.0	3020.0
TDS (MEASURED AT 180 C)	2258.0	2423.0	2105.0
TOTAL SUSPENDED SOLIDS	60.0	2.6	37.0
TURBIDITY (NTU)	46.6	4.73	84.7
WATER TEMPERATURE (C) (FLD)	27.0	24.9	27.4

-- MAJOR CONSTITUENTS --

	EP-121	EP-122	EP-123
CALCIUM (CA) DIS	81.0	124.0	50.0
MAGNESIUM (MG) DIS	64.0	57.0	27.0
SODIUM (NA) DIS	562.0	568.0	616.0
POTASSIUM (K) DIS	11.0	47.0	15.0
BICARBONATE (HCO3)	403.0	370.0	338.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1149.0	1120.0	976.0
CHLORIDE (CL)	354.0	295.0	282.0
FLUORIDE (F)	1.7	3.5	2.7

-- NUTRIENTS --

	EP-121	EP-122	EP-123
NITRATE + NITRITE AS N	6.7 J4	6.4 J4	5.2

-- METALS & MINOR CONSTITUENTS --

	EP-121	EP-122	EP-123
ARSENIC (AS) DIS	0.57	2.2	1.7
ARSENIC (AS) TOT	0.6	2.3	1.7
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	0.97	<0.1	0.72
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.032	0.18	0.073
SELENIUM (SE) TOT	0.031	0.19 J4	0.074 J4
ZINC (ZN) DIS	<0.02	0.079	<0.02
ZINC (ZN) TOT	0.02	0.079 J4	<0.02 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

	SITE CODE	EP-124	EP-125	EP-126
SAMPLE DATE	07/27/2001	07/19/2001	07/19/2001	
SAMPLE TIME	08:15	15:30	15:00	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L01103008	L011038025	L011038024	
SAMPLE NUMBER	EPRI-0108-188	EPRI-0108-189	EPRI-0108-190	

## -- PHYSICAL PARAMETERS --

	EP-124	EP-125	EP-126
DEPTH TO WATER LEVEL (FEET)	35.12	38.01	33.03
OXYGEN (O) (FLD) DIS	2.5	1.0	3.0
PH (FLD)	7.25	6.83	7.18
PH	8.0	7.7	7.6
SC (UMHOS/CM AT 25 C)	4200.0	10120.0	6200.0
SC (UMHOS/CM AT 25 C) (FLD)	883.0 A	9640.0	5850.0
TDS (MEASURED AT 180 C)	2887.0	9168.0	5323.0
TOTAL SUSPENDED SOLIDS	277.0	5458.0	31.0
TURBIDITY (NTU)	NO MEAS	>200	60.4
WATER TEMPERATURE (C) (FLD)	25.4	25.5	29.1

## -- MAJOR CONSTITUENTS --

	EP-124	EP-125	EP-126
CALCIUM (CA) DIS	76.0	420.0	419.0
MAGNESIUM (MG) DIS	43.0	261.0	204.0
SODIUM (NA) DIS	834.0	1976.0	822.0
POTASSIUM (K) DIS	31.0	60.0	29.0
BICARBONATE (HCO3)	416.0	2830.0	214.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1292.0	5195.0	3084.0
CHLORIDE (CL)	475.0	390.0	519.0
FLUORIDE (F)	5.0	3.5	1.1

## -- NUTRIENTS --

	EP-124	EP-125	EP-126
NITRATE + NITRITE AS N	0.56 J4	9.5 J4	35.0 J4

## -- METALS &amp; MINOR CONSTITUENTS --

	EP-124	EP-125	EP-126
ARSENIC (AS) DIS	10.0	0.026	0.039
ARSENIC (AS) TOT	9.8	0.04	0.042
CADMIUM (CD) DIS	<0.005	<0.005	0.006
CADMIUM (CD) TOT	<0.005	<0.005	0.006
CHROMIUM (CR) DIS	<0.01	<0.01	0.057
CHROMIUM (CR) TOT	<0.01	0.087	0.051
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	0.092	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	0.79	81.0	1.1
LEAD (PB) DIS	0.008	<0.003	<0.003
LEAD (PB) TOT	0.018	0.11	0.004 J4
SELENIUM (SE) DIS	0.005	0.21	1.2
SELENIUM (SE) TOT	0.005 J4	0.2	1.3
ZINC (ZN) DIS	0.03	0.93	0.05
ZINC (ZN) TOT	0.044 J4	1.5 J4	0.064 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-127	EP-128	EP-129
SAMPLE DATE	07/31/2001	07/31/2001	07/24/2001
SAMPLE TIME	10:00	08:45	13:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011122020	L011122017	L011066017
SAMPLE NUMBER	EPRI-0108-191	EPRI-0108-192	EPRI-0108-193

-- PHYSICAL PARAMETERS --

DEPTH TO WATER LEVEL (FEET)	6.58	5.27	19.23
OXYGEN (O) (FLD) DIS	0.8 J4	8.7 J4	1.3
PH (FLD)	6.85	7.61	7.09
PH	7.5	7.5	7.9
SC (UMHOS/CM AT 25 C)	5260.0	5700.0	3800.0
SC (UMHOS/CM AT 25 C) (FLD)	5940.0	6080.0	3670.0
TDS (MEASURED AT 180 C)	4563.0	3556.0	2802.0
TOTAL SUSPENDED SOLIDS	17.0	4.3	81.0
TURBIDITY (NTU)	9.6	6.15	217.0
WATER TEMPERATURE (C) (FLD)	24.4	23.9	22.5

-- MAJOR CONSTITUENTS --

CALCIUM (CA) DIS	292.0	123.0	182.0
MAGNESIUM (MG) DIS	77.0	44.0	108.0
SODIUM (NA) DIS	1002.0	929.0	522.0
POTASSIUM (K) DIS	79.0	42.0	11.0
BICARBONATE (HCO3)	515.0	340.0	412.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2430.0	1862.0	1368.0
CHLORIDE (CL)	566.0	649.0	362.0 J4
FLUORIDE (F)	1.1	1.9	0.66

-- NUTRIENTS --

NITRATE + NITRITE AS N	0.12	0.36	11.0
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-- METALS & MINOR CONSTITUENTS --

ARSENIC (AS) DIS	2.5	0.74	0.007
ARSENIC (AS) TOT	2.5	0.68	0.008
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	1.1	0.52	<0.1
IRON (FE) TOT	1.5	0.68	2.6
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	0.024	0.01	0.038
SELENIUM (SE) TOT	0.02	0.007	0.036
ZINC (ZN) DIS	0.021 J4	<0.02 UJ4	<0.02
ZINC (ZN) TOT	0.026 J4	<0.02 UJ4	0.028

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-130	EP-130	EP-131	EP-132
SAMPLE DATE	07/26/2001	07/26/2001	07/26/2001	07/27/2001
SAMPLE TIME	11:00	11:11	12:00	14:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011103009	L011103014	L011103010	L011103011
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0108-194	EPRI-0108-247	EPRI-0108-195	EPRI-0108-196
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	66.32		56.11	12.03
OXYGEN (O) (FLD) DIS	4.1	3.7	3.1	5.4
PH (FLD)	6.26	6.26	7.02	7.06
PH	7.4	7.0	7.8	7.9
SC (UMHOS/CM AT 25 C)	10410.0	10450.0	4420.0	4000.0
SC (UMHOS/CM AT 25 C) (FLD)	10250.0	10260.0	4310.0	780.0 A
TDS (MEASURED AT 180 C)	9022.0	9086.0	3248.0	2937.0
TOTAL SUSPENDED SOLIDS	213.0	175.0	132.0	59.0
TURBIDITY (NTU)	491.0		130.0	124.0
WATER TEMPERATURE (C) (FLD)	27.8	27.8	25.7	27.1
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	754.0	751.0	165.0	217.0
MAGNESIUM (MG) DIS	343.0	336.0	54.0	48.0
SODIUM (NA) DIS	1465.0	1459.0	790.0	620.0
POTASSIUM (K) DIS	36.0	37.0	23.0	47.0
BICARBONATE (HCO3)	763.0	749.0	410.0	283.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	2980.0	3142.0	1538.0	1460.0
CHLORIDE (CL)	1220.0	1360.0	437.0	398.0
FLUORIDE (F)	0.68	0.62	2.4	4.1
-- NUTRIENTS --				
NITRATE + NITRITE AS N	270.0	235.0	8.8	13.0 J4
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS	0.13	0.13	1.2	1.9
ARSENIC (AS) TOT	0.16	0.16	1.3	2.0
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	0.025	0.025	0.028	<0.025
IRON (FE) DIS	0.11	<0.1	<0.1	<0.1
IRON (FE) TOT	9.4	9.9	3.0	0.76
LEAD (PB) DIS	0.003	0.003	<0.003	<0.003
LEAD (PB) TOT	0.033	0.034	0.02	<0.003
SELENIUM (SE) DIS	0.24	0.24	0.099	0.27
SELENIUM (SE) TOT	0.22 J4	0.23 J4	0.1 J4	0.28 J4
ZINC (ZN) DIS	0.053	0.053	0.024	<0.02
ZINC (ZN) TOT	0.072 J4	0.075 J4	0.048 J4	0.021 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: QUALITY CONTROL --

SITE CODE	DI	DI	DI	DI	DI	DI
SAMPLE DATE	07/16/2001	07/17/2001	07/18/2001	07/19/2001	07/20/2001	07/24/2001
SAMPLE TIME	12:00	16:00	13:00	16:30	15:00	16:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011027001	L011027020	L011038008	L011038027	L011066009	L011066020
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
SAMPLE NUMBER	EPRI-0108-233	EPRI-0108-236	EPRI-0108-238	EPRI-0108-240	EPRI-0108-242	EPRI-0108-244

## -- PHYSICAL PARAMETERS --

PH	5.6	5.6	5.7	5.6	5.6	5.6
SC (UMHOS/CM AT 25 C)	<5.0	<5.0	5.1	<5.0	<5.0	<5.0
TDS (MEASURED AT 180 C)	<10.0	<10.0	<10.0	<10.0	<10.0	14.0
TOTAL SUSPENDED SOLIDS	<1.0	1.4	<1.0	<1.0	<1.0	<1.0

## -- MAJOR CONSTITUENTS --

CALCIUM (CA) DIS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MAGNESIUM (MG) DIS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SODIUM (NA) DIS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
POTASSIUM (K) DIS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
BICARBONATE (HCO3)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
CHLORIDE (CL)	<1.0	<1.0	1.4	<1.0	<1.0	<1.0
FLUORIDE (F)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

## -- NUTRIENTS --

NITRATE + NITRITE AS N	<0.05	<0.05	<0.05	0.092	<0.1	<0.1
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## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) DIS	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ARSENIC (AS) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	0.003	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ZINC (ZN) TOT	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spikes, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: QUALITY CONTROL --

SITE CODE	DI	DI	DI	DI	DI	DI
SAMPLE DATE	07/25/2001	07/26/2001	07/27/2001	07/30/2001	07/31/2001	08/01/2001
SAMPLE TIME	17:10	17:30	16:30	18:15	17:00	15:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011103013	L011103015	L011103017	L011122008	L011122016	L011123013
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
SAMPLE NUMBER	EPRI-0108-246	EPRI-0108-248	EPRI-0108-250	EPRI-0108-252	EPRI-0108-256	EPRI-0108-260

-- PHYSICAL PARAMETERS --

	PH	5.5	5.7	5.5	5.6	5.5	5.3
SC (UMHOS/CM AT 25 C)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
TDS (MEASURED AT 180 C)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
TOTAL SUSPENDED SOLIDS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

-- MAJOR CONSTITUENTS --

	CALCIUM (CA) DIS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MAGNESIUM (MG) DIS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SODIUM (NA) DIS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
POTASSIUM (K) DIS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.7
BICARBONATE (HCO3)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
CHLORIDE (CL)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
FLUORIDE (F)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

-- NUTRIENTS --

	NITRATE + NITRITE AS N	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

-- METALS & MINOR CONSTITUENTS --

	ARSENIC (AS) DIS	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ARSENIC (AS) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) DIS	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ZINC (ZN) TOT	<0.02 UJ4	<0.02 UJ4	<0.02 UJ4	<0.02 UJ4	<0.02 UJ4	<0.02 UJ4	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SURFACE WATER --

SITE CODE	SEP-1	SEP-1	SEP-2	SEP-3
SAMPLE DATE	07/31/2001	07/31/2001	07/31/2001	08/01/2001
SAMPLE TIME	15:25	15:30	09:05	10:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011122013	L011122014	L011122018	L011123008
REMARKS	DUPLICATE			
SAMPLE NUMBER	EPRI-0108-197	EPRI-0108-254	EPRI-0108-198	EPRI-0108-199

-- PHYSICAL PARAMETERS --

	SEP-1	SEP-1	SEP-2	SEP-3
OXYGEN (O) (FLD) DIS	9.0	8.9	7.5	7.9
PH (FLD)	8.38	8.52	8.14	8.21
PH	8.2	8.3	8.1	8.2
SC (UMHOS/CM AT 25 C)	1046.0	1045.0	988.0	1046.0
SC (UMHOS/CM AT 25 C) (FLD)	1089.0	1099.0	1030.0	891.0
TDS (MEASURED AT 180 C)	674.0	664.0	624.0	673.0
TOTAL SUSPENDED SOLIDS	153.0	155.0	254.0	194.0
TURBIDITY (NTU)	98.8	98.1	210.0	157.0
WATER TEMPERATURE (C) (FLD)	31.2	31.8	26.9	27.4

-- MAJOR CONSTITUENTS --

	SEP-1	SEP-1	SEP-2	SEP-3
CALCIUM (CA) DIS	60.0	61.0	57.0	63.0
MAGNESIUM (MG) DIS	15.0	16.0	15.0	16.0
SODIUM (NA) DIS	125.0	130.0	119.0	124.0
POTASSIUM (K) DIS	7.5	8.3	7.9	10.0
BICARBONATE (HCO3)	206.0	215.0	270.0	220.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	217.0	210.0	191.0	194.0
CHLORIDE (CL)	105.0	100.0	92.0	106.0
FLUORIDE (F)	0.7	0.71	0.69	0.68

-- NUTRIENTS --

	SEP-1	SEP-1	SEP-2	SEP-3
NITRATE + NITRITE AS N	0.34	0.32	0.16	0.56 J4

-- METALS & MINOR CONSTITUENTS --

	SEP-1	SEP-1	SEP-2	SEP-3
ARSENIC (AS) DIS	<0.005	<0.005	0.005	0.005
ARSENIC (AS) TOT	<0.005	<0.005	0.005	0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1	<0.1
IRON (FE) TOT	2.4	2.4	3.9	2.8
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.004	0.004	0.009	0.004
SELENIUM (SE) DIS	<0.005	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02 UJ4	<0.02 UJ4	<0.02 UJ4	<0.02
ZINC (ZN) TOT	0.024 J4	0.028 J4	0.024 J4	0.021

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1, Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SURFACE WATER --

	SEP-3	SEP-4	SEP-6
SITE CODE			
SAMPLE DATE	08/01/2001	07/31/2001	08/01/2001
SAMPLE TIME	10:45	16:15	10:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011123009	L011122015	L011123007
REMARKS	DUPLICATE		
SAMPLE NUMBER	EPRI-0108-258	EPRI-0108-200	EPRI-0108-201

## -- PHYSICAL PARAMETERS --

	SEP-3	SEP-4	SEP-6
OXYGEN (O) (FLD) DIS	7.9	10.1	7.7
PH (FLD)	8.2	8.5	8.16
PH	8.2	8.1	8.2
SC (UMHOS/CM AT 25 C)	1046.0	1047.0	1045.0
SC (UMHOS/CM AT 25 C) (FLD)	894.0	1102.0	991.0
TDS (MEASURED AT 180 C)	680.0	652.0	663.0
TOTAL SUSPENDED SOLIDS	187.0	176.0	182.0
TURBIDITY (NTU)	152.0	114.0	127.0
WATER TEMPERATURE (C) (FLD)	27.0	31.3	26.9

## -- MAJOR CONSTITUENTS --

	SEP-3	SEP-4	SEP-6
CALCIUM (CA) DIS	64.0	61.0	64.0
MAGNESIUM (MG) DIS	16.0	16.0	16.0
SODIUM (NA) DIS	125.0	128.0	124.0
POTASSIUM (K) DIS	11.0	7.5	9.5
BICARBONATE (HCO3)	214.0	220.0	214.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	212.0	217.0	212.0
CHLORIDE (CL)	104.0	110.0	105.0
FLUORIDE (F)	0.7	0.72	0.68

## -- NUTRIENTS --

	SEP-3	SEP-4	SEP-6
NITRATE + NITRITE AS N	0.56 J4	0.15	0.55 J4

## -- METALS &amp; MINOR CONSTITUENTS --

	SEP-3	SEP-4	SEP-6
ARSENIC (AS) DIS	0.005	0.005	0.005
ARSENIC (AS) TOT	0.005	0.006	0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	3.1	2.1	3.2
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.004	0.005	0.004
SELENIUM (SE) DIS	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02	<0.02 UJ4	<0.02
ZINC (ZN) TOT	0.021	<0.02 UJ4	0.024

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

-- SAMPLE TYPE: SURFACE WATER --

SITE CODE	SEP-7	SEP-9	SEP-10
SAMPLE DATE	07/31/2001	07/31/2001	07/31/2001
SAMPLE TIME	15:00	14:30	11:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011122012	L011122011	L011123003
SAMPLE NUMBER	EPRI-0108-202	EPRI-0108-203	EPRI-0108-204

-- PHYSICAL PARAMETERS --

	SEP-7	SEP-9	SEP-10
OXYGEN (O) (FLD) DIS	9.1	8.7	8.3
PH (FLD)	8.38	8.35	8.17
PH	8.2	8.2	8.0
SC (UMHOS/CM AT 25 C)	1045.0	1143.0	1000.0
SC (UMHOS/CM AT 25 C) (FLD)	1083.0	1176.0	1041.0
TDS (MEASURED AT 180 C)	660.0	750.0	657.0
TOTAL SUSPENDED SOLIDS	166.0	158.0	228.0
TURBIDITY (NTU)	101.0	84.5	133.0
WATER TEMPERATURE (C) (FLD)	33.1	31.5	28.3

-- MAJOR CONSTITUENTS --

	SEP-7	SEP-9	SEP-10
CALCIUM (CA) DIS	61.0	69.0	61.0
MAGNESIUM (MG) DIS	16.0	17.0	15.0
SODIUM (NA) DIS	128.0	145.0	119.0
POTASSIUM (K) DIS	7.7	8.6	9.7
BICARBONATE (HCO3)	207.0	215.0	209.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	199.0	245.0	193.0
CHLORIDE (CL)	103.0	110.0	101.0
FLUORIDE (F)	0.67	0.72	0.7

-- NUTRIENTS --

	SEP-7	SEP-9	SEP-10
NITRATE + NITRITE AS N	0.21	0.85	0.15

-- METALS & MINOR CONSTITUENTS --

	SEP-7	SEP-9	SEP-10
ARSENIC (AS) DIS	<0.005	0.006	<0.005
ARSENIC (AS) TOT	<0.005	0.005	<0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	1.3	<0.1
IRON (FE) TOT	2.8	<0.1	2.7
LEAD (PB) DIS	<0.003	0.003	<0.003
LEAD (PB) TOT	0.003	<0.003	0.005
SELENIUM (SE) DIS	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02 UJ4	<0.02 UJ4	<0.02
ZINC (ZN) TOT	<0.02 UJ4	<0.02 UJ4	<0.02

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SURFACE WATER --

	SEP-11	SEP-12	SEP-13
SITE CODE			
SAMPLE DATE	07/31/2001	08/01/2001	08/01/2001
SAMPLE TIME	10:20	09:40	09:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011123001	L011123006	L011123005
SAMPLE NUMBER	EPRI-0108-205	EPRI-0108-206	EPRI-0108-207

-- PHYSICAL PARAMETERS --

	SEP-11	SEP-12	SEP-13
OXYGEN (O) (FLD) DIS	8.0	7.4	7.4
PH (FLD)	8.17	8.22	8.03
PH	7.9	8.2	8.3
SC (UMHOS/CM AT 25 C)	1003.0	1027.0	1030.0
SC (UMHOS/CM AT 25 C) (FLD)	1042.0	979.0	985.0
TDS (MEASURED AT 180 C)	654.0	661.0	687.0
TOTAL SUSPENDED SOLIDS	213.0	170.0	180.0
TURBIDITY (NTU)	139.0	167.0	130.0
WATER TEMPERATURE (C) (FLD)	28.2	25.9	26.3

-- MAJOR CONSTITUENTS --

	SEP-11	SEP-12	SEP-13
CALCIUM (CA) DIS	60.0	65.0	64.0
MAGNESIUM (MG) DIS	15.0	16.0	16.0
SODIUM (NA) DIS	119.0	120.0	120.0
POTASSIUM (K) DIS	8.4	11.0	11.0
BICARBONATE (HCO3)	195.0	205.0	217.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	221.0	214.0	220.0
CHLORIDE (CL)	99.0	100.0	97.0
FLUORIDE (F)	0.68	0.69	0.71

-- NUTRIENTS --

	SEP-11	SEP-12	SEP-13
NITRATE + NITRITE AS N	0.15	0.4 J4	0.36 J4

-- METALS & MINOR CONSTITUENTS --

	SEP-11	SEP-12	SEP-13
ARSENIC (AS) DIS	<0.005	0.005	<0.005
ARSENIC (AS) TOT	<0.005	0.005	<0.005
CADMIUM (CD) DIS	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS	<0.01	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) DIS	<0.025	<0.025	<0.025
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) DIS	<0.1	<0.1	<0.1
IRON (FE) TOT	3.0	3.1	3.1
LEAD (PB) DIS	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.005	0.004	0.005
SELENIUM (SE) DIS	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	<0.005	<0.005	<0.005
ZINC (ZN) DIS	<0.02	<0.02	<0.02
ZINC (ZN) TOT	0.023	0.026	0.022

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SEDIMENT/SOIL --

SITE CODE	SEP-2-SED	SEP-4-SED	SEP-4-SED	SEP-9-SED
SAMPLE DATE	07/31/2001	07/31/2001	07/31/2001	07/31/2001
SAMPLE TIME			16:30	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011129001	L011129005	L011129006	L011129004
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0108-219	EPRI-0108-221	EPRI-0108-255	EPRI-0108-224

-- METALS & MINOR CONSTITUENTS --

	SEP-2-SED	SEP-4-SED	SEP-4-SED	SEP-9-SED
ARSENIC (AS) TOT	21.0	16.0	22.0	24.0
CADMIUM (CD) TOT	<10.0	<10.0	14.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	270.0	65.0	88.0	120.0
IRON (FE) TOT	15000.0	14000.0	13000.0	11000.0
LEAD (PB) TOT	130.0	63.0	60.0	120.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	65.0 J4	39.0 J4	<10.0 J4	170.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SEDIMENT/SOIL --

SITE CODE	SEP-10-SED	SEP-11-SED	SEP-12-SED
SAMPLE DATE	07/31/2001	07/31/2001	07/31/2001
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011129003	L011129002	L011129009
SAMPLE NUMBER	EPRI-0108-225	EPRI-0108-226	EPRI-0108-227

-- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	26.0	12.0	20.0
CADMIUM (CD) TOT	12.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0
COPPER (CU) TOT	92.0	88.0	160.0
IRON (FE) TOT	14000.0	11000.0	11000.0
LEAD (PB) TOT	51.0	50.0	68.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0
ZINC (ZN) TOT	34.0 J4	27.0 J4	36.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
R:Rejected.

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1	EM-4	EM-4	Groundwater	3774.29	115
2	EM-5	EM-5	Groundwater	3776.50	21.32
2	EM-6	EM-6	Groundwater	3770.64	89.50
2	EP-4	EP-4	Groundwater	3715.96	15.33
3	EP-5	EP-5	Groundwater	3716.92	8.30
3	EP-6	EP-6	Groundwater	3716.22	8.94
3	EP-7	EP-7	Groundwater	3722.10	8.78
4	EP-12	EP-12	Groundwater	3773.23	80.00
4	EP-13	EP-13	Groundwater	3776.22	90.00
4	EP-14	EP-14	Groundwater	3774.98	72.05
5	EP-15	EP-15	Groundwater	3773.19	70.00
5	EP-20	EP-20	Groundwater	3724.55	29.58
5	EP-21	EP-21	Groundwater	3778.62	50.00
6	EP-22	EP-22	Groundwater	3787.82	68.94
6	EP-23	EP-23	Groundwater	3775.32	47.00
6	EP-24	EP-24	Groundwater	3774.87	58.00
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7	EP-26	EP-26	Groundwater	3773.43	78.63
7	EP-29	EP-29	Groundwater	3727.25	36.44
8	EP-35	EP-35	Groundwater	3725.74	33.17
8	EP-43	EP-43	Groundwater	3772.17	90.00
8	EP-49	EP-49	Groundwater	3785.59	83.10
9	EP-51	EP-51	Groundwater	3774.66	71.00
9	EP-52	EP-52	Groundwater	3787.38	71.00
9	EP-53	EP-53	Groundwater	3805.64	79.71
10	EP-54	EP-54	Groundwater	3787.37	81.25
10	EP-55	EP-55	Groundwater	3788.23	60.34
10	EP-56	EP-56	Groundwater	3772.09	58.00
11	EP-57	EP-57	Groundwater	3723.52	30.00
11	EP-58	EP-58	Groundwater	3726.67	30.00
11	EP-59	EP-59	Groundwater	3728.37	20.00
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14	EP-66	EP-66	Groundwater	3722.88	17.00
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16	EP-75	EP-75	Groundwater	3814.50	87.76
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35	L011066020	EPRI-0108-244	07/24/2001DI	
5	L011102001	EPRI-0108-109	07/30/2001EP-21	
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30	EPRI-0108-183	L011103005	07/27/2001EP-119	
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31	EPRI-0108-185	L011123010	08/01/2001EP-121	
31	EPRI-0108-186	L011103006	07/27/2001EP-122	
31	EPRI-0108-187	L011103007	07/25/2001EP-123	
32	EPRI-0108-188	L011103008	07/27/2001EP-124	
32	EPRI-0108-189	L011038025	07/19/2001EP-125	
32	EPRI-0108-190	L011038024	07/19/2001EP-126	
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33	EPRI-0108-193	L011066017	07/24/2001EP-129	
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39	EPRI-0108-203	L011122011	07/31/2001SEP-9	
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43	EPRI-0108-228	L011202001	08/01/2001SEP-13-SED	
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35	EPRI-0108-240	L011038027	07/19/2001DI	
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36	EPRI-0108-248	L011103015	07/26/2001DI	
30	EPRI-0108-249	L011103016	07/27/2001EP-119	
36	EPRI-0108-250	L011103017	07/27/2001DI	
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8	L011102005	EPRI-0108-118	07/26/2001EP-49	
9	L011102006	EPRI-0108-121	07/30/2001EP-53	
10	L011102007	EPRI-0108-122	07/26/2001EP-54	
10	L011102008	EPRI-0108-123	07/26/2001EP-55	
10	L011102009	EPRI-0108-124	07/26/2001EP-56	
11	L011102010	EPRI-0108-127	07/27/2001EP-59	
12	L011102011	EPRI-0108-128	07/27/2001EP-60	
12	L011102012	EPRI-0108-130	07/27/2001EP-62	
13	L011102013	EPRI-0108-131	07/27/2001EP-63	
13	L011102014	EPRI-0108-132	07/27/2001EP-64	
14	L011102015	EPRI-0108-134	07/27/2001EP-66	
17	L011102016	EPRI-0108-144	07/25/2001EP-78	
17	L011102017	EPRI-0108-145	07/25/2001EP-79	
18	L011102018	EPRI-0108-146	07/25/2001EP-80	
18	L011102019	EPRI-0108-147	07/25/2001EP-81	
18	L011102020	EPRI-0108-148	07/25/2001EP-82	
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31	L011103006	EPRI-0108-186	07/27/2001EP-122	
31	L011103007	EPRI-0108-187	07/25/2001EP-123	
32	L011103008	EPRI-0108-188	07/27/2001EP-124	
34	L011103009	EPRI-0108-194	07/26/2001EP-130	
34	L011103010	EPRI-0108-195	07/26/2001EP-131	
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20	L011103012	EPRI-0108-245	07/25/2001EP-86	
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34	L011103014	EPRI-0108-247	07/26/2001EP-130	
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36	L011103017	EPRI-0108-250	07/27/2001DI	
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36	L011122008	EPRI-0108-252	07/30/2001DI	
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1	L011122010	EPRI-0108-253	07/31/2001EM-1	
39	L011122011	EPRI-0108-203	07/31/2001SEP-9	
39	L011122012	EPRI-0108-202	07/31/2001SEP-7	
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36	L011122016	EPRI-0108-256	07/31/2001DI	
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27	L011122019	EPRI-0108-175	07/31/2001EP-111	
33	L011122020	EPRI-0108-191	07/31/2001EP-127	
40	L011123001	EPRI-0108-205	07/31/2001SEP-11	
27	L011123002	EPRI-0108-176	07/31/2001EP-112	
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28	L011123004	EPRI-0108-177	07/31/2001EP-113	
40	L011123005	EPRI-0108-207	08/01/2001SEP-13	
40	L011123006	EPRI-0108-206	08/01/2001SEP-12	
38	L011123007	EPRI-0108-201	08/01/2001SEP-6	
37	L011123008	EPRI-0108-199	08/01/2001SEP-3	
38	L011123009	EPRI-0108-258	08/01/2001SEP-3	
31	L011123010	EPRI-0108-185	08/01/2001EP-121	
30	L011123011	EPRI-0108-184	08/01/2001EP-120	
30	L011123012	EPRI-0108-259	08/01/2001EP-120	
36	L011123013	EPRI-0108-260	08/01/2001DI	
41	L011129001	EPRI-0108-219	07/31/2001SEP-2-SED	
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41	L011129006	EPRI-0108-255	07/31/2001SEP-4-SED	
43	L011129007	EPRI-0108-228	08/01/2001SEP-13-SED	
43	L011129008	EPRI-0108-257	08/01/2001SEP-13-SED	
42	L011129009	EPRI-0108-227	07/31/2001SEP-12-SED	
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**SECTION J-7**

**XRF DATA FOR MAY 2000 THROUGH AUGUST 2001**

**APPENDIX I**

**PHASE III SOIL DATA  
VALIDATION REPORTS**

## **APPENDIX I**

### **PHASE III SOIL DATA VALIDATION REPORTS**

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**DATA VALIDATION REPORT  
ASARCO EL PASO COPPER SMELTER  
REMEDIAL INVESTIGATION - PHASE III  
EDXRF SOIL DATA  
FEBRUARY THROUGH AUGUST 2001**

Prepared by  
Hydrometrics, Inc.  
6900 Cherry Blossom Lane  
Albuquerque, NM 87111

NOVEMBER 2001

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Table A-1	Data Validation Codes and Definitions
Table A-2	Summary of Flagged Data

### APPENDIX 2 Database

## **GLOSSARY OF TERMS**

CCV .....	Continuing Calibration Verification Standard
CLP .....	Contract Laboratory Program
CRDL .....	Contract Required Detection Limit
IDL .....	Instrument Detection Limit
LCS .....	Laboratory Control Standard
PDLG .....	Project Detection Limit Goal
QAPP .....	Quality Assurance Project Plan
QC .....	Quality Control
RL .....	Reporting Limit
RPD .....	Relative Percent Difference
RSD .....	Relative Standard Deviation
SOW .....	Statement of Work
EDXRF .....	X-ray fluorescence

## SUMMARY

Soil samples analyzed for the Asarco El Paso Copper Smelter Phase III Remedial Investigation project have been validated in accordance with the project work plans (Hydrometrics 1996, Hydrometrics 2000a,b,c,d). Samples were analyzed at Asarco's Technical Services Laboratory in Salt Lake City, Utah (TSC-SLC). Data validation codes and definitions are listed in Appendix 1, Table A-1 and the Summary of Flagged Data is located in Table A-2. Appendix 2 contains the validated database of soil results.

Data quality objectives for the project are as follows:

- **Precision Objectives:** A relative percent difference (RPD) of 35% or less must be met for field and laboratory duplicates where concentrations are greater than five times the project detection limit goals (PDLG). Control limits for sample results less or equal to five times the PDLG are +/- two times the PDLG.
- **Accuracy Objectives:** For samples analyzed by the energy dispersive x-ray fluorescence (EDXRF) method, a percent recovery of 75% to 125% must be met for continuing calibration verification (CCV) standards and laboratory control standards (LCS'). For samples analyzed by wet chemistry methods (confirmation samples), a percent recovery rate of 80% to 120% (or within the 95% confidence limits of known value) must be met for LCS' and 75% to 125% for matrix spike samples. Confirmation samples (splits of samples analyzed by the EDXRF method) must be within 35 RPD when EDXRF sample results are greater than 100 mg/kg.
- **Completeness:** Completeness is achieved when the number of valid measurements is sufficient to satisfactorily address all-important issues about the study. Completeness is quantitatively expressed as the number of valid (results that not rejected) measurements divided by the total number of planned measurements, expressed as a percentage.

For this sampling event, precision and accuracy objectives were not always met. Following is a summary of precision and accuracy quantitative evaluation.

### Precision:

- Sixty-five percent of field duplicate results were within control limits.
- Ninety-nine percent of laboratory duplicate results were within control limits.

**Accuracy:**

- Ninety percent of CCV results were within control limits.
- Seventy-nine percent of LCS results were within control limits.
- Eighty-five percent of confirmation sample (splits) results were within control limits.

**Completeness** for this project was technically met with 100% of all results deemed valid. However, it should be noted that although no results were rejected due to quality control violations, only 9% of EDXRF zinc quality control results met control limits for LCS'. Cadmium only met quality control limits for CCVs 43% of the time. Since the LCS zinc concentration (190 mg/kg) and the CCV cadmium concentration (12 mg/kg) were at low levels, and control standards with higher concentration levels were generally within control limits, it was determined that only samples with low zinc and cadmium concentrations were affected. In addition, PDLG's were not met for chromium (20 mg/kg) or selenium (10 mg/kg). Therefore it was not possible to evaluate the quality of chromium results for concentrations less than 80 mg/kg and in some instances less than 200 mg/kg. Selenium had reporting limits of 20 mg/kg and 40 mg/kg. A large percentage of the total results for chromium and selenium were reported as less than the detection limit. Precision, accuracy and completeness are thoroughly discussed in Section 12 of the Data Validation Report.

With the exception of low level cadmium, chromium, selenium and zinc results, the El Paso soil data analyzed February through August 2001 are deemed acceptable for the purposes of the project as outlined in the project work plan (Hydrometrics, 1994) provided that the flagged data are considered with appropriate caution. In using the flagged data, care should be taken to note possible bias and/or lack of reproducibility indicated by the flags.

## DATA VALIDATION REPORT

### 1. INTRODUCTION

- This validation applies to 732 soil (including 66 field duplicates) samples analyzed by the EDXRF method and 41 split samples (used to confirm EDXRF analyses) analyzed by EPA wet chemistry methods. All samples were analyzed at Asarco's Technical services laboratory in Salt Lake City, Utah. These samples were collected from February through August 2001 for the Asarco El Paso Copper Smelter Remedial Investigation Phase III project.
- Validation procedures used are generally consistent with:
  - ☐ EPA National Functional Guidelines for Inorganic Data Review
  - ☒ Work Plans (Hydrometrics 1996 and Hydrometrics 2000a,b,c,d)
  - ☐ Other
- Overall level of validation:
  - ☐ Contract Laboratory Program (CLP)
  - ☒ Standard -- Field and laboratory quality control (QC) samples are evaluated and associated samples are flagged for QC violations.
  - ☐ Visual

### 2. DELIVERABLES

- All laboratory document deliverables were present as specified in the CLP-Statement of Work (CLP-SOW), EPA, 1995 and/or the project contract.
  - ☒ Yes
  - ☐ No
- All documentation of field procedures was provided as required.
  - ☐ Yes
  - ☒ No -- see notes

**Notes:** Field notes were not submitted. Field information was collected from the chain of custodies.

### 3. FIELD QUALITY CONTROL SAMPLES

- **Field duplicates**

Field duplicates have been collected at the proper frequency (1 per 20 or 1 per day, whichever is greater).

  - ☐ Yes
  - ☒ No - see notes on following page

**Field Duplicate Notes:** Although the frequency of 1 per 20 was met, field duplicate samples were not submitted 3/29/01, 3/30/01, 4/2/01, 4/6/01, 5/16/01, 5/21/01, 5/29/01, 7/20/01, and 7/21/01.

Field duplicate relative percent differences (RPDs) were within the required control limits (RPD of 35% or less for soil matrix). If the sample or duplicate result is less than 5 times the project detection limit goal (PDLG), the RPD criteria are not used. In these cases, the difference between the sample and the duplicate results must be within  $\pm 2$  times the PDLG for soil matrix.

☐ Yes  
☒ No – see notes

**Notes:** The  $\pm$  criteria used to evaluate field and laboratory duplicates was  $\pm$  two times the laboratory reporting level instead of the PDLG. Samples collected on the same day (and same time range) and of the same matrix as the field duplicate exceedances were flagged with "UJ4" or "J4." These flags may indicate poor reproducibility of sample results due to the combined effects of variations in field sampling techniques, sample preparation, and laboratory analytical procedures. Table 3-1 lists the field duplicate exceedances for this project.

#### 4. LABORATORY PROCEDURES

- **Laboratory procedures followed**

☐ CLP-SOW  
☐ SW-846  
☒ Standard Methods for Chemical Analysis of Water and Wastes  
(EDXRF Confirmation Samples Only)  
☒ EDXRF Standard Operating Procedures  
☐ Other

- **Holding times met**

☒ Yes  
☐ No

- **Consistency with project requirements**

Analyses were carried out as requested.

☒ Yes  
☐ No

Project specified methods were used.

☒ Yes  
☐ No

**Table 3-1. Summary of Field Duplicate Exceedances**

Sample / Duplicate Code	Sample Date	Analyte	Sample Result (mg/kg)	Duplicate Result (mg/kg)	*PDLG (mg/kg)	RPD or Difference (mg/kg)	# Flagged
BH16-26C1/C2	2/23/01	Arsenic	170.0	110.0	10	42.86 RPD	9
BH18-4A1/A2	3/6/01	Arsenic	44.0	73.0	10	29 mg/kg Diff	7
EP-127E1/E2	4/27/01	Arsenic	29.0	60.0	10	31 mg/kg Diff	10
BH11-9C1/C2	5/9/01	Arsenic	62.0	29.0	10	33 mg/kg Diff	12
BH9-1-10E1/E2	5/17/01	Arsenic	1000.0	500.0	10	66.67 RPD	9
BH9-1-9C1/C2	5/17/01	Arsenic	370.0	1600.0	10	124.87 RPD	8
BH9-6-15B1/B2	5/25/01	Arsenic	120.0	82.0	10	37.62 RPD	3
BH9-6-16B1/B2	5/25/01	Arsenic	1400.0	760.0	10	59.26 RPD	4
BH9-6-5E1/E2	5/25/01	Arsenic	260.0	770.0	10	99.03 RPD	9
BH9-6-9B1/B2	5/25/01	Arsenic	1400.0	3700.0	10	90.20 RPD	8
BH12-32A1/A2	7/18/01	Arsenic	120.0	73.0	10	48.70 RPD	5
BH12-34A1/A2	7/18/01	Arsenic	49.0	430.0	10	381 Diff	6
BH12-35A1/A2	7/18/01	Arsenic	110.0	70.0	10	44.44 RPD	6
BH12-36A1/A2	7/18/01	Arsenic	700.0	1300.0	10	60.00 RPD	3
BH11-18A1/A2	7/19/01	Arsenic	32.0	53.0	10	21 Diff	8
BH9-1-10E1/E2	5/17/01	Cadmium	320.0	140.0	10	78.26 RPD	9
BH9-1-9C1/C2	5/17/01	Cadmium	170.0	1100.0	10	146.46 RPD	8
BH9-6-16B1/B2	5/25/01	Cadmium	790.0	390.0	10	67.80 RPD	4
BH9-6-5E1/E2	5/25/01	Cadmium	770.0	1300.0	10	51.21 RPD	11
BH9-6-9B1/B2	5/25/01	Cadmium	1500.0	5900.0	10	118.92 RPD	8
BH12-34A1/A2	7/18/01	Cadmium	39.0	470.0	10	431 Diff	6
BH12-36A1/A2	7/18/01	Cadmium	540.0	1400.0	10	88.66 RPD	3
BH13-13A1/A2	7/23/01	Cadmium	140.0	330.0	10	80.85 RPD	5
BH15-12E1/E2	2/20/01	Copper	37.0	130.0	20	93 Diff	6
BH16-5H1/H2	2/28/01	Copper	63.0	<20.0	20	43 mg/kg Diff	8
BH16-10B1/B2	3/1/01	Copper	130.0	68.0	20	62 Diff	3
BH18-4A1/A2	3/6/01	Copper	230.0	420.0	20	58.46 RPD	7
BH2-9B1/B2	3/28/01	Copper	15.0	67.0	20	52 mg/kg Diff	5
EP-127E1/E2	4/27/01	Copper	51.0	180.0	20	129 mg/kg Diff	10
BH11-9C1/C2	5/9/01	Copper	720.0	250.0	20	96.91 RPD	10
BH9-1-10E1/E2	5/17/01	Copper	2400.0	1500.0	20	46.15 RPD	9
BH9-1-8E1/E2	5/17/01	Copper	60.0	150.0	20	90 mg/kg Diff	5
BH9-1-9C1/C2	5/17/01	Copper	2000.0	3900.0	20	64.41 RPD	8
BH9-6-15B1/B2	5/25/01	Copper	190.0	52.0	20	138 mg/kg Diff	3
BH9-6-16B1/B2	5/25/01	Copper	8100.0	3900.0	20	70.00 RPD	4
BH9-6-5E1/E2	5/25/01	Copper	2400.0	6000.0	20	85.71 RPD	9
BH9-6-9B1/B2	5/25/01	Copper	6300.0	16000.0	20	87.00 RPD	7
EP-131B1/B2	5/30/01	Copper	23.0	84.0	20	61 mg/kg Diff	7
BH12-24F1/F2	7/17/01	Copper	330.0	170.0	20	64.00 RPD	6
BH12-34A1/A2	7/18/01	Copper	440.0	3000.0	20	148.84 RPD	6
BH12-36A1/A2	7/18/01	Copper	3000.0	6900.0	20	78.79 RPD	3
BH8-6F1/F2	4/11/01	Iron	11000	4700	50	80.25 RPD	15
BH9-1-9C1/C2	5/17/01	Iron	6700	11000	50	48.59 RPD	8
BH12-35A1/A2	7/18/01	Iron	24000	16000	50	40.00 RPD	6
BH13-13A1/A2	7/23/01	Iron	130000	62000	50	70.83 RPD	5
BH15-12E1/E2	2/20/01	Lead	170.0	280.0	10	48.89 RPD	5

\* PDLG = Project Detection Limit Goals. When laboratory reporting limit was greater than the PDLG, the reporting limit was used to evaluate the field duplicate.



**Table 3-1. Summary of Field Duplicate Exceedances**

Sample / Duplicate Code	Sample Date	Analyte	Sample Result (mg/kg)	Duplicate Result (mg/kg)	*PDLG (mg/kg)	RPD or Difference (mg/kg)	# Flagged
BH18-3E1/E2	3/6/01	Lead	150.0	98.0	10	41.94 RPD	7
BH18-4A1/A2	3/6/01	Lead	200.0	560.0	10	94.74 RPD	7
BH8-8C1/C2	4/11/01	Lead	74.0	16.0	10	58 mg/kg Diff	4
EP-123C1/C2	4/12/01	Lead	71.0	130.0	10	58.71 RPD	6
EP-127E1/E2	4/27/01	Lead	79.0	290.0	10	114.36 RPD	10
BH11-9C1/C2	5/9/01	Lead	620.0	260.0	10	81.82 RPD	12
BH9-1-10E1/E2	5/17/01	Lead	3000.0	1500.0	10	66.67 RPD	9
BH9-1-9C1/C2	5/17/01	Lead	930.0	4800.0	10	135.08 RPD	8
BH9-1-14A1/A2	5/24/01	Lead	5600.0	3800.0	10	38.30 RPD	15
BH9-1-18G1/G2	5/25/01	Lead	150.0	94.0	10	45.90 RPD	7
BH9-6-15B1/B2	5/25/01	Lead	290.0	140.0	10	69.77 RPD	3
BH9-6-16B1/B2	5/25/01	Lead	10000.0	4700.0	10	72.11 RPD	5
BH9-6-5E1/E2	5/25/01	Lead	2000.0	5400.0	10	91.89 RPD	9
BH9-6-9B1/B2	5/25/01	Lead	6600.0	44000.0	10	147.83 RPD	8
BH12-24F1/F2	7/17/01	Lead	230.0	76.0	10	100.65 RPD	6
BH12-26C1/C2	7/17/01	Lead	66.0	44.0	10	22 Diff	7
BH12-34A1/A2	7/18/01	Lead	510.0	5700.0	10	167.15 RPD	6
BH12-36A1/A2	7/18/01	Lead	6100.0	13000.0	10	72.25 RPD	3
BL29C/C2	8/13/01	Lead	130.0	61.0	10	72.25 RPD	3
BH9-1-9C1/C2	5/17/01	Selenium	<20.0	66.0	20	46 mg/kg Diff	8
BH9-6-9B1/B2	5/25/01	Selenium	84.0	190.0	20	106 mg/kg Diff	8
BH12-36A1/A2	7/18/01	Selenium	43.0	91.0	20	48 Diff	3
BH17-4A1/A2	3/1/01	Zinc	34.0	120.0	10	86 mg/kg Diff	3
BH18-4A1/A2	3/6/01	Zinc	120.0	290.0	10	82.93 RPD	7
BH12-13A1/A2	4/4/01	Zinc	75.0	43.0	10	32 Diff	7
BH12-19A1/A2	4/5/01	Zinc	49.0	22.0	10	27 Diff	7
BH8-8C1/C2	4/11/01	Zinc	170.0	36.0	10	134 mg/kg Diff	4
EP-123C1/C2	4/12/01	Zinc	48.0	73.0	10	25 mg/kg Diff	6
EP-127E1/E2	4/27/01	Zinc	60.0	190.0	10	104.00 RPD	10
BH11-12C1/C2	5/9/01	Zinc	77.0	150.0	10	64.32 RPD	9
BH11-9C1/C2	5/9/01	Zinc	440.0	170.0	10	88.52 RPD	10
BH9-1-10E1/E2	5/17/01	Zinc	2400.0	1300.0	10	59.46 RPD	9
BH9-1-9C1/C2	5/17/01	Zinc	1800.0	4900.0	10	92.54 RPD	8
BH9-1-18G1/G2	5/25/01	Zinc	120.0	67.0	10	56.68 RPD	7
BH9-6-15B1/B2	5/25/01	Zinc	120.0	28.0	10	92 mg/kg Diff	3
BH9-6-16B1/B2	5/25/01	Zinc	5700.0	3400.0	10	50.55 RPD	4
BH9-6-5E1/E2	5/25/01	Zinc	2600.0	6300.0	10	83.15 RPD	9
BH9-6-9B1/B2	5/25/01	Zinc	7500.0	20000.0	10	90.91 RPD	8
BH9-6-19C1/C2	5/26/01	Zinc	65.0	110.0	10	51.43 RPD	9
EP-131B1/B2	5/30/01	Zinc	47.0	69.0	10	22 mg/kg Diff	7
BH12-25E1/E2	7/17/01	Zinc	42.0	83.0	10	41 Diff	7
BH12-34A1/A2	7/18/01	Zinc	590.0	3200.0	10	137.73 RPD	6
BH12-36A1/A2	7/18/01	Zinc	2700.0	5600.0	10	69.88 RPD	3
BH11-18A1/A2	7/19/01	Zinc	100.0	180.0	10	57.14 RPD	9
BH13-13A1/A2	7/23/01	Zinc	5600.0	3600.0	10	43.48 RPD	5

\* PDLG = Project Detection Limit Goals. When laboratory reporting limit was greater than the PDLG, the reporting limit was used to evaluate the field duplicate.

## 5. DETECTION LIMITS

The following table lists the laboratory's reporting level by analytical method and compares it to the project detection limit (PDLG).

Batches	Analytical Method	Parameter	Reporting Level (mg/kg)	PDLG (mg/kg)
L010370, L010371, L010372, L010423	EDXRF	Arsenic	10	10
		Cadmium	10	10
		Chromium	200	20
		Copper	20	10
		Iron	50	20
		Lead	10	10
		Selenium	40	10
		Zinc	10	10
L010467, L010497, L010605, L010692, L010831, L010832, L010833, L010834, L010953, L010953, L011062, L011074, L011188	EDXRF	Arsenic	10	10
		Cadmium	10	10
		Chromium	80	20
		Copper	20	10
		Iron	50	20
		Lead	10	10
		Selenium	20	10
		Zinc	10	10
L010458, L010532, L010877, L011009, L011202	EPA 6010 (Wet Chemistry – Split Samples)	Arsenic	10	10
		Cadmium	10	10
		Chromium	10	20
		Copper	10	10
		Iron	50	20
		Lead	10	10
		Selenium	10	10
		Zinc	10	10

- Reporting detection limits met PDLGs.

     Yes

X No – see notes

**Notes:** Chromium, copper, iron and selenium reporting detection limits did not meet PDLGs. Following is a table summarizing the percentage of results per analyte that were reported below detection limits. Reporting limits changed during the project for chromium and selenium due to the type of calibration method used to analyze the samples. Note that a large percentage of sample results reported as less than the detection limit for chromium and selenium did not meet PDLGs.

Analyte	PDLG (mg/kg)	Reporting Detection Limit (mg/kg)	% Reported As Less Than the Detection Limit
Arsenic	10	10	2.5%
Cadmium	10	10	36.0%
Chromium	20	30 (Split Samples)	0.1%*
		80	48.3%*
		200	21.6%*
			Total - 70.0%*
Copper	10	20	7.2%
Iron	20	50	0%
Selenium	10	10 (Split Samples)	3.2%
		20	58.5%*
		40	22.1%*
			Total - 83.8% Total that did not meet the PDLG – 80.6%*
Lead	10	10	0.1%
Zinc	10	10	15.5%

\*Notes: Percent that did not meet PDLGs.

- Instrument detection limits (IDLs) were provided by the laboratory.

     Yes

X No

## 6. CALIBRATION AND CALIBRATION VERIFICATIONS (EDXRF METHOD ONLY)

- Instrument calibrations

All initial instrument calibrations were performed as specified in the EDXRF Standard Operating Procedures.

X Yes – see notes on following page

     No

**Instrument Calibration Notes:** For batches L010370, L010371, L010372 and L010423, the EDXRF instrument was calibration using matrix specific calibration methods for arsenic and lead. Other analytes were analyzed using a Fundamental Parameters program. This program uses pure element standards to empirically calculate the concentrations of target analytes. For all other subsequent batches, arsenic, cadmium, chromium, iron, lead and zinc were analyzed using a matrix specific calibration program and copper and selenium were analyzed by the Fundamental Parameters method. Continuing calibration verification (CCV) standards are only used for matrix specific calibration program analytes. Laboratory control standards (LCS) can be used for both types of analytical programs, but for this project, was only analyzed for arsenic and lead in batches L010370, L010371, L010372, and L010423. However the LCS was analyzed for all parameters in subsequent batches.

- **Continuing Calibration Verification Standards**

The continuing calibration verification (CCV) standards were analyzed at the required frequency (1 per 16 samples).

  X   Yes – see notes

      No

**Notes:** Arsenic and lead were analyzed and evaluated for batches L010370, L010371, L010372 and L010423. Arsenic, cadmium, chromium, iron, lead and zinc were analyzed and evaluated for all other batches. See explanation described in "Instrument Calibration Notes."

The CCV standard percent recovery results were within the required control limits (75-125%).

      Yes

  X   No – see notes

**Notes:** Samples associated with CCVs that were out of control limits were flagged with "UJ2 or J2" to indicate a possible bias. Associated samples were analyzed with the same batch and time period as the CCV. Table 6-1 summarizes CCVs that were out of control limits. Please note that cadmium was out of control limits 43% of the time. This may have been due to the low concentration of the CCV (12 mg/kg), which is very near the detection limit (10 mg/kg). Therefore, only samples less than 45 mg/kg were flagged. This value was chosen because the cadmium value for the LCS was 45 mg/kg and 88% the LCS results were within control limits.

## 7. LABORATORY DUPLICATES (EDXRF AND WET CHEMISTRY METHODS)

- Laboratory duplicate samples were analyzed at the proper frequency (1 per 16 samples for EDXRF and 1 per batch for wet chemistry).

  X   Yes – Wet Chemistry

  X   No – EDXRF - see notes on following page

Table 6-1. Summary of Continuing Calibration Standard Exceedances

Laboratory Batch	CCV Sample	Analytical Date	Analyte	Recovery Rate	# of Flags
L010467	30651-58	4/19/01	Cadmium	267	3
L010467	30651-58	4/19/01	Cadmium	508	5
L010467	30651-58	4/19/01	Cadmium	242	3
L010467	30651-58	4/19/01	Cadmium	300	0
L010467	30651-58	4/19/01	Zinc	67	10
L010467	30651-58	4/19/01	Zinc	68	10
L010467	30651-58	4/19/01	Zinc	68	10
L010467	30651-58	4/19/01	Zinc	68	9
L010467	30651-58	4/19/01	Zinc	67	0
L010497	30651-58	4/24/01	Cadmium	267	2
L010497	30651-58	4/24/01	Cadmium	217	3
L010605	30651-58	5/11/01	Cadmium	242	3
L010605	30651-58	5/11/01	Cadmium	275	3
L010605	30651-58	5/11/01	Cadmium	400	2
L010605	30651-58	5/11/01	Cadmium	317	7
L010692	30651-58	5/25/01	Cadmium	358	4
L010692	30651-58	5/25/01	Cadmium	300	9
L010692	30651-58	5/25/01	Cadmium	208	9
L010692	30651-58	5/25/01	Cadmium	250	5
L010831	30651-58	6/19/01	Arsenic	73	10
L010831	30651-58	6/19/01	Cadmium	375	4
L010831	30651-58	6/19/01	Cadmium	267	5
L010831	30651-58	6/19/01	Cadmium	417	1
L010831	30651-58	6/19/01	Cadmium	333	6
L010831	30651-58	6/19/01	Cadmium	225	3
L010831	30651-58	6/19/01	Cadmium	325	4
L010831	30651-58	6/19/01	Cadmium	225	4
L010831	30651-58	6/19/01	Cadmium	442	3
L010832	30651-58	6/22/01	Cadmium	416	2
L010832	30651-58	6/22/01	Cadmium	366	3
L010832	30651-58	6/22/01	Cadmium	208	0
L010833	30651-58	6/22/01	Cadmium	233	2
L010953	30651-58	7/6/01	Cadmium	242	1
L010953	30651-58	7/6/01	Cadmium	333	4
L011062	30651-58	8/8/01	Cadmium	275	0
L011062	30651-58	8/8/01	Cadmium	275	4
L011062	30651-58	8/8/01	Cadmium	208	3
L011074	30651-58	8/8/01	Cadmium	250	7
L011074	30651-58	8/8/01	Cadmium	267	6
L011074	30651-58	8/8/01	Cadmium	217	1
L011188	30651-58	2/24/01	Cadmium	308	2

**Laboratory Duplicate Notes:** Forty laboratory duplicates were run for 732 samples for a total frequency of 1 per 17.

- The laboratory duplicate relative percent differences (RPDs) were within the required control limits (RPD of 35% or less for soil matrix). If the sample or duplicate result is less than 5 times the PDLG, the RPD criteria are not used. In these cases, the difference between the sample and the duplicate results must be within  $\pm 2$  times the PDLG for soil matrix.

     Yes  
  X   No – see notes

**Notes:** Sample associated with laboratory duplicates that were out of control limits were flagged with “UJ4” or “J4” to indicate a possible variance with the result. Associated samples were analyzed with the same batch and time period as the laboratory duplicate. Following is a table summarizing laboratory duplicates that were out of control limits.

Batch	Analytical Method	Lab Duplicate Sample	Analytical Date	Analyte	RPD/Diff (mg/kg)	# of Flags
L010370	EDXRF	L010370-20	4/3/01	Copper	44 Diff	20
L010423	EDXRF	L010423-9	4/3/01	Zinc	25 Diff	9
L010831	EDXRF	L010831-110	6/16/01	Lead	22 Diff	10

#### 8. LABORATORY CONTROL SAMPLES (EDXRF AND WET CHEMISTRY METHODS)

- The reference material used was of the correct matrix and concentration.  
  X   Yes  
     No
- LCSs were analyzed at the proper frequency (1 per day for EDXRF and 1 per batch for wet chemistry).  
  X   Yes – see notes  
     No

**Notes:** One LCS was run per 20 samples analyzed by the EDXRF method, which was much greater than the work plan required. Arsenic and lead were analyzed and evaluated for EDXRF batches L010370, L010371, L010372 and L010423. All parameters were analyzed for subsequent EDXRF batches. Refer to section 6 (Instrument Calibrations) for explanation.

- LCS recoveries were within the required control limits (75-125% for arsenic and lead).  
     Yes  
  X   No – see notes on following page

**LCS Notes:** Samples that were associated with LCS' that were out of control limits were flagged with "UJ4" or "J4" to indicate a possible bias. Associated samples were analyzed with the same batch and time period as the LCS. Table 8-1 lists the LCS' that were out of control limits. Please note that zinc was in control limits only 9% of the time. This may have been due to the instruments calibration standards. If the standards were had high zinc concentrations (which the CCV indicates), low level values may be biased. The LCS concentration for zinc was 190 mg/kg whereas the CCV concentration was 27400 mg/kg. Since the difference of the standard's concentrations is great, it is difficult to know at what concentration zinc becomes statistically accurate. Therefore, all samples associated with the LCS' were flagged.

**9. LABORATORY BLANKS (WET CHEMISTRY METHODS ONLY)**

Please note that the highest blank value associated with any particular analyte is the blank value used for the flagging process.

- **Preparation blanks**

Preparation blanks were prepared and analyzed at the required frequency (1 per batch).

☒ Yes

☐ No

All the analytes in the preparation blank were less than the CRDL (or the PDLG if a project detection limit goal has been specified).

☒ Yes

☐ No

**10. LABORATORY MATRIX SPIKES (WET CHEMISTRY METHODS ONLY)**

- A matrix spike sample (pre-digestion) was analyzed for each digestion batch and/or matrix, or as required in the CLP-SOW.

☒ Yes

☐ No

- Matrix spike recoveries were within the required control limits (75-125%).

☒ Yes

☐ No

**11. EDXRF CONFIRMATION SAMPLES (SPLIT SAMPLES)**

- EDXRF confirmation samples were analyzed at the proper frequency (1 per 20 samples collected).

☒ Yes

☐ No

Table 8-1. Summary of Laboratory Control Standard Exceedances

Laboratory Batch	Analytical Method	LCS Sample	Analytical Date	Analyte	Recovery Rate	# of Flags
L010371	EDXRF	LCS287	4/3/01	Lead	100%	20
L010372	EDXRF	LCS287	4/3/01	Lead	128%	20
L010467	EDXRF	LCS287	4/19/01	Cadmium	58%	20
L010467	EDXRF	LCS287	4/19/01	Lead	126%	19
L010467	EDXRF	LCS287	4/19/01	Zinc	32%	20
L010467	EDXRF	LCS287	4/19/01	Zinc	30%	19
L010467	EDXRF	LCS287	4/19/01	Zinc	42%	0
L010497	EDXRF	LCS287	4/24/01	Chromium	72%	20
L010497	EDXRF	LCS287	4/24/01	Chromium	57%	15
L010497	EDXRF	LCS287	4/24/01	Selenium	73%	20
L010497	EDXRF	LCS287	4/24/01	Zinc	35%	20
L010497	EDXRF	LCS287	4/24/01	Zinc	37%	20
L010497	EDXRF	LCS287	4/24/01	Zinc	39%	15
L010605	EDXRF	LCS287	5/11/01	Cadmium	71%	20
L010605	EDXRF	LCS287	5/11/01	Chromium	65%	20
L010605	EDXRF	LCS287	5/11/01	Chromium	66%	17
L010692	EDXRF	LCS287	5/25/01	Lead	126%	20
L010692	EDXRF	LCS287	5/25/01	Lead	126%	17
L010692	EDXRF	LCS287	5/25/01	Zinc	34%	20
L010692	EDXRF	LCS287	5/25/01	Zinc	35%	20
L010692	EDXRF	LCS287	5/25/01	Zinc	23%	17
L010831	EDXRF	LCS287	6/19/01	Chromium	71%	20
L010831	EDXRF	LCS287	6/19/01	Chromium	70%	20
L010831	EDXRF	LCS287	6/19/01	Chromium	51%	20
L010831	EDXRF	LCS287	6/19/01	Chromium	63%	20
L010831	EDXRF	LCS287	6/19/01	Chromium	68%	10
L010831	EDXRF	LCS287	6/19/01	Selenium	73%	20
L010831	EDXRF	LCS287	6/19/01	Zinc	31%	20
L010831	EDXRF	LCS287	6/19/01	Zinc	29%	20
L010831	EDXRF	LCS287	6/19/01	Zinc	28%	20
L010831	EDXRF	LCS287	6/19/01	Zinc	40%	20
L010831	EDXRF	LCS287	6/19/01	Zinc	22%	20
L010831	EDXRF	LCS287	6/19/01	Zinc	35%	10
L010832	EDXRF	LCS287	6/22/01	Chromium	67%	20
L010832	EDXRF	LCS287	6/22/01	Chromium	72%	20
L010832	EDXRF	LCS287	6/22/01	Lead	141%	11
L010832	EDXRF	LCS287	6/22/01	Zinc	32%	20
L010832	EDXRF	LCS287	6/22/01	Zinc	40%	20
L010832	EDXRF	LCS287	6/22/01	Zinc	30%	20
L010832-833	EDXRF	LCS287	6/22/01	Chromium	74%	20
L010832-833	EDXRF	LCS287	6/22/01	Zinc	41%	20
L010833	EDXRF	LCS287	6/22/01	Lead	141%	16
L010833-834	EDXRF	LCS287	6/22/01	Chromium	66%	11
L010833-834	EDXRF	LCS287	6/22/01	Zinc	28%	11
L010953	EDXRF	LCS287	7/6/01	Cadmium	71%	20
L010953	EDXRF	LCS287	7/6/01	Chromium	61%	20
L010953	EDXRF	LCS287	7/6/01	Chromium	67%	7
L010953	EDXRF	LCS287	7/6/01	Zinc	33%	20
L010953	EDXRF	LCS287	7/6/01	Zinc	19%	20
L010953	EDXRF	LCS287	7/6/01	Zinc	28%	7
L011062	EDXRF	LCS287	8/8/01	Zinc	21%	20
L011062	EDXRF	LCS287	8/8/01	Zinc	30%	20
L011062	EDXRF	LCS287	8/8/01	Zinc	29%	12
L011074	EDXRF	LCS287	8/8/01	Cadmium	67%	5
L011074	EDXRF	LCS287	8/8/01	Lead	126%	20
L011074	EDXRF	LCS287	8/8/01	Zinc	26%	20
L011074	EDXRF	LCS287	8/8/01	Zinc	26%	20
L011074	EDXRF	LCS287	8/8/01	Zinc	28%	5
L011188	EDXRF	LCS287	2/24/01	Zinc	26%	7
L010458	Wet Chem	WG010293	4/9/01	Chromium	123%	10



- Confirmation samples were analyzed using the proper method.  
☒ Yes – EPA Method 6010  
☐ No
- Confirmation samples were within the required control limits (35% RPD for XRF concentrations greater than 100 mg/kg).  
☐ Yes  
☒ No – see notes

**Notes:** Samples associated with confirmation samples that were out of control limits were flagged "UJ4" or "J4" to indicate a possible variance and or bias with the result. Associated samples were collected on the same day and during the same time period as the confirmation sample. Table 11-1 lists the confirmation sample results that were out of control limits.

## 12. DATA QUALITY OBJECTIVES

- Project data quality objectives (DQOs) met.  
☐ Yes  
☒ No – see section below

### Accuracy

Accuracy is the agreement between a measured value and a true value. Accuracy for EDXRF analytical data was evaluated using CCVs, LCS', and confirmation samples. Wet chemistry analytical data (EDXRF confirmation samples) were evaluated using laboratory matrix spike sample and LCS'.

### ACCURACY OF EDXRF ANALYTICAL DATA

#### Continuing Calibration Verification Standards

Analyte	CCV Concentration (mg/kg)	# of CCV Results	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	700	81	1	98.8%
Cadmium	12	61	35	42.6%
Chromium	420	61	0	100%
Copper	NA	0	NA	NA
Iron	18000	61	0	100%
Lead	8062	81	0	100%
Selenium	NA	0	NA	NA
Zinc	27400	61	5	5
<b>Total</b>		<b>406</b>	<b>41</b>	<b>89.9%</b>

\*NA = Not Analyzed

Table 11-1. Summary of Split Sample Exceedances

Sample Code	Sample Date	Sample Laboratory Code	Split Laboratory Code	Analyte	Sample Result (mg/kg)	Split Result (mg/kg)	PDLG* (mg/kg)	RPD or Difference (mg/kg)	# Flagged
BH14-5A	10-Apr-01	L010605007	L010887001	Arsenic	170.0	105.0	10	47.27 RPD	11
EP-128C	27-Apr-01	L010605051	L010887002	Arsenic	68.0	1566.0	10	183.35 RPD	11
BH9-1-18C	24-May-01	L010831031	L010887012	Arsenic	110.0	74.0	10	39.13 RPD	9
BL43A	28-Jun-01	L010953039	L011009005	Arsenic	235.0	155.0	10	41.03 RPD	6
BH12-25A	17-Jul-01	L011062023	L011202004	Arsenic	190.0	112	10	51.66 RPD	16
BH12-15A	4-Apr-01	L010467022	L010532002	Cadmium	2800.0	1945.0	10	36.04 RPD	2
EP-128C	27-Apr-01	L010605051	L010887002	Cadmium	<10.0	1031.0	10	1021 Diff	11
BH16-28E	26-Feb-01	L010372038	L010458010	Copper	210.0	126.0	20	50.00 RPD	11
BH17-13B	5-Mar-01	L010371037	L010458007	Copper	140.0	74.0	20	66 Diff	12
EP-128C	27-Apr-01	L010605051	L010887002	Copper	140.0	37730.0	20	198.52 RPD	11
BH11-15C	17-Jul-01	L011062003	L011202005	Copper	3900.0	6192	20	45.42 RPD	2
BH15-8C	20-Feb-01	L010370002	L010458001	Iron	10000	19180.0	50	62.92 RPD	10
BH17-6A	2-Mar-01	L010370023	L010458002	Iron	16000	24070.0	50	40.28 RPD	20
BH8-6A	11-Apr-01	L010497006	L010532003	Iron	7000	10340.0	50	38.52 RPD	16
BH8-9B	11-Apr-01	L010497026	L010532004	Iron	12000	17850.0	50	39.20 RPD	10
EP-128C	27-Apr-01	L010605051	L010887002	Iron	17000	61050.0	50	112.88 RPD	11
BL51	26-Jun-01	L010953030	L011009002	Iron	7800	14100	50	57.53 RPD	13
BH12-27C	17-Jul-01	L011074003	L011202002	Iron	8700	14300	50	48.70 RPD	10
BH17-13B	5-Mar-01	L010371037	L010458007	Lead	140.0	82.0	10	52.25 RPD	12
BH18-5A	6-Mar-01	L010370065	L010458005	Lead	160.0	109.0	10	37.92 RPD	11
EP-128C	27-Apr-01	L010605051	L010887002	Lead	210.0	6225.0	10	186.95 RPD	11
BH18-5A	6-Mar-01	L010370065	L010458005	Zinc	100.0	151.0	10	40.64 RPD	8
BH2-13B	30-Mar-01	L010467004	L010532001	Zinc	11.0	169.0	10	158 Diff	6
BH8-6A	11-Apr-01	L010497006	L010532003	Zinc	83.0	231.0	10	94.27 RPD	7
EP-128C	27-Apr-01	L010605051	L010887002	Zinc	69.0	20200.0	10	198.64 RPD	11
BL51	26-Jun-01	L010953030	L011009002	Zinc	758.0	1551.0	10	68.69 RPD	14
BH12-25A	17-Jul-01	L011062023	L011202004	Zinc	3100.0	5353	10	53.31 RPD	16

Notes:

- 1) PDLG = Project Detection Limit Goal. Where the reporting limit was greater than the PDLG, the reporting limit was used to evaluate splits.
- 2) FD = field duplicate exceedances.

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### Laboratory Control Standards

Analyte	LCS Concentration (mg/kg)	# of LCS Results	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	917	45	0	100%
Cadmium	45	33	4	87.9%
Chromium	100	33	15	54.5%
Copper	6900	33	0	100%
Iron	22400	33	0	100%
Lead	236	45	8	82.2%
Selenium	37	33	2	93.9%
Zinc	190	33	30	9.1%
<b>Total</b>		<b>288</b>	<b>59</b>	<b>79.5%</b>

### EDXRF Confirmation Samples

Analyte	# of Confirmation Samples	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	41	5	100%
Cadmium	41	2	87.9%
Chromium	41	0	54.5%
Copper	41	4	100%
Iron	41	7	100%
Lead	41	3	82.2%
Selenium	41	0	93.9%
Zinc	41	6	9.1%
<b>Total</b>	<b>328</b>	<b>27</b>	<b>91.8%</b>

## ACCURACY OF WET CHEMISTRY ANALYTICAL DATA (CONFIRMATION SAMPLES)

### Matrix Spike Samples

Analyte	# of Matrix Spike Samples	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	5	0	100%
Cadmium	5	0	100%
Chromium	5	0	100%
Copper	5	0	100%
Iron	5	0	100%
Lead	5	0	100%
Selenium	5	0	100%
Zinc	5	0	100%
<b>Total</b>	<b>40</b>	<b>0</b>	<b>100%</b>

### Laboratory Control Standards

Analyte	# of LCS'	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	5	0	100%
Cadmium	5	0	100%
Chromium	5	1	80%
Copper	5	0	100%
Iron	5	0	100%
Lead	5	0	100%
Selenium	5	0	100%
Zinc	5	0	100%
<b>Total</b>	<b>40</b>	<b>1</b>	<b>97.5%</b>

### Precision

Precision refers to the reproducibility of replicate measurements, and is inversely related to the variability of the results obtained (highly variable results have low precision). Precision for this project is measured by number of field and laboratory duplicates within control limits. Precision of field duplicates provides both field sampling variability and laboratory analytical variability. Laboratory duplicates provide a measure of laboratory analytical variability only. On the following page is a summary of precision for this project.

## PRECISION OF EDXRF ANALYTICAL DATA

### Field Duplicate Samples

Analyte	# of Field Duplicate Samples	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	66	15	77.3%
Cadmium	66	8	87.9%
Chromium	66	0	100%
Copper	66	18	72.7%
Iron	66	4	93.9%
Lead	66	20	69.7%
Selenium	66	3	95.5%
Zinc	66	23	65.2%
<b>Total</b>	<b>528</b>	<b>91</b>	<b>82.8%</b>

### Laboratory Duplicate Samples

Analyte	# of Lab Duplicate Samples	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	43	0	100%
Cadmium	43	0	100%
Chromium	43	0	100%
Copper	43	1	97.7%
Iron	43	0	100%
Lead	43	1	97.7%
Selenium	43	0	100%
Zinc	43	1	97.7%
<b>Total</b>	<b>344</b>	<b>3</b>	<b>99.1%</b>

**PRECISION OF WET CHEMISTRY DATA  
(CONFIRMATION SAMPLES)**

**Laboratory Duplicate Samples**

Analyte	# of Lab Duplicate Samples	# of Results Out of Control Limits	% of Results Within Control Limits
Arsenic	5	0	100%
Cadmium	5	0	100%
Chromium	5	0	100%
Copper	5	0	100%
Iron	5	0	100%
Lead	5	0	100%
Selenium	5	0	100%
Zinc	5	0	100%
<b>Total</b>	<b>40</b>	<b>0</b>	<b>100%</b>

**Completeness**

Completeness is achieved when the number of valid measurements is sufficient to satisfactorily address all-important issues about the study. Completeness is quantitatively expressed as the number of valid measurements (results not rejected) divided by the total number of planned measurements, expressed as a percentage. Completeness can also be expressed by the percentage of results flagged for quality control exceedances. Following is a summary of completeness.

Completeness expressed as the percent of results not rejected: **100%**

Completeness expressed as the percent of results without flags: **71.0%**

**Completeness Per Parameter**

Analyte	# of Results	# of Flagged Results	% of Results Without Flags
Arsenic	773	155	79.9%
Cadmium	773	225	70.9%
Chromium	773	270	65.1%
Copper	773	156	79.8%
Iron	773	109	85.9%
Lead	773	277	64.2%
Selenium	773	59	92.4%
Zinc	773	545	29.5%
<b>Total</b>	<b>6184</b>	<b>1796</b>	<b>71.0%</b>

### **13. CONCLUSION**

With the exception of low level cadmium, chromium, selenium and zinc results, the El Paso soil data analyzed February through August 2001 are deemed acceptable for the purposes of the project as outlined in the project work plan (Hydrometrics; 1994) provided that the flagged data are considered with appropriate caution. In using the flagged data, care should be taken to note possible bias and/or lack of reproducibility indicated by the flags.

### **DATA VALIDATION REPORT**

**Prepared by:** Linda Tangen

**Reviewed by:** Harold Kutz

## REFERENCES

- Hydrometrics, 1996. Asarco El Paso Copper Smelter, Remedial Investigation Work Plan, El Paso, Texas. November 1994.
- Hydrometrics, 2000a. Technical Memorandum, Closed Plant Evaluation Plan, Lead and Sinter Plants, Asarco El Paso Copper Smelter. October 2000.
- Hydrometrics, 2000b. Technical Memorandum, Closed Plant Evaluation Plan, Cadmium and Zinc Plants, Asarco El Paso Copper Smelter. October 2000.
- Hydrometrics, 2000c. Technical Memorandum, Closed Plant Evaluation Plan, Copper Plant, Asarco El Paso Copper Smelter. October 2000.
- Hydrometrics, 2000d. Technical Memorandum, Closed Plant Evaluation Plan, Antimony Plant, Asarco El Paso Copper Smelter. October 2000.
- Standard Operating Procedure - Spectrace 5000 EDXRF Routine Soil Analysis (HL\_SOP\_53-1/95).
- U.S. Environmental Protection Agency, 1990. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition.
- U.S. Environmental Protection Agency, 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. February 1994.



## **APPENDIX 1**

### **TABLES**

TABLE A-1

DATA VALIDATION CODES AND DEFINITIONS

<u>CODE</u>	<u>DEFINITION</u>
J -	<p>The associated numerical value is an estimated quantity because quality control criteria were not met.</p> <p>Subscripts for the "J" qualifier:</p> <ul style="list-style-type: none"> <li>2 - Calibration range exceeded or significant deviation from known value. Possible bias.</li> <li>3 - Holding time not met. Indicates low bias.</li> <li>4 - Other QC outside control limits.</li> </ul>
UJ -	<p>The material was analyzed for, but was not detected above the associated value.</p> <ul style="list-style-type: none"> <li>1 - Blank contamination. Indicates possible high bias and/or false positive.</li> <li>2 - Calibration range exceeded or significant deviation from known value. Possible bias.</li> <li>3 - Holding time not met. Indicates low bias.</li> <li>4 - Other QC outside control limits.</li> </ul>
R -	<p>Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis are necessary for verification.</p>
A -	<p>Anomalous data. No apparent explanation for discrepancy in data. (Not an EPA code.)</p>

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
BL21	BL21A	L010834001	06/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				ZINC (ZN)	16.0	J4	LCS	28% Recovery
BL22	BL22A	L010834002	06/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				ZINC (ZN)	38.0	J4	LCS	28% Recovery
BL23	BL23A	L010834003	06/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				ZINC (ZN)	190.0	J4	LCS	28% Recovery
BL24	BL24A	L010834004	06/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				ZINC (ZN)	51.0	J4	LCS	28% Recovery
BL25	BL25A	L010953024	06/26/2001	CADMIUM (CD)	18	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	12000.0	J4	Split	57.5 RPD
				ZINC (ZN)	229.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL25	BL25B	L010953022	06/26/2001	CADMIUM (CD)	14	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	9600.0	J4	Split	57.5 RPD
				ZINC (ZN)	238.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL25	BL25C	L011188001	08/13/2001	ZINC (ZN)	53.0	J4	LCS	26% Recovery
BL26	BL26A	L010953025	06/26/2001	CADMIUM (CD)	10	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	10000.0	J4	Split	57.5 RPD
				ZINC (ZN)	256.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL26	BL26B	L010953023	06/26/2001	CADMIUM (CD)	13	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	10000.0	J4	Split	57.5 RPD
				ZINC (ZN)	275.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL26	BL26C	L011188002	08/13/2001	CADMIUM (CD)	12	J2	CCV	308% Recovery
				ZINC (ZN)	190.0	J4	LCS	26% Recovery
BL27	BL27A	L010953026	06/26/2001	CADMIUM (CD)	14	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	9900.0	J4	Split	57.5 RPD
				ZINC (ZN)	85.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL27	BL27B	L010953033	06/26/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	14000.0	J4	Split	57.5 RPD
				ZINC (ZN)	103.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL27	BL27C1	L011188003	08/13/2001	CADMIUM (CD)	13	J2	CCV	308% Recovery
				ZINC (ZN)	110.0	J4	LCS	26% Recovery
BL27	BL27C2 Dup	L011188004	08/13/2001	ZINC (ZN)	140.0	J4	LCS	26% Recovery
BL28	BL28A	L010953031	06/26/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	15000.0	J4	Split	57.5 RPD
				ZINC (ZN)	<10.0	UJ4	Split, LCS	68.7 RPD, 19% Recovery
BL28	BL28B	L010953032	06/26/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	15000.0	J4	Split	57.5 RPD
				ZINC (ZN)	<10.0	UJ4	Split, LCS	68.7 RPD, 19% Recovery
BL28	BL28C	L011188005	08/13/2001	LEAD (PB)	77.0	J4	Field Dup	72.3 RPD
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
BL29	BL29A	L010953027	06/26/2001	CADMIUM (CD)	42	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	16000.0	J4	Split	57.5 RPD
				ZINC (ZN)	1100.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL29	BL29B	L010953034	06/26/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	12000.0	J4	Split	57.5 RPD
				ZINC (ZN)	19.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL29	BL29C	L011188006	08/13/2001	LEAD (PB)	130.0	J4	Field Dup	72.3 RPD
				ZINC (ZN)	23.0	J4	LCS	26% Recovery
BL29	BL29C2 Dup	L011188007	08/13/2001	LEAD (PB)	61.0	J4	Field Dup	72.3 RPD
				ZINC (ZN)	32.0	J4	LCS	26% Recovery
BL30	BL30A	L010953029	06/26/2001	CADMIUM (CD)	24	J4	LCS	71% Recovery
				CHROMIUM (CR)	85.0	J4	LCS	61% Recovery
				ZINC (ZN)	1380.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
BL30	BL30B	L010953028	06/26/2001	CADMIUM (CD)	13	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	13000.0	J4	Split	57.5 RPD
				ZINC (ZN)	<10.0	UJ4	Split, LCS	68.7 RPD, 19% Recovery
BL31	BL31A	L010953001	06/27/2001	ZINC (ZN)	54.0	J4	LCS	33% Recovery
BL31	BL31B	L010953002	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL32	BL32A	L010953011	06/27/2001	CADMIUM (CD)	18	J2	CCV	333% Recovery
				ZINC (ZN)	149.0	J4	LCS	33% Recovery
BL32	BL32B	L010953003	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL33	BL33A	L010953006	06/27/2001	ZINC (ZN)	130.0	J4	LCS	33% Recovery
BL33	BL33B	L010953005	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL34	BL34A	L010953004	06/27/2001	ZINC (ZN)	78.0	J4	LCS	33% Recovery
BL34	BL34B	L010953008	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL35	BL35A	L010953007	06/27/2001	CADMIUM (CD)	10	J2	CCV	242% Recovery
				ZINC (ZN)	74.0	J4	LCS	33% Recovery
BL35	BL35B	L010953010	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL36	BL36A	L010953009	06/27/2001	ZINC (ZN)	37.0	J4	LCS	33% Recovery
BL36	BL36B	L010953013	06/27/2001	CADMIUM (CD)	11	J2	CCV	333% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL37	BL37A	L010953016	06/27/2001	ZINC (ZN)	17.0	J4	LCS	33% Recovery
BL37	BL37B	L010953014	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL38	BL38A	L010953012	06/27/2001	CADMIUM (CD)	18	J2	CCV	333% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL39	BL39A	L010953015	06/27/2001	ZINC (ZN)	344.0	J4	LCS	33% Recovery
BL39	BL39B	L010953018	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL40	BL40A	L010953017	06/27/2001	CADMIUM (CD)	18	J2	CCV	333% Recovery
				ZINC (ZN)	306.0	J4	LCS	33% Recovery
BL40	BL40B	L010953019	06/27/2001	ZINC (ZN)	<10.0	UJ4	LCS	33% Recovery
BL41	BL41A	L010953021	06/27/2001	CADMIUM (CD)	12	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				ZINC (ZN)	277.0	J4	LCS	19% Recovery
BL41	BL41B	L010953020	06/27/2001	ZINC (ZN)	105.0	J4	LCS	33% Recovery
				ARSENIC (AS)	31.0	J4	Split	41.0 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
BL42	BL42	L010953047	06/28/2001	ZINC (ZN)	155.0	J4	LCS	28% Recovery
				ARSENIC (AS)	235.0	J4	Split	41.0 RPD

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
BL43	BL43A Split	L011009005	06/28/2001	ARSENIC (AS)	155.0	J4	Split	41.0 RPD
				CADMIUM (CD)	34	J4	LCS	71% Recovery
				CHROMIUM (CR)	130.0	J4	LCS	61% Recovery
				ZINC (ZN)	1940.0	J4	LCS	19% Recovery
BL44	BL44A	L010953036	06/27/2001	CADMIUM (CD)	12	J4	LCS	71% Recovery
BL44	BL44A	L010953036	06/27/2001	CHROMIUM (CR)	90.0	J4	LCS	61% Recovery
				ZINC (ZN)	18.0	J4	LCS	19% Recovery
BL44	BL44B	L010953040	06/28/2001	ARSENIC (AS)	40.0	J4	Split	41.0 RPD
				CADMIUM (CD)	11	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	19% Recovery
BL45	BL45A	L010953037	06/27/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	85.0	J4	LCS	61% Recovery
				ZINC (ZN)	59.0	J4	LCS	19% Recovery
BL46	BL46A	L010953035	06/28/2001	ARSENIC (AS)	36.0	J4	Split	41.0 RPD
				CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				ZINC (ZN)	62.0	J4	LCS	19% Recovery
BL47	BL47	L010953038	06/27/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	83.0	J4	LCS	61% Recovery
				ZINC (ZN)	79.0	J4	LCS	19% Recovery
BL48	BL48	L010953045	06/28/2001	ARSENIC (AS)	39.0	J4	Split	41.0 RPD
				CHROMIUM (CR)	83.0	J4	LCS	67% Recovery
				ZINC (ZN)	118.0	J4	LCS	28% Recovery
BL49	BL49A	L010953043	06/28/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				ZINC (ZN)	254.0	J4	LCS	28% Recovery
BL49	BL49B	L010953044	06/28/2001	CHROMIUM (CR)	83.0	J4	LCS	67% Recovery
				ZINC (ZN)	14.0	J4	LCS	28% Recovery
BL50	BL50A	L010953041	06/28/2001	CHROMIUM (CR)	117.0	J4	LCS	67% Recovery
				ZINC (ZN)	1440.0	J4	LCS	28% Recovery
BL50	BL50B	L010953042	06/28/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	28% Recovery
BL51	BL51	L010953030	06/26/2001	CADMIUM (CD)	29	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	61% Recovery
				IRON (FE)	7800.0	J4	Split	57.5 RPD
BL51	BL51 Split	L011009002	06/26/2001	IRON (FE)	14100.0	J4	Split	57.5 RPD
				ZINC (ZN)	758.0	J4, J4	Split, LCS	68.7 RPD, 19% Recovery
				ZINC (ZN)	1551.0	J4	Split	68.7 RPD
BL52	BL52	L010953046	06/27/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	28% Recovery
R13BH11-10	BH11-10A	L010692044	05/09/2001	ARSENIC (AS)	110.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	14	J2	CCV	208% Recovery
				COPPER (CU)	930.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	620.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	720.0	J4	LCS	23% Recovery
R13BH11-10	BH11-10B	L010692045	05/09/2001	ARSENIC (AS)	55.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	13	J2	CCV	208% Recovery
				COPPER (CU)	280.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	320.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	190.0	J4, J4	Field Dup, LCS	64.3 RPD, 23% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH11-10	BH11-10C	L010692046	05/09/2001	ARSENIC (AS)	68.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	12	J2	CCV	208% Recovery
				COPPER (CU)	700.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	640.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	440.0	J4	LCS	23% Recovery
RI3BH11-10	BH11-10D	L010692047	05/09/2001	ARSENIC (AS)	41.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	18	J2	CCV	208% Recovery
				COPPER (CU)	280.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	260.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	180.0	J4, J4	Field Dup, LCS	64.3 RPD, 23% Recovery
RI3BH11-11	BH11-11A	L010692024	05/09/2001	ARSENIC (AS)	180.0	J4	Field Dup	33 mg/kg Diff
				LEAD (PB)	1500.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	1200.0	J4	LCS	35% Recovery
RI3BH11-11	BH11-11B	L010692025	05/09/2001	ARSENIC (AS)	63.0	J4	Field Dup	33 mg/kg Diff
				COPPER (CU)	870.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	760.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	520.0	J4	LCS	35% Recovery
RI3BH11-11	BH11-11C	L010692026	05/09/2001	ARSENIC (AS)	71.0	J4	Field Dup	33 mg/kg Diff
				COPPER (CU)	590.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	520.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	390.0	J4	LCS	35% Recovery
RI3BH11-11	BH11-11D	L010692027	05/09/2001	ARSENIC (AS)	60.0	J4	Field Dup	33 mg/kg Diff
				COPPER (CU)	650.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	590.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	360.0	J4	LCS	35% Recovery
RI3BH11-12	BH11-12A	L010692028	05/09/2001	LEAD (PB)	1900.0	J4	LCS	126% Recovery
				ZINC (ZN)	1700.0	J4	LCS	35% Recovery
RI3BH11-12	BH11-12B	L010692029	05/09/2001	LEAD (PB)	200.0	J4	LCS	126% Recovery
				ZINC (ZN)	170.0	J4, J4	Field Dup, LCS	64.3 RPD, 35% Recovery
RI3BH11-12	BH11-12C1	L010692030	05/09/2001	LEAD (PB)	130.0	J4	LCS	126% Recovery
				ZINC (ZN)	77.0	J4, J4	Field Dup, LCS	64.3 RPD, 35% Recovery
RI3BH11-12	BH11-12C2 Dup	L010692031	05/09/2001	LEAD (PB)	180.0	J4	LCS	126% Recovery
				ZINC (ZN)	150.0	J4, J4	Field Dup, LCS	64.3 RPD, 35% Recovery
RI3BH11-12	BH11-12D	L010692032	05/09/2001	CADMIUM (CD)	14	J2	CCV	300% Recovery
				LEAD (PB)	300.0	J4	LCS	126% Recovery
				ZINC (ZN)	190.0	J4, J4	Field Dup, LCS	27 mg/kg Diff, 35% Recovery
RI3BH11-13	BH11-13A	L010692033	05/09/2001	CADMIUM (CD)	18	J2	CCV	300% Recovery
				LEAD (PB)	370.0	J4	LCS	126% Recovery
				ZINC (ZN)	620.0	J4	LCS	35% Recovery
RI3BH11-13	BH11-13B	L010692034	05/09/2001	CADMIUM (CD)	12	J2	CCV	300% Recovery
				LEAD (PB)	360.0	J4	LCS	126% Recovery
				ZINC (ZN)	290.0	J4	LCS	35% Recovery
RI3BH11-13	BH11-13C	L010692035	05/09/2001	CADMIUM (CD)	15	J2	CCV	300% Recovery
				LEAD (PB)	120.0	J4	LCS	126% Recovery
RI3BH11-13	BH11-13C	L010692035	05/09/2001	ZINC (ZN)	75.0	J4, J4	Field Dup, LCS	64.3 RPD, 35% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
R13BH11-14	BH11-14A	L010692001	05/09/2001	CADMIUM (CD)	38	J2	CCV	358% Recovery
				ZINC (ZN)	1100.0	J4	LCS	34% Recovery
R13BH11-14	BH11-14B	L010692002	05/09/2001	ZINC (ZN)	470.0	J4	LCS	34% Recovery
R13BH11-14	BH11-14C	L010692003	05/09/2001	ZINC (ZN)	92.0	J4, J4	Field Dup, LCS	64.3 RPD, 34% Recovery
R13BH11-14	BH11-14D	L010692004	05/09/2001	CADMIUM (CD)	12	J2	CCV	358% Recovery
				ZINC (ZN)	180.0	J4, J4	Field Dup, LCS	64.3 RPD, 34% Recovery
R13BH11-15	BH11-15A	L011062001	07/17/2001	ZINC (ZN)	4200.0	J4	LCS	21% Recovery
R13BH11-15	BH11-15B	L011062002	07/17/2001	ZINC (ZN)	6800.0	J4	LCS	21% Recovery
R13BH11-15	BH11-15C	L011062003	07/17/2001	COPPER (CU)	3900.0	J4	Split	45.4 RPD
R13BH11-15	BH11-15C Split	L011202005	07/17/2001	COPPER (CU)	6192.0	J4	Split	45.4 RPD
				ZINC (ZN)	2200.0	J4	LCS	21% Recovery
				ZINC (ZN)	3900.0	J4	LCS	21% Recovery
R13BH11-16	BH11-16A	L011074031	07/19/2001	ARSENIC (AS)	28.0	J4	Field Dup	21 mg/kg Diff
				CADMIUM (CD)	15	J2	CCV	267% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	57.1 RPD, '26% Recovery
R13BH11-17	BH11-17A	L011074032	07/19/2001	ARSENIC (AS)	25.0	J4	Field Dup	21 mg/kg Diff
				CADMIUM (CD)	13	J2	CCV	267% Recovery
				ZINC (ZN)	27.0	J4, J4	Field Dup, LCS	57.1 RPD, '26% Recovery
R13BH11-18	BH11-18A1	L011074033	07/19/2001	ARSENIC (AS)	32.0	J4	Field Dup	21 mg/kg Diff
				CADMIUM (CD)	12	J2	CCV	267% Recovery
				ZINC (ZN)	100.0	J4, J4	Field Dup, LCS	57.1 RPD, '26% Recovery
R13BH11-18	BH11-18A2 Dup	L011074034	07/19/2001	ARSENIC (AS)	53.0	J4	Field Dup	21 mg/kg Diff
				ZINC (ZN)	180.0	J4, J4	Field Dup, LCS	57.1 RPD, '26% Recovery
R13BH11-19	BH11-19A	L011074035	07/19/2001	ARSENIC (AS)	<10.0	J4	Field Dup	21 mg/kg Diff
				CADMIUM (CD)	11	J2	CCV	267% Recovery
				ZINC (ZN)	16.0	J4, J4	Field Dup, LCS	57.1 RPD, '26% Recovery
R13BH11-22	BH11-22A	L011074036	07/20/2001	ZINC (ZN)	230.0	J4	LCS	26% Recovery
R13BH11-23	BH11-23A	L011074037	07/20/2001	CADMIUM (CD)	13	J2	CCV	267% Recovery
				ZINC (ZN)	38.0	J4	LCS	26% Recovery
R13BH11-24	BH11-24A	L011074038	07/20/2001	CADMIUM (CD)	11	J2	CCV	267% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
R13BH11-25	BH11-25A	L011074039	07/20/2001	ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
R13BH11-26	BH11-26A	L010692005	04/30/2001	CADMIUM (CD)	10	J2	CCV	358% Recovery
				ZINC (ZN)	77.0	J4	LCS	34% Recovery
R13BH11-26	BH11-26B	L010692006	04/30/2001	CADMIUM (CD)	12	J2	CCV	358% Recovery
				ZINC (ZN)	14.0	J4	LCS	34% Recovery
R13BH11-26	BH11-26C	L010692007	04/30/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
R13BH11-26	BH11-26D	L010692008	04/30/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
R13BH11-26	BH11-26E	L010692009	04/30/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
R13BH11-26	BH11-26F1	L010692010	04/30/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
R13BH11-26	BH11-26F2 Dup	L010692011	04/30/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
R13BH11-26	BH11-26G	L010692022	04/30/2001	LEAD (PB)	56.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	35% Recovery
R13BH11-26	BH11-26H	L010692023	04/30/2001	LEAD (PB)	48.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	35% Recovery
R13BH11-5	BH11-5A	L010692048	05/09/2001	CADMIUM (CD)	31	J2	CCV	208% Recovery
				LEAD (PB)	1400.0	J4	LCS	126% Recovery
				ZINC (ZN)	1200.0	J4	LCS	23% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
R13BH11-5	BH11-5B	L010692049	05/09/2001	CADMIUM (CD)	18	J2	CCV	208% Recovery
				LEAD (PB)	460.0	J4	LCS	126% Recovery
				ZINC (ZN)	340.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
R13BH11-5	BH11-5C1	L010692050	05/09/2001	LEAD (PB)	280.0	J4	LCS	126% Recovery
				ZINC (ZN)	180.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
R13BH11-5	BH11-5C2 Dup	L010692051	05/09/2001	CADMIUM (CD)	17	J2	CCV	250% Recovery
				LEAD (PB)	300.0	J4	LCS	126% Recovery
				ZINC (ZN)	220.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
R13BH11-5	BH11-5D	L010692052	05/09/2001	LEAD (PB)	410.0	J4	LCS	126% Recovery
				ZINC (ZN)	260.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
R13BH11-6	BH11-6A	L010692053	05/09/2001	CADMIUM (CD)	31	J2	CCV	250% Recovery
				LEAD (PB)	930.0	J4	LCS	126% Recovery
				ZINC (ZN)	770.0	J4	LCS	23% Recovery
R13BH11-6	BH11-6B	L010692054	05/09/2001	CADMIUM (CD)	32	J2	CCV	250% Recovery
				LEAD (PB)	980.0	J4	LCS	126% Recovery
				ZINC (ZN)	830.0	J4	LCS	23% Recovery
R13BH11-7	BH11-7A	L010692055	05/09/2001	CADMIUM (CD)	18	J2	CCV	250% Recovery
				LEAD (PB)	540.0	J4	LCS	126% Recovery
				ZINC (ZN)	620.0	J4	LCS	23% Recovery
R13BH11-7	BH11-7B	L010692056	05/09/2001	CADMIUM (CD)	26	J2	CCV	250% Recovery
				LEAD (PB)	960.0	J4	LCS	126% Recovery
				ZINC (ZN)	680.0	J4	LCS	23% Recovery
R13BH11-7	BH11-7C	L010692057	05/09/2001	LEAD (PB)	370.0	J4	LCS	126% Recovery
				ZINC (ZN)	260.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
R13BH11-8	BH11-8A	L010692036	05/09/2001	CADMIUM (CD)	22	J2	CCV	300% Recovery
				LEAD (PB)	640.0	J4	LCS	126% Recovery
				ZINC (ZN)	930.0	J4	LCS	35% Recovery
R13BH11-8	BH11-8B	L010692037	05/09/2001	CADMIUM (CD)	36	J2	CCV	300% Recovery
				LEAD (PB)	1700.0	J4	LCS	126% Recovery
				ZINC (ZN)	1100.0	J4	LCS	35% Recovery
R13BH11-8	BH11-8C	L010692038	05/09/2001	CADMIUM (CD)	16	J2	CCV	300% Recovery
				LEAD (PB)	440.0	J4	LCS	126% Recovery
				ZINC (ZN)	240.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
R13BH11-8	BH11-8D	L010692039	05/09/2001	CADMIUM (CD)	14	J2	CCV	300% Recovery
				LEAD (PB)	340.0	J4	LCS	126% Recovery
				ZINC (ZN)	250.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
R13BH11-9	BH11-9A	L010692040	05/09/2001	ARSENIC (AS)	110.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	20	J2	CCV	300% Recovery
				LEAD (PB)	670.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	1000.0	J4	LCS	35% Recovery
R13BH11-9	BH11-9B	L010692041	05/09/2001	ARSENIC (AS)	59.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	10	J2	CCV	208% Recovery
				COPPER (CU)	510.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	510.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	380.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery



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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH11-9	BH11-9C1	L010692042	05/09/2001	ARSENIC (AS)	62.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	22	J2	CCV	208% Recovery
				COPPER (CU)	720.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	620.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	440.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
RI3BH11-9	BH11-9C2 Dup	L010692043	05/09/2001	ARSENIC (AS)	29.0	J4	Field Dup	33 mg/kg Diff
				CADMIUM (CD)	16	J2	CCV	208% Recovery
				COPPER (CU)	250.0	J4	Field Dup	96.9 RPD
				LEAD (PB)	260.0	J4, J4	Field Dup, LCS	81.8 RPD, 126% Recovery
				ZINC (ZN)	170.0	J4, J4	Field Dup, LCS	88.5 RPD, 23% Recovery
RI3BH12-10	BH12-10A	L010467012	04/03/2001	CADMIUM (CD)	13	J2, J4	CCV, LCS	508% Recovery, 58% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	32% Recovery, 68% Recovery
RI3BH12-11	BH12-11A	L010467013	04/03/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	32% Recovery, 68% Recovery
RI3BH12-11	BH12-11B1	L010467014	04/03/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	32% Recovery, 68% Recovery
RI3BH12-11	BH12-11A2 Dup	L010467038	04/03/2001	LEAD (PB)	48.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-12	BH12-12A	L010467015	04/03/2001	CADMIUM (CD)	13	J2, J4	CCV, LCS	508% Recovery, 58% Recovery
				ZINC (ZN)	91.0	UJ4, UJ2	LCS, CCV	32% Recovery, 68% Recovery
RI3BH12-12	BH12-12B	L010467016	04/03/2001	CADMIUM (CD)	11	J2, J4	CCV, LCS	508% Recovery, 58% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	32% Recovery, 68% Recovery
RI3BH12-13	BH12-13A1	L010467017	04/04/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	75.0	J4, J4, J2	Field Dup, LCS, CCV	32 mg/kg Diff, 32% Recovery, 68% Recovery
RI3BH12-13	BH12-13A2 Dup	L010467018	04/04/2001	CADMIUM (CD)	12	J2, J4	CCV, LCS	508% Recovery, 58% Recovery
				ZINC (ZN)	43.0	J4, J4, J2	Field Dup, LCS, CCV	32 mg/kg Diff, 32% Recovery, 68% Recovery
RI3BH12-13	BH12-13B	L010467019	04/04/2001	CADMIUM (CD)	13	J2, J4	CCV, LCS	508% Recovery, 58% Recovery
				ZINC (ZN)	12.0	J4, J4, J2	Field Dup, LCS, CCV	32 mg/kg Diff, 32% Recovery, 68% Recovery
RI3BH12-14	BH12-14A	L010467020	04/04/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	100.0	J4, J4, J2	Field Dup, LCS, CCV	32 mg/kg Diff, 32% Recovery, 68% Recovery
RI3BH12-14	BH12-14B	L010467021	04/04/2001	LEAD (PB)	77.0	J4	LCS	126% Recovery
				ZINC (ZN)	29.0	J4, J4, J2	Field Dup, LCS, CCV	32 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-15	BH12-15A	L010467022	04/04/2001	CADMIUM (CD)	2800	J4	Split	36.0 RPD

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH12-15	BH12-15A Split	L010532002	04/04/2001	CADMIUM (CD)	1945	J4	Split	36.0 RPD
				LEAD (PB)	1500.0	J4	LCS	126% Recovery
				ZINC (ZN)	7700.0	J4, J2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-15	BH12-15B	L010467023	04/04/2001	CADMIUM (CD)	11	J2	CCV	242% Recovery
				LEAD (PB)	230.0	J4	LCS	126% Recovery
				ZINC (ZN)	75.0	J4, J4, J2	Field Dup, LCS, CCV	32 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-16	BH12-16A	L010467024	04/04/2001	LEAD (PB)	100.0	J4	LCS	126% Recovery
				ZINC (ZN)	410.0	J4, J2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-16	BH12-16B	L010467025	04/04/2001	LEAD (PB)	65.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4, UJ2	Field Dup, LCS, CCV	32 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-17	BH12-17A	L010467026	04/05/2001	LEAD (PB)	1100.0	J4	LCS	126% Recovery
				ZINC (ZN)	1500.0	J4, J2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-17	BH12-17B	L010467027	04/05/2001	CADMIUM (CD)	17	J2	CCV	242% Recovery
				LEAD (PB)	510.0	J4	LCS	126% Recovery
				ZINC (ZN)	720.0	J4, J2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-17	BH12-17C	L010467028	04/05/2001	LEAD (PB)	230.0	J4	LCS	126% Recovery
				ZINC (ZN)	220.0	J4, J2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-18	BH12-18A	L010467029	04/05/2001	CADMIUM (CD)	11	J2	CCV	242% Recovery
				LEAD (PB)	51.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4, UJ2	Field Dup, LCS, CCV	27 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-18	BH12-18B	L010467030	04/05/2001	LEAD (PB)	60.0	J4	LCS	126% Recovery
				ZINC (ZN)	11.0	J4, J4, J2	Field Dup, LCS, CCV	27 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-19	BH12-19A1	L010467031	04/05/2001	LEAD (PB)	54.0	J4	LCS	126% Recovery
				ZINC (ZN)	49.0	J4, J4, J2	Field Dup, LCS, CCV	27 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-19	BH12-19A2 Dup	L010467032	04/05/2001	LEAD (PB)	64.0	J4	LCS	126% Recovery
				ZINC (ZN)	22.0	J4, J4, J2	Field Dup, LCS, CCV	27 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-19	BH12-19B	L010467033	04/05/2001	LEAD (PB)	64.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4, UJ2	Field Dup, LCS, CCV	27 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-20	BH12-20A1	L010467034	04/05/2001	LEAD (PB)	46.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-20	BH12-20A2 Dup	L010467039	04/05/2001	LEAD (PB)	37.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	30% Recovery, 68% Recovery
RI3BH12-20	BH12-20B	L010467035	04/05/2001	LEAD (PB)	45.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	30% Recovery, 68% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH12-21	BH12-21A	L010467036	04/05/2001	LEAD (PB)	51.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4, UJ2	Field Dup, LCS, CCV	27 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-21	BH12-21B	L010467037	04/05/2001	LEAD (PB)	59.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4, UJ2	Field Dup, LCS, CCV	27 mg/kg Diff, 30% Recovery, 68% Recovery
RI3BH12-22	BH12-22A	L010497031	04/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	37% Recovery
RI3BH12-22	BH12-22B	L010497032	04/06/2001	CHROMIUM (CR)	97.0	J4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	37% Recovery
RI3BH12-23	BH12-23A	L011062005	07/17/2001	ZINC (ZN)	10000.0	J4	LCS	21% Recovery
RI3BH12-23	BH12-23B	L011062006	07/17/2001	ZINC (ZN)	8700.0	J4	LCS	21% Recovery
RI3BH12-23	BH12-23D	L011062007	07/17/2001	ZINC (ZN)	7600.0	J4	LCS	21% Recovery
RI3BH12-23	BH12-23E	L011062008	07/17/2001	ZINC (ZN)	8500.0	J4	LCS	21% Recovery
RI3BH12-23	BH12-23F1	L011062009	07/17/2001	ZINC (ZN)	22.0	J4	LCS	21% Recovery
RI3BH12-23	BH12-23F2	L011062010	07/17/2001	ZINC (ZN)	10.0	J4	LCS	21% Recovery
RI3BH12-23	BH12-23G	L011062011	07/17/2001	ZINC (ZN)	<10.0	UJ4	LCS	21% Recovery
RI3BH12-23	BH12-23H	L011062012	07/17/2001	ZINC (ZN)	280.0	J4	LCS	21% Recovery
RI3BH12-23	BH12-23I	L011062013	07/17/2001	ZINC (ZN)	280.0	J4	LCS	21% Recovery
RI3BH12-24	BH12-24A	L011062014	07/17/2001	ZINC (ZN)	11000.0	J4	LCS	21% Recovery
RI3BH12-24	BH12-24B	L011062015	07/17/2001	ZINC (ZN)	11000.0	J4	LCS	21% Recovery
RI3BH12-24	BH12-24C	L011062016	07/17/2001	ZINC (ZN)	12000.0	J4	LCS	21% Recovery
RI3BH12-24	BH12-24E	L011062017	07/17/2001	ARSENIC (AS)	88.0	J4	Split	51.7 RPD
				COPPER (CU)	670.0	J4	Field Dup	64 RPD
				LEAD (PB)	560.0	J4	Field Dup	100.7 RPD
				ZINC (ZN)	840.0	J4, J4	Split, LCS	53.3 RPD, 21% Recovery
RI3BH12-24	BH12-24F1	L011062018	07/17/2001	ARSENIC (AS)	35.0	J4	Split	51.7 RPD
				COPPER (CU)	330.0	J4	Field Dup	64 RPD
				LEAD (PB)	230.0	J4	Field Dup	100.7 RPD
				ZINC (ZN)	140.0	J4, J4	Split, LCS	53.3 RPD, 21% Recovery
RI3BH12-24	BH12-24F2 Dup	L011062019	07/17/2001	ARSENIC (AS)	40.0	J4	Split	51.7 RPD
				LEAD (PB)	76.0	J4	Field Dup	100.7 RPD
				ZINC (ZN)	190.0	J4, J4	Split, LCS	53.3 RPD, 21% Recovery
				COPPER (CU)	170.0	J4	Field Dup	64 RPD
RI3BH12-24	BH12-24G	L011062020	07/17/2001	ARSENIC (AS)	22.0	J4	Split	51.7 RPD
				COPPER (CU)	70.0	J4	Field Dup	64 RPD
				LEAD (PB)	71.0	J4	Field Dup	100.7 RPD
				ZINC (ZN)	<10.0	UJ4, UJ4	Split, LCS	53.3 RPD, 21% Recovery
RI3BH12-24	BH12-24H	L011062021	07/17/2001	ARSENIC (AS)	33.0	J4	Split	51.7 RPD
				COPPER (CU)	250.0	J4	Field Dup	64 RPD
				LEAD (PB)	120.0	J4	Field Dup	100.7 RPD
				ZINC (ZN)	300.0	J4, J4	Split, LCS	53.3 RPD, 21% Recovery
RI3BH12-24	BH12-24I	L011062022	07/17/2001	ARSENIC (AS)	25.0	J4	Split	51.7 RPD
				CADMIUM (CD)	12	J2	CCV	275% Recovery
				COPPER (CU)	120.0	J4	Field Dup	64 RPD
				LEAD (PB)	78.0	J4	Field Dup	100.7 RPD
				ZINC (ZN)	72.0	J4, J4	Split, LCS	53.3 RPD, 21% Recovery
RI3BH12-25	BH12-25A	L011062023	07/17/2001	ARSENIC (AS)	190.0	J4	Split	51.7 RPD

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH12-25	BH12-25A Split	L011202004	07/17/2001	ARSENIC (AS)	112.0	J4	Split	51.7 RPD
				ZINC (ZN)	3100.0	J4, J4	Split, LCS	53.3 RPD, 21% Recovery
				ZINC (ZN)	5353.0	J4	Split	53.3 RPD
RI3BH12-25	BH12-25B	L011062024	07/17/2001	ARSENIC (AS)	89.0	J4	Split	51.7 RPD
				CADMIUM (CD)	31	J2	CCV	275% Recovery
				ZINC (ZN)	3600.0	J4, J4	Split, LCS	53.3 RPD, 21% Recovery
RI3BH12-25	BH12-25C	L011062025	07/17/2001	ARSENIC (AS)	23.0	J4	Split	51.7 RPD
				CADMIUM (CD)	19	J2	CCV	275% Recovery
				ZINC (ZN)	130.0	J4, J4, J4	Split, Field Dup, LCS	53.3 RPD, 41 mg/kg Diff, 30% Recovery
RI3BH12-25	BH12-25D	L011062026	07/17/2001	ARSENIC (AS)	24.0	J4	Split	51.7 RPD
				ZINC (ZN)	58.0	J4, J4, J4	Split, Field Dup, LCS	53.3 RPD, 41 mg/kg Diff, 30% Recovery
RI3BH12-25	BH12-25E1	L011062027	07/17/2001	ARSENIC (AS)	21.0	J4	Split	51.7 RPD
				ZINC (ZN)	42.0	J4, J4, J4	Split, Field Dup, LCS	53.3 RPD, 41 mg/kg Diff, 30% Recovery
RI3BH12-25	BH12-25E2 Dup	L011062028	07/17/2001	ARSENIC (AS)	30.0	J4	Split	51.7 RPD
				ZINC (ZN)	83.0	J4, J4, J4	Split, Field Dup, LCS	53.3 RPD, 41 mg/kg Diff, 30% Recovery
RI3BH12-25	BH12-25F	L011062029	07/17/2001	ARSENIC (AS)	36.0	J4	Split	51.7 RPD
				ZINC (ZN)	<10.0	J4, J4, J4	Split, Field Dup, LCS	53.3 RPD, 41 mg/kg Diff, 30% Recovery
RI3BH12-25	BH12-25H	L011074043	07/17/2001	ARSENIC (AS)	19.0	J4	Split	51.7 RPD
				CADMIUM (CD)	11	J2, J4	CCV, LCS	217% Recovery, 67% Recovery
				ZINC (ZN)	<10.0	J4, J4, J4	Split, Field Dup, LCS	53.3 RPD, 41 mg/kg Diff, 28% Recovery
RI3BH12-25	BH12-25I	L011074044	07/17/2001	ARSENIC (AS)	18.0	J4	Split	51.7 RPD
				CADMIUM (CD)	<10.0	UJ4	LCS	67% Recovery
				ZINC (ZN)	60.0	J4, J4, J4	Split, Field Dup, LCS	53.3 RPD, 41 mg/kg Diff, 28% Recovery
RI3BH12-26	BH12-26A	L011074006	07/17/2001	IRON (FE)	13000.0	J4	Split	48.7 RPD
				LEAD (PB)	130.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 126% Recovery
				ZINC (ZN)	65.0	J4	LCS	26% Recovery
RI3BH12-26	BH12-26B	L011074007	07/17/2001	IRON (FE)	15000.0	J4	Split	48.7 RPD
				LEAD (PB)	150.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 126% Recovery
				ZINC (ZN)	79.0	J4	LCS	26% Recovery
RI3BH12-26	BH12-26C1	L011074008	07/17/2001	IRON (FE)	14000.0	J4	Split	48.7 RPD
				LEAD (PB)	66.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-26	BH12-26C2 Dup	L011074009	07/17/2001	IRON (FE)	15000.0	J4	Split	48.7 RPD
				LEAD (PB)	44.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH12-26	BH12-26D	L011074010	07/17/2001	IRON (FE)	20000.0	J4	Split	48.7 RPD
				LEAD (PB)	92.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 126% Recovery
				ZINC (ZN)	240.0	J4	LCS	26% Recovery
RI3BH12-27	BH12-27A	L011074001	07/17/2001	LEAD (PB)	20000.0	J4	LCS	126% Recovery
				ZINC (ZN)	9600.0	J4	LCS	26% Recovery
RI3BH12-27	BH12-27B	L011074002	07/17/2001	IRON (FE)	15000.0	J4	Split	48.7 RPD
				LEAD (PB)	1400.0	J4	LCS	126% Recovery
				ZINC (ZN)	1300.0	J4	LCS	26% Recovery
RI3BH12-27	BH12-27C	L011074003	07/17/2001	IRON (FE)	8700.0	J4	Split	48.7 RPD
RI3BH12-27	BH12-27C Split	L011202002	07/17/2001	IRON (FE)	14300.0	J4	Split	48.7 RPD
				LEAD (PB)	3500.0	J4	LCS	126% Recovery
				ZINC (ZN)	1700.0	J4	LCS	26% Recovery
RI3BH12-27	BH12-27D	L011074004	07/17/2001	IRON (FE)	1900.0	J4	Split	48.7 RPD
				LEAD (PB)	170.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-27	BH12-27E	L011074005	07/17/2001	IRON (FE)	1900.0	J4	Split	48.7 RPD
				LEAD (PB)	180.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-28	BH12-28A	L011074016	07/18/2001	CADMIUM (CD)	24	J2	CCV	250% Recovery
				LEAD (PB)	190.0	J4	LCS	126% Recovery
				ZINC (ZN)	55.0	J4	LCS	26% Recovery
RI3BH12-29	BH12-29A1	L011074017	07/18/2001	CADMIUM (CD)	10	J2	CCV	250% Recovery
				LEAD (PB)	87.0	J4	LCS	126% Recovery
				ZINC (ZN)	38.0	J4	LCS	26% Recovery
RI3BH12-29	BH12-29A2 Dup	L011074025	07/18/2001	ZINC (ZN)	38.0	J4	LCS	26% Recovery
RI3BH12-29	BH12-29B	L011074018	07/18/2001	CADMIUM (CD)	16	J2	CCV	250% Recovery
				LEAD (PB)	64.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-29	BH12-29C	L011074019	07/18/2001	CADMIUM (CD)	12	J2	CCV	250% Recovery
				LEAD (PB)	43.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-29	BH12-29D	L011074020	07/18/2001	LEAD (PB)	80.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-30	BH12-30A	L011074021	07/18/2001	ZINC (ZN)	180.0	J4	LCS	26% Recovery
RI3BH12-30	BH12-30B	L011074022	07/18/2001	ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-30	BH12-30C	L011074023	07/18/2001	ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-30	BH12-30D	L011074024	07/18/2001	ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-31	BH12-31A	L011074026	07/18/2001	ZINC (ZN)	17.0	J4	LCS	26% Recovery
RI3BH12-31	BH12-31B	L011074027	07/18/2001	ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-31	BH12-31C	L011074028	07/18/2001	ZINC (ZN)	18.0	J4	LCS	26% Recovery
RI3BH12-31	BH12-31D	L011074029	07/18/2001	ZINC (ZN)	<10.0	UJ4	LCS	26% Recovery
RI3BH12-32	BH12-32A1	L011074030	07/18/2001	ARSENIC (AS)	120.0	J4	Field Dup	48.7 RPD
				ZINC (ZN)	350.0	J4	LCS	26% Recovery
RI3BH12-32	BH12-32A2 Dup	L011062031	07/18/2001	ARSENIC (AS)	73.0	J4	Field Dup	48.7 RPD
				CADMIUM (CD)	25	J2	CCV	208% Recovery
				ZINC (ZN)	370.0	J4	LCS	30% Recovery
RI3BH12-32	BH12-32B	L011062032	07/18/2001	ARSENIC (AS)	34.0	J4	Field Dup	48.7 RPD
				ZINC (ZN)	370.0	J4	LCS	30% Recovery
RI3BH12-32	BH12-32C	L011062033	07/18/2001	ARSENIC (AS)	44.0	J4	Field Dup	48.7 RPD
				ZINC (ZN)	94.0	J4	LCS	30% Recovery
RI3BH12-33	BH12-33A	L011062034	07/18/2001	ARSENIC (AS)	15.0	J4	Field Dup	48.7 RPD
				ZINC (ZN)	170.0	J4	LCS	30% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
R13BH12-34	BH12-34A1	L011062035	07/18/2001	ARSENIC (AS)	49.0	J4	Field Dup	381 mg/kg Diff
				CADMIUM (CD)	39	J2, J4	CCV, Field Dup	208% Recovery, 431 mg/kg Diff
				COPPER (CU)	440.0	J4	Field Dup	148.8 RPD
				LEAD (PB)	510.0	J4	Field Dup	167.2 RPD
				ZINC (ZN)	590.0	J4, J4	Field Dup, LCS	137.7 RPD, 30% Recovery
				LEAD (PB)	5700.0	J4	Field Dup	167.2 RPD
R13BH12-34	BH12-34A2 Dup	L011062036	07/18/2001	ARSENIC (AS)	430.0	J4	Field Dup	381 mg/kg Diff
				CADMIUM (CD)	470	J4	Field Dup	431 mg/kg Diff
				COPPER (CU)	3000.0	J4	Field Dup	148.8 RPD
				ZINC (ZN)	3200.0	J4, J4	Field Dup, LCS	137.7 RPD, 30% Recovery
R13BH12-34	BH12-34B	L011062037	07/18/2001	ARSENIC (AS)	160.0	J4	Field Dup	381 mg/kg Diff
				CADMIUM (CD)	58	J4	Field Dup	431 mg/kg Diff
				COPPER (CU)	1300.0	J4	Field Dup	148.8 RPD
				LEAD (PB)	1300.0	J4	Field Dup	167.2 RPD
				ZINC (ZN)	740.0	J4, J4	Field Dup, LCS	137.7 RPD, 30% Recovery
R13BH12-34	BH12-34C	L011062038	07/18/2001	ARSENIC (AS)	73.0	J4	Field Dup	381 mg/kg Diff
				CADMIUM (CD)	14	J2, J4	CCV, Field Dup	208% Recovery, 431 mg/kg Diff
				COPPER (CU)	720.0	J4	Field Dup	148.8 RPD
				LEAD (PB)	170.0	J4	Field Dup	167.2 RPD
				ZINC (ZN)	2300.0	J4, J4	Field Dup, LCS	137.7 RPD, 30% Recovery
R13BH12-34	BH12-34D	L011062039	07/18/2001	ARSENIC (AS)	250.0	J4	Field Dup	381 mg/kg Diff
				CADMIUM (CD)	180	J4	Field Dup	431 mg/kg Diff
				COPPER (CU)	1700.0	J4	Field Dup	148.8 RPD
				LEAD (PB)	2500.0	J4	Field Dup	167.2 RPD
				ZINC (ZN)	1700.0	J4, J4	Field Dup, LCS	137.7 RPD, 30% Recovery
R13BH12-34	BH12-34E	L011062040	07/18/2001	ARSENIC (AS)	140.0	J4	Field Dup	381 mg/kg Diff
				CADMIUM (CD)	100	J4	Field Dup	431 mg/kg Diff
				COPPER (CU)	1100.0	J4	Field Dup	148.8 RPD
				LEAD (PB)	1600.0	J4	Field Dup	167.2 RPD
				ZINC (ZN)	910.0	J4, J4	Field Dup, LCS	137.7 RPD, 30% Recovery
R13BH12-35	BH12-35A1	L011062041	07/18/2001	ARSENIC (AS)	110.0	J4	Field Dup	44.4 RPD
				IRON (FE)	24000.0	J4	Field Dup	40.0 RPD
				ZINC (ZN)	410.0	J4	LCS	29% Recovery
R13BH12-35	BH12-35A2 Dup	L011062042	07/18/2001	ARSENIC (AS)	70.0	J4	Field Dup	44.4 RPD
				IRON (FE)	16000.0	J4	Field Dup	40.0 RPD
				ZINC (ZN)	320.0	J4	LCS	29% Recovery
R13BH12-35	BH12-35B	L011062043	07/18/2001	ARSENIC (AS)	74.0	J4	Field Dup	44.4 RPD
				IRON (FE)	16000.0	J4	Field Dup	40.0 RPD
				ZINC (ZN)	260.0	J4	LCS	29% Recovery
R13BH12-35	BH12-35C	L011062044	07/18/2001	ARSENIC (AS)	29.0	J4	Field Dup	44.4 RPD
				IRON (FE)	15000.0	J4	Field Dup	40.0 RPD
				ZINC (ZN)	<10.0	UJ4	LCS	29% Recovery
R13BH12-35	BH12-35D	L011062045	07/18/2001	ARSENIC (AS)	68.0	J4	Field Dup	44.4 RPD
				IRON (FE)	17000.0	J4	Field Dup	40.0 RPD
				ZINC (ZN)	270.0	J4	LCS	29% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH12-35	BH12-35E	L011062030	07/18/2001	ARSENIC (AS)	63.0	J4	Field Dup	44.4 RPD
				CADMIUM (CD)	25	J2	CCV	275% Recovery
				IRON (FE)	13000.0	J4	Field Dup	40.0 RPD
				ZINC (ZN)	240.0	J4	LCS	30% Recovery
RI3BH12-36	BH12-36A1	L011074040	07/18/2001	ARSENIC (AS)	700.0	J4	Field Dup	60.0 RPD
				CADMIUM (CD)	540	J4	Field Dup	88.7 RPD
				COPPER (CU)	3000.0	J4	Field Dup	78.8 RPD
				LEAD (PB)	6100.0	J4	Field Dup	72.3 RPD
				SELENIUM (SE)	43.0	J4	Field Dup	48 mg/kg Diff
				ZINC (ZN)	2700.0	J4, J4	Field Dup, LCS	69.9 RPD, 26% Recovery
RI3BH12-36	BH12-36A2 Dup	L011074041	07/18/2001	ARSENIC (AS)	1300.0	J4	Field Dup	60.0 RPD
				CADMIUM (CD)	1400	J4, J4	LCS, Field Dup	67% Recovery, 88.7 RPD
				COPPER (CU)	6900.0	J4	Field Dup	78.8 RPD
				LEAD (PB)	13000.0	J4	Field Dup	72.3 RPD
				SELENIUM (SE)	91.0	J4	Field Dup	48 mg/kg Diff
				ZINC (ZN)	5600.0	J4, J4	Field Dup, LCS	69.9 RPD, 26% Recovery
RI3BH12-36	BH12-36B	L011074042	07/18/2001	ARSENIC (AS)	100.0	J4	Field Dup	60.0 RPD
				CADMIUM (CD)	83	J4	LCS, Field Dup	67% Recovery, 88.7 RPD
				COPPER (CU)	1200.0	J4	Field Dup	78.8 RPD
				LEAD (PB)	1200.0	J4	Field Dup	72.3 RPD
				SELENIUM (SE)	<20.0	J4	Field Dup	48 mg/kg Diff
				ZINC (ZN)	420.0	J4, J4	Field Dup, LCS	69.9 RPD, 26% Recovery
RI3BH12-37	BH12-37A	L011074011	07/19/2001	CADMIUM (CD)	19	J2	CCV	250% Recovery
				LEAD (PB)	1100.0	J4	LCS	126% Recovery
				ZINC (ZN)	750.0	J4	LCS	26% Recovery
RI3BH12-37	BH12-37B	L011074012	07/19/2001	CADMIUM (CD)	13	J2	CCV	250% Recovery
				LEAD (PB)	670.0	J4	LCS	126% Recovery
				ZINC (ZN)	280.0	J4, J4	Field Dup, LCS	57.1 RPD, 26% Recovery
RI3BH12-37	BH12-37C	L011074013	07/19/2001	ARSENIC (AS)	19.0	J4	Field Dup	21 mg/kg Diff
				LEAD (PB)	41.0	J4	LCS	126% Recovery
				ZINC (ZN)	17.0	J4, J4	Field Dup, LCS	57.1 RPD, 26% Recovery
RI3BH12-37	BH12-37D	L011074014	07/19/2001	ARSENIC (AS)	33.0	J4	Field Dup	21 mg/kg Diff
				CADMIUM (CD)	12	J2	CCV	250% Recovery
				LEAD (PB)	32.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	57.1 RPD, 26% Recovery
RI3BH12-38	BH12-38A	L011074015	07/19/2001	ARSENIC (AS)	27.0	J4	Field Dup	21 mg/kg Diff
				LEAD (PB)	59.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	57.1 RPD, 26% Recovery
RI3BH13-10	BH13-10A	L011062049	07/23/2001	CADMIUM (CD)	260	J4	Field Dup	80.6 RPD
RI3BH13-10	BH13-10A	L011062049	07/23/2001	IRON (FE)	3300.0	J4	Field Dup	70.8 RPD
				ZINC (ZN)	170.0	J4, J4	Field Dup, LCS	43.5 RPD, 29% Recovery
RI3BH13-11	BH13-11A	L011062050	07/23/2001	CADMIUM (CD)	47	J4	Field Dup	80.6 RPD
				IRON (FE)	28000.0	J4	Field Dup	70.8 RPD
				ZINC (ZN)	1500.0	J4, J4	Field Dup, LCS	43.5 RPD, 29% Recovery
RI3BH13-13	BH13-13A1	L011062051	07/23/2001	CADMIUM (CD)	140	J4	Field Dup	80.6 RPD
				IRON (FE)	130000.0	J4	Field Dup	70.8 RPD
				ZINC (ZN)	5600.0	J4, J4	Field Dup, LCS	43.5 RPD, 29% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH13-13	BH13-13A2 Dup	L011062052	07/23/2001	CADMIUM (CD)	330	J4	Field Dup	80.6 RPD
				IRON (FE)	62000.0	J4	Field Dup	70.8 RPD
				ZINC (ZN)	3600.0	J4, J4	Field Dup, LCS	43.5 RPD, 29% Recovery
RI3BH13-2	BH13-2A	L011074045	07/20/2001	CADMIUM (CD)	92	J4	LCS	67% Recovery
				ZINC (ZN)	1400.0	J4	LCS	28% Recovery
RI3BH13-3	BH13-3A	L011062046	07/21/2001	ZINC (ZN)	14.0	J4	LCS	29% Recovery
RI3BH13-4	BH13-4A	L011062047	07/21/2001	ZINC (ZN)	550.0	J4	LCS	29% Recovery
RI3BH13-9	BH13-9A	L011062048	07/23/2001	CADMIUM (CD)	210	J4	Field Dup	80.6 RPD
				IRON (FE)	10000.0	J4	Field Dup	70.8 RPD
				ZINC (ZN)	180.0	J4, J4	Field Dup, LCS	43.5 RPD, 29% Recovery
RI3BH14-4	BH14-4A	L010605001	04/10/2001	CADMIUM (CD)	140	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-4	BH14-4B	L010605002	04/10/2001	ARSENIC (AS)	27.0	J4	Split	47.3 RPD
				CADMIUM (CD)	15	J2, J4	CCV, LCS	242% Recovery, 71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-4	BH14-4C	L010605003	04/10/2001	ARSENIC (AS)	28.0	J4	Split	47.3 RPD
				CADMIUM (CD)	11	J2, J4	CCV, LCS	242% Recovery, 71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-4	BH14-4D	L010605004	04/10/2001	ARSENIC (AS)	19.0	J4	Split	47.3 RPD
				CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-4	BH14-4E	L010605005	04/10/2001	ARSENIC (AS)	<10.0	UJ4	Split	47.3 RPD
				CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-4	BH14-4F	L010605006	04/10/2001	ARSENIC (AS)	11.0	J4	Split	47.3 RPD
				CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-5	BH14-5A	L010605007	04/10/2001	ARSENIC (AS)	170.0	J4	Split	47.3 RPD
				CADMIUM (CD)	110	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-5	BH14-5A Split	L010887001	04/10/2001	ARSENIC (AS)	105.0	J4	Split	47.3 RPD
RI3BH14-5	BH14-5B	L010605008	04/10/2001	ARSENIC (AS)	100.0	J4	Split	47.3 RPD
				CADMIUM (CD)	35	J2, J4	CCV, LCS	242% Recovery, 71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-5	BH14-5D	L010605009	04/10/2001	CADMIUM (CD)	88	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-5	BH14-5E	L010605010	04/10/2001	CADMIUM (CD)	66	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-5	BH14-5F1	L010605011	04/10/2001	ARSENIC (AS)	<10.0	UJ4	Split	47.3 RPD
				CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-5	BH14-5F2 Dup	L010605012	04/10/2001	ARSENIC (AS)	<10.0	UJ4	Split	47.3 RPD
				CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-6	BH14-6A	L010605013	04/16/2001	CADMIUM (CD)	28	J2, J4	CCV, LCS	275% Recovery, 71% Recovery
				CHROMIUM (CR)	85.0	J4	LCS	65% Recovery
RI3BH14-6	BH14-6B	L010605014	04/16/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-6	BH14-6C	L010605015	04/16/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery



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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH14-6	BH14-6D	L010605016	04/16/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-6	BH14-6E	L010605017	04/16/2001	CADMIUM (CD)	11	J2, J4	CCV, LCS	275% Recovery, 71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-6	BH14-6F1	L010605018	04/16/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH14-6	BH14-6F2 Dup	L010605019	04/16/2001	CADMIUM (CD)	<10.0	UJ4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3BH15-12	BH15-12C	L010370005	02/20/2001	COPPER (CU)	430.0	J4, J4	Lab Dup, Field Dup	44 mg/kg Diff, 93 mg/kg Diff
				IRON (FE)	19000.0	J4	Split	62.9 RPD
RI3BH15-12	BH15-12D	L010370006	02/20/2001	COPPER (CU)	37.0	J4, J4	Lab Dup, Field Dup	44 mg/kg Diff, 93 mg/kg Diff
				IRON (FE)	7200.0	J4	Split	62.9 RPD
				LEAD (PB)	32.0	J4	Field Dup	48.9 RPD
RI3BH15-12	BH15-12E1	L010370007	02/20/2001	COPPER (CU)	37.0	J4, J4	Lab Dup, Field Dup	44 mg/kg Diff, 93 mg/kg Diff
				IRON (FE)	7200.0	J4	Split	62.9 RPD
				LEAD (PB)	170.0	J4	Field Dup	48.9 RPD
RI3BH15-12	BH15-12E2 Dup	L010370008	02/20/2001	COPPER (CU)	130.0	J4, J4	Lab Dup, Field Dup	44 mg/kg Diff, 93 mg/kg Diff
				IRON (FE)	8600.0	J4	Split	62.9 RPD
				LEAD (PB)	280.0	J4	Field Dup	48.9 RPD
RI3BH15-12	BH15-12F	L010370009	02/20/2001	COPPER (CU)	39.0	J4, J4	Lab Dup, Field Dup	44 mg/kg Diff, 93 mg/kg Diff
				IRON (FE)	7400.0	J4	Split	62.9 RPD
				LEAD (PB)	51.0	J4	Field Dup	48.9 RPD
RI3BH15-13	BH15-13A	L010833001	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	57.0	J4	LCS	141% Recovery
				ZINC (ZN)	15.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13B	L010833002	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	41.0	J4	LCS	141% Recovery
				ZINC (ZN)	15.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13C	L010833003	06/01/2001	CADMIUM (CD)	12	J2	CCV	233% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	40.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13D	L010833004	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	36.0	J4	LCS	141% Recovery
				ZINC (ZN)	16.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13E	L010833005	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	47.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13F	L010833006	06/01/2001	CADMIUM (CD)	11	J2	CCV	233% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	47.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13G	L010833007	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	42.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13H	L010833008	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	46.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	71% Recovery
RI3BH15-13	BH15-13I	L010833009	06/01/2001	CHROMIUM (CR)	82.0	J4	LCS	74% Recovery
				LEAD (PB)	38.0	J4	LCS	141% Recovery
				ZINC (ZN)	45.0	J4	LCS	71% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH15-13	BH15-13J	L010833010	06/01/2001	CHROMIUM (CR)	110.0	J4	LCS	66% Recovery
				LEAD (PB)	23.0	J4	LCS	141% Recovery
				ZINC (ZN)	80.0	J4	LCS	28% Recovery
RI3BH15-14	BH15-14A	L010833011	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				LEAD (PB)	31.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	28% Recovery
RI3BH15-14	BH15-14B1	L010833012	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				LEAD (PB)	33.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	28% Recovery
RI3BH15-14	BH15-14B2 Dup	L010833013	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				LEAD (PB)	43.0	J4	LCS	141% Recovery
				ZINC (ZN)	<10.0	J4	LCS	28% Recovery
RI3BH15-14	BH15-14C	L010833014	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				LEAD (PB)	32.0	J4	LCS	141% Recovery
				ZINC (ZN)	55.0	J4	LCS	28% Recovery
RI3BH15-14	BH15-14D	L010833015	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				LEAD (PB)	31	J4	LCS	141% Recovery
				ZINC (ZN)	22	J4	LCS	28% Recovery
RI3BH15-14	BH15-14E	L010833016	06/01/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				LEAD (PB)	28.0	J4	LCS	141% Recovery
				ZINC (ZN)	360.0	J4	LCS	28% Recovery
RI3BH15-8	BH15-8B	L010370001	02/20/2001	COPPER (CU)	30000.0	J4	Lab Dup	44 mg/kg Diff
				IRON (FE)	49000.0	J4	Split	62.9 RPD
RI3BH15-8	BH15-8C Split	L010458001	02/20/2001	CHROMIUM (CR)	<30.0	UJ4	LCS	123% Recovery
RI3BH15-8	BH15-8C	L010370002	02/20/2001	COPPER (CU)	38000.0	J4	Lab Dup	44 mg/kg Diff
				IRON (FE)	10000.0	J4	Split	62.9 RPD
				IRON (FE)	19180.0	J4	Split	62.9 RPD
RI3BH15-8	BH15-8E	L010370003	02/20/2001	COPPER (CU)	19000.0	J4	Lab Dup	44 mg/kg Diff
				IRON (FE)	18000.0	J4	Split	62.9 RPD
RI3BH15-8	BH15-8F	L010370004	02/20/2001	COPPER (CU)	200.0	J4, J4	Lab Dup, Field Dup	44 mg/kg Diff, 93 mg/kg Diff
				IRON (FE)	6600.0	J4	Split	62.9 RPD
				LEAD (PB)	45.0	J4	Field Dup	48.9 RPD
RI3BH16-10	BH16-10A	L010371003	03/01/2001	COPPER (CU)	74.0	J4	Field Dup	62 mg/kg Diff
RI3BH16-10	BH16-10B1	L010371004	03/01/2001	COPPER (CU)	130.0	J4	Field Dup	62 mg/kg Diff
RI3BH16-10	BH16-10B2 Dup	L010371005	03/01/2001	COPPER (CU)	68.0	J4	Field Dup	62 mg/kg Diff
RI3BH16-19	BH16-19A Split	L010458008	02/22/2001	CHROMIUM (CR)	57.0	J4	LCS	123% Recovery
RI3BH16-21	BH16-21G Split	L010458009	02/23/2001	CHROMIUM (CR)	61.0	J4	LCS	123% Recovery
RI3BH16-24	BH16-24F	L010372021	02/23/2001	LEAD (PB)	1700.0	J4	LCS	128% Recovery
RI3BH16-24	BH16-24G	L010372022	02/23/2001	LEAD (PB)	1300.0	J4	LCS	128% Recovery
RI3BH16-25	BH16-25D	L010372023	02/23/2001	LEAD (PB)	690.0	J4	LCS	128% Recovery
RI3BH16-25	BH16-25E	L010372024	02/23/2001	LEAD (PB)	1700.0	J4	LCS	128% Recovery
RI3BH16-25	BH16-25F	L010372025	02/23/2001	LEAD (PB)	370.0	J4	LCS	128% Recovery
RI3BH16-25	BH16-25G	L010372026	02/23/2001	LEAD (PB)	200.0	J4	LCS	128% Recovery
RI3BH16-25	BH16-25H	L010372027	02/23/2001	LEAD (PB)	68.0	J4	LCS	128% Recovery
RI3BH16-26	BH16-26A	L010372028	02/23/2001	ARSENIC (AS)	100.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	730.0	J4	LCS	128% Recovery
RI3BH16-26	BH16-26B	L010372029	02/23/2001	ARSENIC (AS)	40.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	68.0	J4	LCS	128% Recovery
RI3BH16-26	BH16-26C1	L010372030	02/23/2001	ARSENIC (AS)	170.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	2100.0	J4	LCS	128% Recovery
RI3BH16-26	BH16-26C2 Dup	L010372031	02/23/2001	ARSENIC (AS)	110.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	1700.0	J4	LCS	128% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH16-26	BH16-26D	L010372032	02/23/2001	ARSENIC (AS)	83.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	1000.0	J4	LCS	128% Recovery
RI3BH16-26	BH16-26E	L010372033	02/23/2001	ARSENIC (AS)	34.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	39.0	J4	LCS	128% Recovery
RI3BH16-26	BH16-26F	L010372034	02/23/2001	ARSENIC (AS)	44.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	240.0	J4	LCS	128% Recovery
RI3BH16-27	BH16-27F	L010372035	02/23/2001	ARSENIC (AS)	190.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	1000.0	J4	LCS	128% Recovery
RI3BH16-27	BH16-27G	L010372036	02/23/2001	ARSENIC (AS)	71.0	J4	Field Dup	42.9 RPD
				LEAD (PB)	250.0	J4	LCS	128% Recovery
RI3BH16-28	BH16-28D	L010372037	02/26/2001	COPPER (CU)	220.0	J4	Split	50.0 RPD
				LEAD (PB)	310.0	J4	LCS	128% Recovery
RI3BH16-28	BH16-28E Split	L010458010	02/26/2001	CHROMIUM (CR)	65.0	J4	LCS	123% Recovery
RI3BH16-28	BH16-28E	L010372038	02/26/2001	COPPER (CU)	210.0	J4	Split	50.0 RPD
				COPPER (CU)	126.0	J4	Split	50.0 RPD
				LEAD (PB)	120.0	J4	LCS	128% Recovery
RI3BH16-28	BH16-28F	L010372039	02/26/2001	COPPER (CU)	<20.0	J4	Split	50.0 RPD
				LEAD (PB)	35.0	J4	LCS	128% Recovery
RI3BH16-29	BH16-29G	L010372040	02/26/2001	COPPER (CU)	150.0	J4	Split	50.0 RPD
				LEAD (PB)	180.0	J4	LCS	128% Recovery
RI3BH16-30	BH16-30B Split	L010458006	02/26/2001	CHROMIUM (CR)	58.0	J4	LCS	123% Recovery
RI3BH16-30	BH16-30B	L010371016	02/26/2001	COPPER (CU)	100.0	J4	Split	50.0 RPD
				COPPER (CU)	79.0	J4	Split	50.0 RPD
RI3BH16-30	BH16-30C	L010371017	02/26/2001	COPPER (CU)	280.0	J4	Split	50.0 RPD
RI3BH16-30	BH16-30D1	L010371018	02/26/2001	COPPER (CU)	56.0	J4	Split	50.0 RPD
RI3BH16-30	BH16-30D2 Dup	L010371019	02/26/2001	COPPER (CU)	33.0	J4	Split	50.0 RPD
RI3BH16-40	BH16-40F	L010371020	02/26/2001	COPPER (CU)	47.0	J4	Split	50.0 RPD
RI3BH16-5	BH16-5F	L010371030	02/28/2001	COPPER (CU)	28.0	J4	Field Dup	43 mg/kg Diff
RI3BH16-5	BH16-5G	L010371029	02/28/2001	COPPER (CU)	220.0	J4	Field Dup	43 mg/kg Diff
RI3BH16-5	BH16-5H1	L010371031	02/28/2001	COPPER (CU)	63.0	J4	Field Dup	43 mg/kg Diff
RI3BH16-5	BH16-5H2 Dup	L010371032	02/28/2001	COPPER (CU)	<20.0	UJ4	Field Dup	43 mg/kg Diff
RI3BH16-7	BH16-7B	L010371033	02/28/2001	COPPER (CU)	190.0	J4	Field Dup	43 mg/kg Diff
RI3BH16-8	BH16-8D	L010371034	02/28/2001	COPPER (CU)	120.0	J4	Field Dup	43 mg/kg Diff
RI3BH16-8	BH16-8E	L010371035	02/28/2001	COPPER (CU)	25.0	J4	Field Dup	43 mg/kg Diff
RI3BH16-8	BH16-8F	L010371036	02/28/2001	COPPER (CU)	150.0	J4	Field Dup	43 mg/kg Diff
RI3BH17-1	BH17-1A1	L010370010	03/01/2001	COPPER (CU)	<20.0	J4	Lab Dup	44 mg/kg Diff
RI3BH17-1	BH17-1A2 Dup	L010370011	03/01/2001	COPPER (CU)	39.0	J4	Lab Dup	44 mg/kg Diff
RI3BH17-1	BH17-1B	L010370012	03/01/2001	COPPER (CU)	<20.0	J4	Lab Dup	44 mg/kg Diff
RI3BH17-10	BH17-10B	L010370033	03/02/2001	IRON (FE)	17000.0	J4	Split	40.3 RPD
RI3BH17-10	BH17-10C	L010370034	03/02/2001	IRON (FE)	7000.0	J4	Split	40.3 RPD
RI3BH17-11	BH17-11A	L010370035	03/02/2001	IRON (FE)	14000.0	J4	Split	40.3 RPD
RI3BH17-11	BH17-11B	L010370036	03/02/2001	IRON (FE)	7700.0	J4	Split	40.3 RPD
RI3BH17-12	BH17-12A	L010370037	03/02/2001	IRON (FE)	13000.0	J4	Split	40.3 RPD
RI3BH17-12	BH17-12B	L010370038	03/02/2001	IRON (FE)	12000.0	J4	Split	40.3 RPD
RI3BH17-13	BH17-13A	L010370039	03/05/2001	COPPER (CU)	64.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	96.0	J4	Split	52.5 RPD
RI3BH17-13	BH17-13B Split	L010458007	03/05/2001	CHROMIUM (CR)	56.0	J4	LCS	123% Recovery
RI3BH17-13	BH17-13B	L010371037	03/05/2001	COPPER (CU)	140.0	J4	Split	66 mg/kg Diff
				COPPER (CU)	74.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	140.0	J4	Split	52.5 RPD
				LEAD (PB)	82.0	J4	Split	52.5 RPD
RI3BH17-14	BH17-14A	L010371038	03/05/2001	COPPER (CU)	22.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	54.0	J4	Split	52.5 RPD

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH17-14	BH17-14B	L010371039	03/05/2001	COPPER (CU)	77.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	73.0	J4	Split	52.5 RPD
RI3BH17-15	BH17-15A	L010371040	03/05/2001	COPPER (CU)	20.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	57.0	J4	Split	52.5 RPD
RI3BH17-15	BH17-15B	L010371041	03/05/2001	COPPER (CU)	34.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	51.0	J4	Split	52.5 RPD
RI3BH17-16	BH17-16A	L010371042	03/05/2001	COPPER (CU)	35.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	42.0	J4	Split	52.5 RPD
RI3BH17-16	BH17-16B	L010371043	03/05/2001	COPPER (CU)	36.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	41.0	J4	Split	52.5 RPD
RI3BH17-17	BH17-17E	L010371044	03/05/2001	COPPER (CU)	120.0	J4	Split	66 mg/kg Diff
				LEAD (PB)	66.0	J4	Split	52.5 RPD
RI3BH17-17	BH17-17F1	L010371045	03/05/2001	COPPER (CU)	<20.0	UJ4	Split	66 mg/kg Diff
				LEAD (PB)	27.0	J4	Split	52.5 RPD
RI3BH17-17	BH17-17F2 Dup	L010371046	03/05/2001	COPPER (CU)	<20.0	UJ4	Split	66 mg/kg Diff
				LEAD (PB)	20.0	J4	Split	52.5 RPD
RI3BH17-2	BH17-2A	L010370013	03/01/2001	COPPER (CU)	94.0	J4	Lab Dup	44 mg/kg Diff
RI3BH17-2	BH17-2B	L010370014	03/01/2001	COPPER (CU)	51.0	J4	Lab Dup	44 mg/kg Diff
RI3BH17-3	BH17-3A	L010370015	03/01/2001	COPPER (CU)	43.0	J4	Lab Dup	44 mg/kg Diff
RI3BH17-3	BH17-3B	L010370016	03/01/2001	COPPER (CU)	57.0	J4	Lab Dup	44 mg/kg Diff
RI3BH17-4	BH17-4A1	L010370017	03/01/2001	COPPER (CU)	38.0	J4	Lab Dup	44 mg/kg Diff
				ZINC (ZN)	34.0	J4	Field Dup	86 mg/kg Diff
RI3BH17-4	BH17-4A2 Dup	L010370018	03/01/2001	COPPER (CU)	<20.0	J4	Lab Dup	44 mg/kg Diff
				ZINC (ZN)	120.0	J4	Field Dup	86 mg/kg Diff
RI3BH17-4	BH17-4B	L010370019	03/01/2001	COPPER (CU)	25.0	J4	Lab Dup	44 mg/kg Diff
				ZINC (ZN)	64.0	J4	Field Dup	86 mg/kg Diff
RI3BH17-5	BH17-5A	L010370020	03/02/2001	COPPER (CU)	53.0	J4	Lab Dup	44 mg/kg Diff
				IRON (FE)	11000.0	J4	Split	40.3 RPD
RI3BH17-5	BH17-5B1	L010370021	03/02/2001	IRON (FE)	20000.0	J4	Split	40.3 RPD
RI3BH17-5	BH17-5B2 Dup	L010370022	03/02/2001	IRON (FE)	20000.0	J4	Split	40.3 RPD
RI3BH17-6	BH17-6A Split	L010458002	03/02/2001	CHROMIUM (CR)	79.0	J4	LCS	123% Recovery
RI3BH17-6	BH17-6A	L010370023	03/02/2001	IRON (FE)	16000.0	J4	Split	40.3 RPD
				IRON (FE)	24070.0	J4	Split	40.3 RPD
RI3BH17-6	BH17-6B	L010370024	03/02/2001	IRON (FE)	9100.0	J4	Split	40.3 RPD
RI3BH17-7	BH17-7A	L010370025	03/02/2001	IRON (FE)	13000.0	J4	Split	40.3 RPD
RI3BH17-7	BH17-7B	L010370026	03/02/2001	IRON (FE)	7500.0	J4	Split	40.3 RPD
RI3BH17-8	BH17-8A	L010370027	03/02/2001	IRON (FE)	14000.0	J4	Split	40.3 RPD
RI3BH17-8	BH17-8B	L010370028	03/02/2001	IRON (FE)	14000.0	J4	Split	40.3 RPD
RI3BH17-8	BH17-8C1	L010370029	03/02/2001	IRON (FE)	9700.0	J4	Split	40.3 RPD
RI3BH17-8	BH17-8C2 Dup	L010370030	03/02/2001	IRON (FE)	9500.0	J4	Split	40.3 RPD
RI3BH17-9	BH17-9A	L010370031	03/02/2001	IRON (FE)	16000.0	J4	Split	40.3 RPD
				IRON (FE)	15000.0	J4	Split	40.3 RPD
RI3BH18-1	BH18-1B	L010370041	03/06/2001	LEAD (PB)	51.0	J4	LCS	129% Recovery
RI3BH18-1	BH18-1C	L010370042	03/06/2001	LEAD (PB)	90.0	J4	LCS	129% Recovery
RI3BH18-1	BH18-1D	L010370043	03/06/2001	LEAD (PB)	33.0	J4	LCS	129% Recovery
RI3BH18-1	BH18-1E1 Split	L010458003	03/06/2001	CHROMIUM (CR)	46.0	J4	LCS	123% Recovery
RI3BH18-1	BH18-1E1	L010370044	03/06/2001	LEAD (PB)	56.0	J4	LCS	129% Recovery
RI3BH18-1	BH18-1E2 Dup	L010370045	03/06/2001	LEAD (PB)	37.0	J4	LCS	129% Recovery
RI3BH18-2	BH18-2A	L010370046	03/06/2001	LEAD (PB)	80.0	J4	LCS	129% Recovery
RI3BH18-2	BH18-2B	L010370047	03/06/2001	LEAD (PB)	51.0	J4	LCS	129% Recovery
RI3BH18-2	BH18-2C	L010370048	03/06/2001	LEAD (PB)	49.0	J4	LCS	129% Recovery
RI3BH18-2	BH18-2D	L010370049	03/06/2001	LEAD (PB)	36.0	J4	LCS	129% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH18-2	BH18-2E	L010370050	03/06/2001	LEAD (PB)	47.0	J4	LCS	129% Recovery
RI3BH18-3	BH18-3A	L010370051	03/06/2001	LEAD (PB)	100.0	J4, J4	Field Dup, LCS	41.9 RPD, 129% Recovery
RI3BH18-3	BH18-3B	L010370052	03/06/2001	LEAD (PB)	50.0	J4, J4	Field Dup, LCS	41.9 RPD, 129% Recovery
RI3BH18-3	BH18-3C	L010370053	03/06/2001	LEAD (PB)	69.0	J4, J4	Field Dup, LCS	41.9 RPD, 129% Recovery
RI3BH18-3	BH18-3D	L010370054	03/06/2001	LEAD (PB)	49.0	J4, J4	Field Dup, LCS	41.9 RPD, 129% Recovery
RI3BH18-3	BH18-3E1	L010370055	03/06/2001	LEAD (PB)	150.0	J4, J4	Field Dup, LCS	41.9 RPD, 129% Recovery
RI3BH18-3	BH18-3E2 Dup	L010370056	03/06/2001	LEAD (PB)	98.0	J4, J4	Field Dup, LCS	41.9 RPD, 129% Recovery
RI3BH18-3	BH18-3F	L010370057	03/06/2001	LEAD (PB)	49.0	J4, J4	Field Dup, LCS	41.9 RPD, 129% Recovery
RI3BH18-4	BH18-4A1	L010370058	03/06/2001	ARSENIC (AS)	44.0	J4	Field Dup	29 mg/kg Diff
				COPPER (CU)	230.0	J4	Field Dup	58.5 RPD
				LEAD (PB)	200.0	J4, J4	Field Dup, LCS	94.7 RPD, 129% Recovery
				ZINC (ZN)	120.0	J4	Field Dup	82.9 RPD
RI3BH18-4	BH18-4A2 Dup	L010370059	03/06/2001	ARSENIC (AS)	73.0	J4	Field Dup	29 mg/kg Diff
				COPPER (CU)	420.0	J4	Field Dup	58.5 RPD
				LEAD (PB)	560.0	J4, J4	Field Dup, LCS	94.7 RPD, 129% Recovery
				ZINC (ZN)	290.0	J4	Field Dup	82.9 RPD
RI3BH18-4	BH18-4B	L010370060	03/06/2001	ARSENIC (AS)	68.0	J4	Field Dup	29 mg/kg Diff
RI3BH18-4	BH18-4B Split	L010458004	03/06/2001	CHROMIUM (CR)	38.0	J4	LCS	123% Recovery
				COPPER (CU)	410.0	J4	Field Dup	58.5 RPD
				LEAD (PB)	450.0	J4, J4	Field Dup, LCS	94.7 RPD, 129% Recovery
				ZINC (ZN)	380.0	J4	Field Dup	82.9 RPD
RI3BH18-4	BH18-4C	L010370061	03/06/2001	ARSENIC (AS)	62.0	J4	Field Dup	29 mg/kg Diff
				COPPER (CU)	62.0	J4	Field Dup	58.5 RPD
				LEAD (PB)	74.0	J4, J4	Field Dup, Split	94.9 RPD, 37.9 RPD
				ZINC (ZN)	68.0	J4	Field Dup	82.9 RPD
RI3BH18-4	BH18-4D	L010370062	03/06/2001	ARSENIC (AS)	48.0	J4	Field Dup	29 mg/kg Diff
				COPPER (CU)	78.0	J4	Field Dup	58.5 RPD
				LEAD (PB)	37.0	J4, J4	Field Dup, Split	94.9 RPD, 37.9 RPD
				ZINC (ZN)	48.0	J4	Field Dup	82.9 RPD
RI3BH18-4	BH18-4E	L010370063	03/06/2001	ARSENIC (AS)	30.0	J4	Field Dup	29 mg/kg Diff
				COPPER (CU)	28.0	J4	Field Dup	58.5 RPD
				LEAD (PB)	35.0	J4, J4	Field Dup, Split	94.9 RPD, 37.9 RPD
				ZINC (ZN)	25.0	J4	Field Dup	82.9 RPD
RI3BH18-4	BH18-4F	L010370064	03/06/2001	ARSENIC (AS)	28.0	J4	Field Dup	29 mg/kg Diff
				COPPER (CU)	24.0	J4	Field Dup	58.5 RPD
				LEAD (PB)	24.0	J4, J4	Field Dup, Split	94.9 RPD, 37.9 RPD
				ZINC (ZN)	42.0	J4	Field Dup	82.9 RPD
RI3BH18-5	BH18-5A Split	L010458005	03/06/2001	CHROMIUM (CR)	48.0	J4	LCS	123% Recovery
RI3BH18-5	BH18-5A	L010370065	03/06/2001	LEAD (PB)	160.0	J4	Split	37.9 RPD
				LEAD (PB)	109.0	J4	Split	37.9 RPD
				ZINC (ZN)	100.0	J4	Split	40.6 RPD
				ZINC (ZN)	151.0	J4, J4	Split, Lab Dup	40.6 RPD, 25 mg/kg Diff

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH18-5	BH18-5B	L010370066	03/06/2001	LEAD (PB)	43.0	J4	Split	37.9 RPD
				ZINC (ZN)	56.0	J4	Split	40.6 RPD
RI3BH18-5	BH18-5C	L010370067	03/06/2001	LEAD (PB)	69.0	J4	Split	37.9 RPD
				ZINC (ZN)	58.0	J4	Split	40.6 RPD
RI3BH18-5	BH18-5D1	L010370068	03/06/2001	LEAD (PB)	40.0	J4	Split	37.9 RPD
				ZINC (ZN)	54.0	J4	Split	40.6 RPD
RI3BH18-5	BH18-5D2 Dup	L010370069	03/06/2001	LEAD (PB)	37.0	J4	Split	37.9 RPD
				ZINC (ZN)	44.0	J4	Split	40.6 RPD
RI3BH18-5	BH18-5E	L010370070	03/06/2001	LEAD (PB)	120.0	J4	Split	37.9 RPD
				ZINC (ZN)	140.0	J4	Split	40.6 RPD
RI3BH18-5	BH18-5F	L010370071	03/06/2001	ZINC (ZN)	39.0	J4	Split	40.6 RPD
RI3BH2-10	BH2-10A	L010423006	03/29/2001	ZINC (ZN)	44.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-10	BH2-10B	L010423007	03/29/2001	ZINC (ZN)	35.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-11	BH2-11A	L010423008	03/29/2001	ZINC (ZN)	150.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-11	BH2-11B	L010423009	03/29/2001	ZINC (ZN)	53.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-12	BH2-12A	L010467001	03/30/2001	CADMIUM (CD)	82	J4	LCS	58% Recovery
				ZINC (ZN)	340.0	J4, J4, J2	Split, LCS, CCV	158 mg/kg Diff, 32% Recovery, 67% Recovery
RI3BH2-12	BH2-12B	L010467002	03/30/2001	CADMIUM (CD)	55	J4	LCS	58% Recovery
RI3BH2-12	BH2-12B	L010467002	03/30/2001	ZINC (ZN)	580.0	J4, J4, J2	Split, LCS, CCV	158 mg/kg Diff, 32% Recovery, 67% Recovery
RI3BH2-13	BH2-13A	L010467003	03/30/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	150.0	J4, J4, J2	Split, LCS, CCV	158 mg/kg Diff, 32% Recovery, 67% Recovery
RI3BH2-13	BH2-13B	L010467004	03/30/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	11.0	J4, J4, J2	Split, LCS, CCV	158 mg/kg Diff, 32% Recovery, 67% Recovery
RI3BH2-13	BH2-13B Split	L010532001	03/30/2001	ZINC (ZN)	169.0	J4	Split	158 mg/kg Diff
RI3BH2-13	BH2-13C	L010467005	03/30/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	26.0	J4, J4, J2	Split, LCS, CCV	158 mg/kg Diff, 32% Recovery, 67% Recovery
RI3BH2-8	BH2-8A	L010423001	03/28/2001	COPPER (CU)	64.0	J4	Field Dup	52 mg/kg Diff
				ZINC (ZN)	160.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-8	BH2-8B	L010423002	03/28/2001	COPPER (CU)	39.0	J4	Field Dup	52 mg/kg Diff
				ZINC (ZN)	230.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-9	BH2-9A	L010423003	03/28/2001	COPPER (CU)	38.0	J4	Field Dup	52 mg/kg Diff
				ZINC (ZN)	200.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-9	BH2-9B1	L010423004	03/28/2001	COPPER (CU)	15.0	J4	Field Dup	52 mg/kg Diff
				ZINC (ZN)	150.0	J4	Lab Dup	25 mg/kg Diff
RI3BH2-9	BH2-9B2 Dup	L010423005	03/28/2001	COPPER (CU)	67.0	J4	Field Dup	52 mg/kg Diff
				ZINC (ZN)	110.0	J4	Lab Dup	25 mg/kg Diff
RI3BH8-10	BH8-10A1	L010497028	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				IRON (FE)	6200.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	1400.0	J4	LCS	37% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH8-10	BH8-10A2 Dup	L010497029	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				IRON (FE)	6100.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	1400.0	J4	LCS	37% Recovery
RI3BH8-10	BH8-10B	L010497030	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	85.0	J4	LCS	37% Recovery
RI3BH8-11	BH8-11A	L010497050	04/12/2001	CHROMIUM (CR)	180.0	J4	LCS	57% Recovery
				ZINC (ZN)	11000.0	J4	LCS	39% Recovery
RI3BH8-11	BH8-11B	L010497051	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				ZINC (ZN)	2700.0	J4	LCS	39% Recovery
RI3BH8-11	BH8-11C	L010497052	04/12/2001	CHROMIUM (CR)	89.0	UJ4	LCS	57% Recovery
				ZINC (ZN)	2100.0	J4	LCS	39% Recovery
RI3BH8-11	BH8-11D	L010497053	04/12/2001	CHROMIUM (CR)	110.0	J4	LCS	57% Recovery
				ZINC (ZN)	3900.0	J4	LCS	39% Recovery
RI3BH8-11	BH8-11E	L010497054	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				ZINC (ZN)	400.0	J4	LCS	39% Recovery
RI3BH8-11	BH8-11F	L010497055	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				ZINC (ZN)	19.0	J4	LCS	39% Recovery
RI3BH8-12	BH8-12A	L010605053	04/16/2001	CHROMIUM (CR)	130.0	J4	LCS	66% Recovery
RI3BH8-12	BH8-12B	L010605054	04/16/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
RI3BH8-12	BH8-12C	L010605055	04/16/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
RI3BH8-12	BH8-12D	L010605056	04/16/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
RI3BH8-12	BH8-12E	L010605057	04/16/2001	CHROMIUM (CR)	80.0	J4	LCS	66% Recovery
RI3BH8-5	BH8-5A	L010497001	04/11/2001	IRON (FE)	57000.0	J4	Split	39.2 RPD
				ZINC (ZN)	12000.0	J4, J4	LCS, Split	35% Recovery, 97.3 RPD
RI3BH8-5	BH8-5B	L010497002	04/11/2001	IRON (FE)	41000.0	J4	Split	39.2 RPD
				ZINC (ZN)	7200.0	J4, J4	LCS, Split	35% Recovery, 97.3 RPD
RI3BH8-5	BH8-5C	L010497003	04/11/2001	ZINC (ZN)	8300.0	J4, J4	LCS, Split	35% Recovery, 97.3 RPD
RI3BH8-5	BH8-5D	L010497004	04/11/2001	IRON (FE)	7600.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				ZINC (ZN)	180.0	J4, J4	LCS, Split	35% Recovery, 97.3 RPD
RI3BH8-5	BH8-5E	L010497005	04/11/2001	CADMIUM (CD)	17	J2	CCV	267% Recovery
				IRON (FE)	6500.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				ZINC (ZN)	170.0	J4, J4	LCS, Split	35% Recovery, 97.3 RPD
RI3BH8-6	BH8-6A	L010497006	04/11/2001	IRON (FE)	7000.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
RI3BH8-6	BH8-6A Split	L010532003	04/11/2001	IRON (FE)	10340.0	J4	Split	38.5 RPD
				ZINC (ZN)	83.0	J4, J4	LCS, Split	35% Recovery, 97.3 RPD
RI3BH8-6	BH8-6A Split	L010532003	04/11/2001	ZINC (ZN)	231	J4	Split	97.3 RPD
RI3BH8-6	BH8-6B	L010497007	04/11/2001	IRON (FE)	95000.0	J4	Split	39.2 RPD
				ZINC (ZN)	9000.0	J4	LCS	35% Recovery
RI3BH8-6	BH8-6C	L010497008	04/11/2001	IRON (FE)	58000.0	J4	Split	39.2 RPD
				ZINC (ZN)	6500.0	J4	LCS	35% Recovery
RI3BH8-6	BH8-6D	L010497009	04/11/2001	CADMIUM (CD)	18	J2	CCV	267% Recovery
				ZINC (ZN)	1700.0	J4	LCS	35% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Blas	Exceedances
RI3BH8-6	BH8-6E	L010497010	04/11/2001	IRON (FE)	7500.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				ZINC (ZN)	19.0	J4	LCS	35% Recovery
RI3BH8-6	BH8-6F1	L010497011	04/11/2001	IRON (FE)	11000.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				ZINC (ZN)	24.0	J4	LCS	35% Recovery
RI3BH8-6	BH8-6F2 Dup	L010497012	04/11/2001	IRON (FE)	4700.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				ZINC (ZN)	<10.0	UJ4	LCS	35% Recovery
RI3BH8-7	BH8-7A	L010497013	04/11/2001	IRON (FE)	98000.0	J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				ZINC (ZN)	10000.0	J4	LCS	35% Recovery
RI3BH8-7	BH8-7B	L010497014	04/11/2001	ZINC (ZN)	8300.0	J4	LCS	35% Recovery
RI3BH8-7	BH8-7C	L010497015	04/11/2001	IRON (FE)	13000.0	J4	Split	39.2 RPD
				ZINC (ZN)	200.0	J4	LCS	35% Recovery
RI3BH8-7	BH8-7D	L010497016	04/11/2001	IRON (FE)	15000.0	J4	Split	39.2 RPD
				ZINC (ZN)	550.0	J4	LCS	35% Recovery
RI3BH8-7	BH8-7E	L010497017	04/11/2001	IRON (FE)	22000.0	J4	Split	39.2 RPD
				ZINC (ZN)	1900.0	J4	LCS	35% Recovery
RI3BH8-7	BH8-7F	L010497018	04/11/2001	IRON (FE)	7600.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				ZINC (ZN)	85.0	J4	LCS	35% Recovery
RI3BH8-7	BH8-7G	L010497019	04/11/2001	IRON (FE)	22000.0	J4	Split	39.2 RPD
				ZINC (ZN)	<10.0	UJ4	LCS	35% Recovery
RI3BH8-8	BH8-8A	L010497020	04/11/2001	IRON (FE)	22000.0	J4	Split	39.2 RPD
				ZINC (ZN)	1900.0	J4	LCS	35% Recovery
RI3BH8-8	BH8-8B	L010497021	04/11/2001	CHROMIUM (CR)	120.0	J4	LCS	72% Recovery
				SELENIUM (SE)	37.0	J4	LCS	73% Recovery
				ZINC (ZN)	5500.0	J4	LCS	37% Recovery
RI3BH8-8	BH8-8C1	L010497022	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				IRON (FE)	6500.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				LEAD (PB)	74.0	J4	Field Dup	58 mg/kg Diff
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	170.0	J4, J4	Field Dup, LCS	134 mg/kg, 37% Recovery
RI3BH8-8	BH8-8C2 Dup	L010497023	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				IRON (FE)	4800.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				LEAD (PB)	16.0	J4	Field Dup	58 mg/kg Diff
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	36.0	J4	Field Dup, LCS	134 mg/kg, 37% Recovery
RI3BH8-8	BH8-8D	L010497024	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				IRON (FE)	6300.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				LEAD (PB)	28.0	J4	Field Dup	58 mg/kg Diff
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	23.0	J4	Field Dup, LCS	134 mg/kg, 37% Recovery
RI3BH8-9	BH8-9A	L010497025	04/11/2001	CHROMIUM (CR)	300.0	J4	LCS	72% Recovery
				SELENIUM (SE)	240.0	J4	LCS	73% Recovery
				ZINC (ZN)	12000.0	J4	LCS	37% Recovery
RI3BH8-9	BH8-9B	L010497026	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
RI3BH8-9	BH8-9B	L010497026	04/11/2001	IRON (FE)	12000.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD



**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH8-9	BH8-9B Split	L010532004	04/11/2001	IRON (FE)	17850.0	J4	Split	39.2 RPD
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	440.0	J4	LCS	37% Recovery
RI3BH8-9	BH8-9C	L010497027	04/11/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				IRON (FE)	8400.0	J4, J4	Field Dup, Split	80.3 RPD, 38.5 RPD
				LEAD (PB)	25.0	J4	Field Dup	58 mg/kg Diff
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	14.0	J4	Field Dup, LCS	134 mg/kg, 37% Recovery
RI3BH9-1-10	BH9-1-10A	L010832029	05/17/2001	CHROMIUM (CR)	140.0	J4	LCS	67% Recovery
				ZINC (ZN)	8400.0	J4	LCS	40% Recovery
RI3BH9-1-10	BH9-1-10B	L010832030	05/17/2001	ARSENIC (AS)	190.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	64	J4	Field Dup	146.5 RPD
				CHROMIUM (CR)	87.0	J4	LCS	67% Recovery
				COPPER (CU)	590.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	600.0	J4	Field Dup	66.7 RPD
				ZINC (ZN)	490.0	J4, J4	Field Dup, LCS	59.5 RPD, 40% Recovery
RI3BH9-1-10	BH9-1-10C	L010832031	05/17/2001	ARSENIC (AS)	250.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	87	J4	Field Dup	146.5 RPD
				CHROMIUM (CR)	80.0	J4	LCS	67% Recovery
				COPPER (CU)	830.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	860.0	J4	Field Dup	66.7 RPD
				ZINC (ZN)	650.0	J4, J4	Field Dup, LCS	59.5 RPD, 40% Recovery
RI3BH9-1-10	BH9-1-10D	L010832032	05/17/2001	ARSENIC (AS)	220.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	75	J4	Field Dup	146.5 RPD
				CHROMIUM (CR)	83.0	J4	LCS	67% Recovery
				COPPER (CU)	340.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	270.0	J4	Field Dup	66.7 RPD
				ZINC (ZN)	540.0	J4, J4	Field Dup, LCS	59.5 RPD, 40% Recovery
RI3BH9-1-10	BH9-1-10E1	L010832033	05/17/2001	ARSENIC (AS)	1000.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	320	J4	Field Dup	78.3 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	2400.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	3000.0	J4	Field Dup	66.7 RPD
				ZINC (ZN)	2400.0	J4, J4	Field Dup, LCS	59.5 RPD, 40% Recovery
RI3BH9-1-10	BH9-1-10E2 Dup	L010832006	05/17/2001	ARSENIC (AS)	500.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	140	J4	Field Dup	78.3 RPD
RI3BH9-1-10	BH9-1-10E2 Dup	L010832006	05/17/2001	COPPER (CU)	1500.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	1500.0	J4	Field Dup	66.7 RPD
				ZINC (ZN)	1300.0	J4, J4	Field Dup, LCS	59.5 RPD, 32% Recovery
RI3BH9-1-10	BH9-1-10F	L010832034	05/17/2001	ARSENIC (AS)	160.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	37	J4	Field Dup	146.5 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	300.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	340.0	J4	Field Dup	66.7 RPD
				ZINC (ZN)	240.0	J4, J4	Field Dup, LCS	59.5 RPD, 40% Recovery
RI3BH9-1-11	BH9-1-11A	L010832035	05/17/2001	CHROMIUM (CR)	110.0	J4	LCS	67% Recovery
				ZINC (ZN)	9500.0	J4	LCS	40% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-1-11	BH9-1-11B	L010832036	05/17/2001	ARSENIC (AS)	95.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	110	J4	Field Dup	146.5 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	240.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	91.0	J4	Field Dup	66.7 RPD
RI3BH9-1-11	BH9-1-11C	L010832001	05/17/2001	ZINC (ZN)	950.0	J4, J4	Field Dup, LCS	59.5 RPD, 40% Recovery
				ARSENIC (AS)	180.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	170	J4	Field Dup	78.3 RPD
				COPPER (CU)	330.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	76.0	J4	Field Dup	66.7 RPD
RI3BH9-1-11	BH9-1-11D	L010832002	05/17/2001	ZINC (ZN)	1200.0	J4, J4	Field Dup, LCS	59.5 RPD, 32% Recovery
				ARSENIC (AS)	280.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	64	J4	Field Dup	146.5 RPD
				COPPER (CU)	210.0	J4	Field Dup	46.2 RPD
				LEAD (PB)	36.0	J4	Field Dup	66.7 RPD
RI3BH9-1-12	BH9-1-12A	L010832057	05/21/2001	ZINC (ZN)	960.0	J4, J4	Field Dup, LCS	59.5 RPD, 32% Recovery
				CHROMIUM (CR)	80.0	J4	LCS	72% Recovery
RI3BH9-1-12	BH9-1-12B	L010832058	05/21/2001	ZINC (ZN)	3900.0	J4	LCS	30% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
RI3BH9-1-12	BH9-1-12C	L010832059	05/21/2001	ZINC (ZN)	630.0	J4	LCS	30% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
RI3BH9-1-13	BH9-1-13A	L010832060	05/24/2001	ZINC (ZN)	350.0	J4	LCS	30% Recovery
				CHROMIUM (CR)	110.0	J4	LCS	72% Recovery
RI3BH9-1-13	BH9-1-13B	L010832061	05/24/2001	ZINC (ZN)	28000.0	J4	LCS	30% Recovery
				CHROMIUM (CR)	100.0	J4	LCS	74% Recovery
				LEAD (PB)	1300.0	J4, J4	Field Dup, LCS	38.3 RPD, 141% Recovery
RI3BH9-1-13	BH9-1-13C	L010832062	05/17/2001	ZINC (ZN)	870.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	120.0	J4	LCS	74% Recovery
				LEAD (PB)	13000.0	J4	LCS	141% Recovery
RI3BH9-1-13	BH9-1-13D	L010832063	05/17/2001	ZINC (ZN)	16000.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	120.0	J4	LCS	74% Recovery
				LEAD (PB)	17000.0	J4	LCS	141% Recovery
RI3BH9-1-13	BH9-1-13E	L010832064	05/24/2001	ZINC (ZN)	15000.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	1300.0	J4, J4	Field Dup, LCS	38.3 RPD, 141% Recovery
RI3BH9-1-13	BH9-1-13F	L010832065	05/24/2001	ZINC (ZN)	680.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	89.0	J4	LCS	74% Recovery
				LEAD (PB)	860.0	J4, J4	Field Dup, LCS	38.3 RPD, 141% Recovery
RI3BH9-1-13	BH9-1-13G	L010832066	05/24/2001	ZINC (ZN)	610.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	130.0	J4	LCS	74% Recovery
				LEAD (PB)	12000.0	J4	LCS	141% Recovery
RI3BH9-1-13	BH9-1-13H	L010832067	05/24/2001	ZINC (ZN)	9000.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	110.0	J4	LCS	74% Recovery
				LEAD (PB)	9000.0	J4	LCS	141% Recovery
RI3BH9-1-14	BH9-1-14A1	L010832068	05/24/2001	ZINC (ZN)	8700.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	5600.0	J4, J4	Field Dup, LCS	38.3 RPD, 141% Recovery
RI3BH9-1-14	BH9-1-14A2 Dup	L010832069	05/24/2001	ZINC (ZN)	6700.0	J4	LCS	71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	3800.0	J4, J4	Field Dup, LCS	38.3 RPD, 141% Recovery
				ZINC (ZN)	4800.0	J4	LCS	71% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-1-14	BH9-1-14B	L010832070	05/24/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	74% Recovery
				LEAD (PB)	7000.0	J4, J4	Field Dup, LCS	38.3 RPD, 141% Recovery
				ZINC (ZN)	10000.0	J4	LCS	71% Recovery
RI3BH9-1-14	BH9-1-14C	L010832071	05/24/2001	ARSENIC (AS)	100.0	J4	Split	39.3 RPD
RI3BH9-1-14	BH9-1-14C	L010832071	05/24/2001	CHROMIUM (CR)	81.0	J4	LCS	74% Recovery
				LEAD (PB)	450.0	J4, J4	Field Dup, LCS	38.3 RPD, 141% Recovery
				ZINC (ZN)	320.0	J4	LCS	71% Recovery
RI3BH9-1-14	BH9-1-14D	L010832037	05/24/2001	ARSENIC (AS)	68.0	J4	Split	39.3 RPD
RI3BH9-1-14	BH9-1-14D	L010832037	05/24/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				LEAD (PB)	730.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	440.0	J4	LCS	40% Recovery
RI3BH9-1-14	BH9-1-14E	L010832038	05/24/2001	ARSENIC (AS)	69.0	J4	Split	39.3 RPD
RI3BH9-1-14	BH9-1-14E	L010832038	05/24/2001	CHROMIUM (CR)	98.0	J4	LCS	67% Recovery
				LEAD (PB)	450.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	200.0	J4	LCS	40% Recovery
RI3BH9-1-14	BH9-1-14F	L010832039	05/24/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				LEAD (PB)	1400.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	6800.0	J4	LCS	40% Recovery
RI3BH9-1-15	BH9-1-15A	L010832040	05/24/2001	CHROMIUM (CR)	120.0	J4	LCS	67% Recovery
				LEAD (PB)	8800.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	24000.0	J4	LCS	40% Recovery
RI3BH9-1-15	BH9-1-15B	L010832041	05/24/2001	CHROMIUM (CR)	120.0	J4	LCS	72% Recovery
				LEAD (PB)	4800.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	5200.0	J4	LCS	30% Recovery
RI3BH9-1-15	BH9-1-15C	L010832042	05/24/2001	CHROMIUM (CR)	98.0	J4	LCS	72% Recovery
				LEAD (PB)	890.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	740.0	J4	LCS	30% Recovery
RI3BH9-1-15	BH9-1-15D	L010832043	05/24/2001	ARSENIC (AS)	60.0	J4	Split	39.3 RPD
RI3BH9-1-15	BH9-1-15D	L010832043	05/24/2001	CHROMIUM (CR)	92.0	J4	LCS	72% Recovery
				LEAD (PB)	540.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	410.0	J4	LCS	30% Recovery
RI3BH9-1-15	BH9-1-15E	L010832044	05/24/2001	CHROMIUM (CR)	91.0	J4	LCS	72% Recovery
				LEAD (PB)	1200.0	J4	Field Dup	38.3 RPD
				ZINC (ZN)	1300.0	J4	LCS	30% Recovery
RI3BH9-1-16	BH9-1-16A1	L010832045	05/24/2001	CHROMIUM (CR)	130.0	J4	LCS	72% Recovery
				ZINC (ZN)	11000.0	J4	LCS	30% Recovery
RI3BH9-1-16	BH9-1-16A2 Dup	L010832046	05/24/2001	CHROMIUM (CR)	130.0	J4	LCS	72% Recovery
				ZINC (ZN)	10000.0	J4	LCS	30% Recovery
RI3BH9-1-16	BH9-1-16B	L010832047	05/24/2001	ARSENIC (AS)	250.0	J4	Split	39.3 RPD
RI3BH9-1-16	BH9-1-16B	L010832047	05/24/2001	CHROMIUM (CR)	110.0	J4	LCS	72% Recovery
				ZINC (ZN)	1700.0	J4	LCS	30% Recovery
RI3BH9-1-16	BH9-1-16C	L010832048	05/24/2001	CADMIUM (CD)	21	J2	CCV	366% Recovery
				CHROMIUM (CR)	130.0	J4	LCS	72% Recovery
				ZINC (ZN)	230.0	J4	LCS	30% Recovery
RI3BH9-1-16	BH9-1-16D	L010832049	05/24/2001	ARSENIC (AS)	91.0	J4	Split	39.3 RPD
RI3BH9-1-16	BH9-1-16D	L010832049	05/24/2001	CADMIUM (CD)	14	J2	CCV	366% Recovery
				CHROMIUM (CR)	130.0	J4	LCS	72% Recovery
				ZINC (ZN)	110.0	J4	LCS	30% Recovery
RI3BH9-1-16	BH9-1-16E	L010832050	05/24/2001	CADMIUM (CD)	35	J2	CCV	366% Recovery
				CHROMIUM (CR)	120.0	J4	LCS	72% Recovery
				ZINC (ZN)	1400.0	J4	LCS	30% Recovery
RI3BH9-1-17	BH9-1-17A	L010832051	05/24/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				ZINC (ZN)	2800.0	J4	LCS	30% Recovery
RI3BH9-1-17	BH9-1-17B	L010832052	05/24/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				ZINC (ZN)	1400.0	J4	LCS	30% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-1-18	BH9-1-18A	L010831029	05/24/2001	CHROMIUM (CR)	120.0	J4	LCS	70% Recovery
				ZINC (ZN)	3500.0	J4	LCS	29% Recovery
RI3BH9-1-18	BH9-1-18B	L010831030	05/24/2001	ARSENIC (AS)	100.0	J4	Split	39.3 RPD
RI3BH9-1-18	BH9-1-18B	L010831030	05/24/2001	CHROMIUM (CR)	120.0	J4	LCS	70% Recovery
				ZINC (ZN)	180.0	J4	LCS	29% Recovery
RI3BH9-1-18	BH9-1-18C	L010831031	05/24/2001	ARSENIC (AS)	110.0	J4	Split	39.3 RPD
RI3BH9-1-18	BH9-1-18C Split	L010887012	05/24/2001	ARSENIC (AS)	74.0	J4	Split	39.3 RPD
RI3BH9-1-18	BH9-1-18C	L010831031	05/24/2001	CADMIUM (CD)	13	J2	CCV	267% Recovery
				CHROMIUM (CR)	120.0	J4	LCS	70% Recovery
				ZINC (ZN)	230.0	J4	LCS	29% Recovery
RI3BH9-1-18	BH9-1-18D	L010831032	05/25/2001	CADMIUM (CD)	75	J2	CCV	267% Recovery
				CHROMIUM (CR)	120.0	J4	LCS	70% Recovery
				ZINC (ZN)	890.0	J4	LCS	29% Recovery
				CHROMIUM (CR)	130.0	J4	LCS	70% Recovery
RI3BH9-1-18	BH9-1-18E	L010831033	05/25/2001	LEAD (PB)	110.0	J4	Field Dup	45.9 RPD
				ZINC (ZN)	150.0	J4, J4	Field Dup, LCS	56.7 RPD, 29% Recovery
				CHROMIUM (CR)	140.0	J4	LCS	70% Recovery
RI3BH9-1-18	BH9-1-18F	L010831034	05/25/2001	LEAD (PB)	48.0	J4	Field Dup	45.9 RPD
				ZINC (ZN)	89.0	J4, J4	Field Dup, LCS	56.7 RPD, 29% Recovery
				CADMIUM (CD)	13	J2	CCV	267% Recovery
RI3BH9-1-18	BH9-1-18G1	L010831035	05/25/2001	CHROMIUM (CR)	110.0	J4	LCS	70% Recovery
				LEAD (PB)	150.0	J4	Field Dup	45.9 RPD
				ZINC (ZN)	120.0	J4, J4	Field Dup, LCS	56.7 RPD, 29% Recovery
				CHROMIUM (CR)	120.0	J4	LCS	70% Recovery
RI3BH9-1-18	BH9-1-18G2 Dup	L010831036	05/25/2001	LEAD (PB)	94.0	J4	Field Dup	45.9 RPD
				ZINC (ZN)	67.0	J4, J4	Field Dup, LCS	56.7 RPD, 29% Recovery
				CADMIUM (CD)	17	J2	CCV	267% Recovery
RI3BH9-1-18	BH9-1-18H	L010831037	05/25/2001	CHROMIUM (CR)	120.0	J4	LCS	70% Recovery
				LEAD (PB)	69.0	J4	Field Dup	45.9 RPD
				ZINC (ZN)	98.0	J4, J4	Field Dup, LCS	56.7 RPD, 29% Recovery
				CADMIUM (CD)	18	J2	CCV	267% Recovery
RI3BH9-1-18	BH9-1-18I	L010831038	05/25/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	70% Recovery
				LEAD (PB)	200.0	J4	Field Dup	45.9 RPD
				ZINC (ZN)	130.0	J4, J4	Field Dup, LCS	56.7 RPD, 29% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	70% Recovery
RI3BH9-1-18	BH9-1-18J	L010831039	05/25/2001	LEAD (PB)	53.0	J4	Field Dup	45.9 RPD
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	56.7 RPD, 29% Recovery
				CHROMIUM (CR)	3100.0	J4	LCS	32% Recovery
RI3BH9-1-6	BH9-1-6A	L010832007	05/16/2001	ZINC (ZN)	550.0	J4	LCS	32% Recovery
RI3BH9-1-6	BH9-1-6B	L010832008	05/16/2001	ZINC (ZN)	710.0	J4	LCS	32% Recovery
RI3BH9-1-6	BH9-1-6C	L010832009	05/16/2001	ZINC (ZN)	580.0	J4	LCS	32% Recovery
RI3BH9-1-6	BH9-1-6D	L010832010	05/16/2001	CADMIUM (CD)	19	J2	CCV	416% Recovery
				ZINC (ZN)	230.0	J4	LCS	32% Recovery
RI3BH9-1-6	BH9-1-6E	L010832011	05/16/2001	ZINC (ZN)	27000.0	J4	LCS	32% Recovery
RI3BH9-1-7	BH9-1-7A	L010832012	05/16/2001	ZINC (ZN)	730.0	J4	LCS	32% Recovery
RI3BH9-1-7	BH9-1-7B	L010832013	05/16/2001	ZINC (ZN)	24000.0	J4	LCS	32% Recovery
RI3BH9-1-7	BH9-1-7C	L010832014	05/16/2001	ZINC (ZN)	330.0	J4	LCS	32% Recovery
RI3BH9-1-7	BH9-1-7D1	L010832015	05/17/2001	ZINC (ZN)	260.0	J4	LCS	32% Recovery
RI3BH9-1-7	BH9-1-7D2 Dup	L010832003	05/17/2001	ZINC (ZN)	310.0	J4	LCS	32% Recovery
RI3BH9-1-7	BH9-1-7E	L010832016	05/17/2001	ZINC (ZN)				

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-1-8	BH9-1-8A	L010832017	05/17/2001	ZINC (ZN)	4000.0	J4	LCS	32% Recovery
RI3BH9-1-8	BH9-1-8B	L010832018	05/17/2001	COPPER (CU)	160.0	J4	Field Dup	90 mg/kg Diff
				ZINC (ZN)	140.0	J4	LCS	32% Recovery
RI3BH9-1-8	BH9-1-8C	L010832019	05/17/2001	COPPER (CU)	150.0	J4	Field Dup	90 mg/kg Diff
				ZINC (ZN)	150.0	J4	LCS	32% Recovery
RI3BH9-1-8	BH9-1-8D	L010832020	05/17/2001	COPPER (CU)	560.0	J4	Field Dup	90 mg/kg Diff
				ZINC (ZN)	710.0	J4	LCS	32% Recovery
RI3BH9-1-8	BH9-1-8E1	L010832021	05/17/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	60.0	J4	Field Dup	90 mg/kg Diff
				ZINC (ZN)	61.0	J4	LCS	40% Recovery
RI3BH9-1-8	BH9-1-8E2 Dup	L010832004	05/17/2001	CADMIUM (CD)	19	J2	CCV	416% Recovery
				COPPER (CU)	150.0	J4	Field Dup	90 mg/kg Diff
				ZINC (ZN)	84.0	J4	LCS	32% Recovery
RI3BH9-1-9	BH9-1-9A	L010832022	05/17/2001	ARSENIC (AS)	1700.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	610	J4	Field Dup	78.3 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	7600.0	J4	Field Dup	64.4 RPD
RI3BH9-1-9	BH9-1-9A	L010832022	05/17/2001	IRON (FE)	16000.0	J4	Field Dup	48.6 RPD
				LEAD (PB)	6100.0	J4	Field Dup	138.1 RPD
				SELENIUM (SE)	57.0	J4	Field Dup	46 mg/kg Diff
				ZINC (ZN)	6400.0	J4, J4	Field Dup, LCS	92.5 RPD, 40% Recovery
RI3BH9-1-9	BH9-1-9B	L010832023	05/17/2001	ARSENIC (AS)	190.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	73	J4	Field Dup	146.5 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	620.0	J4	Field Dup	64.4 RPD
				IRON (FE)	8500.0	J4	Field Dup	48.6 RPD
				LEAD (PB)	520.0	J4	Field Dup	138.1 RPD
				SELENIUM (SE)	<20.0	J4	Field Dup	46 mg/kg Diff
				ZINC (ZN)	1100.0	J4, J4	Field Dup, LCS	92.5 RPD, 40% Recovery
RI3BH9-1-9	BH9-1-9C1	L010832024	05/17/2001	ARSENIC (AS)	370.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	170	J4	Field Dup	78.3 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	2000.0	J4	Field Dup	64.4 RPD
				IRON (FE)	6700.0	J4	Field Dup	48.6 RPD
				LEAD (PB)	930.0	J4	Field Dup	138.1 RPD
				SELENIUM (SE)	<20.0	J4	Field Dup	46 mg/kg Diff
				ZINC (ZN)	1800.0	J4, J4	Field Dup, LCS	92.5 RPD, 40% Recovery
RI3BH9-1-9	BH9-1-9C2 Dup	L010832005	05/17/2001	ARSENIC (AS)	1600.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	1100	J4	Field Dup	78.3 RPD
				COPPER (CU)	3900.0	J4	Field Dup	64.4 RPD
				IRON (FE)	11000.0	J4	Field Dup	48.6 RPD
				LEAD (PB)	4800.0	J4	Field Dup	138.1 RPD
				SELENIUM (SE)	66.0	J4	Field Dup	46 mg/kg Diff
				ZINC (ZN)	4900.0	J4, J4	Field Dup, LCS	92.5 RPD, 32% Recovery
RI3BH9-1-9	BH9-1-9D	L010832025	05/17/2001	ARSENIC (AS)	200.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	190	J4	Field Dup	78.3 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	140.0	J4	Field Dup	64.4 RPD
				IRON (FE)	6200.0	J4	Field Dup	48.6 RPD
				LEAD (PB)	330.0	J4	Field Dup	138.1 RPD
				SELENIUM (SE)	<20.0	J4	Field Dup	46 mg/kg Diff
				ZINC (ZN)	930.0	J4, J4	Field Dup, LCS	92.5 RPD, 40% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-1-9	BH9-1-9E	L010832026	05/17/2001	ARSENIC (AS)	240.0	J4	Field Dup	124.9 RPD
				CADMIUM (CD)	400	J4	Field Dup	78.3 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	74.0	J4	Field Dup	64.4 RPD
				IRON (FE)	11000.0	J4	Field Dup	48.6 RPD
				LEAD (PB)	160.0	J4	Field Dup	138.1 RPD
				SELENIUM (SE)	<20.0	J4	Field Dup	46 mg/kg Diff
RI3BH9-1-9	BH9-1-9F	L010832027	05/17/2001	ZINC (ZN)	2400.0	J4, J4	Field Dup, LCS	92.5 RPD, 40% Recovery
				ARSENIC (AS)	100.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	88	J4	Field Dup	146.5 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	<20.0	UJ4	Field Dup	64.4 RPD
				IRON (FE)	3700.0	J4	Field Dup	48.6 RPD
				LEAD (PB)	41.0	J4	Field Dup	138.1 RPD
RI3BH9-1-9	BH9-1-9G	L010832028	05/17/2001	SELENIUM (SE)	<20.0	J4	Field Dup	46 mg/kg Diff
				ZINC (ZN)	1400.0	J4, J4	Field Dup, LCS	92.5 RPD, 40% Recovery
				ARSENIC (AS)	75.0	J4	Field Dup	66.7 RPD
				CADMIUM (CD)	150	J4	Field Dup	78.3 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	67% Recovery
				COPPER (CU)	<20.0	J4	Field Dup	64.4 RPD
				IRON (FE)	4000.0	J4	Field Dup	48.6 RPD
RI3BH9-6-10	BH9-6-10A	L010831003	05/25/2001	LEAD (PB)	28.0	J4	Field Dup	138.1 RPD
				SELENIUM (SE)	<20.0	J4	Field Dup	46 mg/kg Diff
				ZINC (ZN)	640.0	J4, J4	Field Dup, LCS	92.5 RPD, 40% Recovery
				ARSENIC (AS)	5200.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	2100	J4	Field Dup	118.9 RPD
				CHROMIUM (CR)	220.0	J4	LCS	71% Recovery
				LEAD (PB)	19000.0	J4	Field Dup	147.8 RPD
RI3BH9-6-10	BH9-6-10B	L010831004	05/25/2001	SELENIUM (SE)	120.0	J4	Field Dup	106 mg/kg Diff
				ZINC (ZN)	20000.0	J4	LCS	31% Recovery
				ARSENIC (AS)	280.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	260	J4	Field Dup	118.9 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	71% Recovery
				COPPER (CU)	1800.0	J4	Field Dup	87 RPD
				LEAD (PB)	1600.0	J4	Field Dup	147.8 RPD
RI3BH9-6-10	BH9-6-10C	L010831005	05/25/2001	SELENIUM (SE)	<20.0	UJ4	Field Dup	106 mg/kg Diff
				ZINC (ZN)	1700.0	J4	LCS	31% Recovery
				ARSENIC (AS)	62.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	46	J4	Field Dup	118.9 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	71% Recovery
				COPPER (CU)	85.0	J4	Field Dup	87 RPD
				LEAD (PB)	73.0	J4	Field Dup	147.8 RPD
RI3BH9-6-10	BH9-6-10D	L010831006	05/25/2001	SELENIUM (SE)	<20.0	UJ4	Field Dup	106 mg/kg Diff
				ZINC (ZN)	300.0	J4	LCS	31% Recovery
				ARSENIC (AS)	73.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	31	J4, J2	Field Dup, CCV	118.9 RPD, 375% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	71% Recovery
				COPPER (CU)	76.0	J4	Field Dup	87 RPD
				LEAD (PB)	63.0	J4	Field Dup	147.8 RPD
RI3BH9-6-11	BH9-6-11A	L010831016	05/25/2001	SELENIUM (SE)	<20.0	UJ4	Field Dup	106 mg/kg Diff
				ZINC (ZN)	230.0	J4	LCS	31% Recovery
RI3BH9-6-11	BH9-6-11B	L010831017	05/25/2001	CHROMIUM (CR)	290.0	J4	LCS	71% Recovery
				ZINC (ZN)	21000.0	J4	LCS	31% Recovery
				CHROMIUM (CR)	340.0	J4	LCS	71% Recovery
				ZINC (ZN)	20000.0	J4	LCS	31% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-6-11	BH9-6-11C	L010831018	05/25/2001	CHROMIUM (CR)	170.0	J4	LCS	71% Recovery
				ZINC (ZN)	7500.0	J4	LCS	31% Recovery
RI3BH9-6-11	BH9-6-11D	L010831019	05/25/2001	CHROMIUM (CR)	83.0	J4	LCS	71% Recovery
				ZINC (ZN)	140.0	J4	LCS	31% Recovery
RI3BH9-6-12	BH9-6-12A	L010831020	05/25/2001	CHROMIUM (CR)	260.0	J4	LCS	71% Recovery
				ZINC (ZN)	21000.0	J4	LCS	31% Recovery
RI3BH9-6-12	BH9-6-12B	L010831021	05/25/2001	CHROMIUM (CR)	390.0	J4	LCS	70% Recovery
				ZINC (ZN)	30000.0	J4	LCS	29% Recovery
RI3BH9-6-12	BH9-6-12C	L010831022	05/25/2001	CHROMIUM (CR)	86.0	J4	LCS	70% Recovery
				ZINC (ZN)	2300.0	J4	LCS	29% Recovery
RI3BH9-6-13	BH9-6-13A	L010831023	05/25/2001	CHROMIUM (CR)	280.0	J4	LCS	70% Recovery
				ZINC (ZN)	24000.0	J4	LCS	29% Recovery
RI3BH9-6-14	BH9-6-14A1	L010831024	05/25/2001	CHROMIUM (CR)	230.0	J4	LCS	70% Recovery
				ZINC (ZN)	10000.0	J4	LCS	29% Recovery
RI3BH9-6-14	BH9-6-14A2 Dup	L010831025	05/25/2001	CHROMIUM (CR)	250.0	J4	LCS	70% Recovery
				ZINC (ZN)	9400.0	J4	LCS	29% Recovery
RI3BH9-6-14	BH9-6-14B	L010831026	05/25/2001	CHROMIUM (CR)	180.0	J4	LCS	70% Recovery
				ZINC (ZN)	44000.0	J4	LCS	29% Recovery
RI3BH9-6-14	BH9-6-14C	L010831027	05/25/2001	CHROMIUM (CR)	210.0	J4	LCS	70% Recovery
				ZINC (ZN)	46000.0	J4	LCS	29% Recovery
RI3BH9-6-14	BH9-6-14D	L010831028	05/25/2001	CHROMIUM (CR)	350.0	J4	LCS	70% Recovery
				ZINC (ZN)	22000.0	J4	LCS	29% Recovery
RI3BH9-6-15	BH9-6-15A	L010831078	05/25/2001	CHROMIUM (CR)	410.0	J4	LCS	63% Recovery
				SELENIUM (SE)	160.0	J4	LCS	73% Recovery
				ZINC (ZN)	30000.0	J4	LCS	70% Recovery
RI3BH9-6-15	BH9-6-15B1	L010831079	05/25/2001	ARSENIC (AS)	120.0	J4	Field Dup	37.6 RPD
				CADMIUM (CD)	17	J2	CCV	225% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
				COPPER (CU)	190.0	J4	Field Dup	138 mg/kg Diff
				LEAD (PB)	290.0	J4	Field Dup	69.8 RPD
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	120.0	J4, J4	Field Dup, LCS	92 mg/kg Diff, 70% Recovery
RI3BH9-6-15	BH9-6-15B2 Dup	L010831080	05/25/2001	ARSENIC (AS)	82.0	J4	Field Dup	37.6 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
				COPPER (CU)	52.0	J4	Field Dup	138 mg/kg Diff
				LEAD (PB)	140.0	J4	Field Dup	69.8 RPD
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
RI3BH9-6-15	BH9-6-15A2 Dup	L010831080	05/25/2001	ZINC (ZN)	28.0	J4, J4	Field Dup, LCS	92 mg/kg Diff, 70% Recovery
RI3BH9-6-15	BH9-6-15C	L010831081	05/25/2001	ARSENIC (AS)	91.0	J4	Field Dup	37.6 RPD
				CADMIUM (CD)	12	J2	CCV	325% Recovery
				COPPER (CU)	130.0	J4	Field Dup	138 mg/kg Diff
				LEAD (PB)	160.0	J4	Field Dup	69.8 RPD
				ZINC (ZN)	50.0	J4, J4	Field Dup, LCS	92 mg/kg Diff, 70% Recovery
RI3BH9-6-16	BH9-6-16A	L010831007	05/25/2001	CHROMIUM (CR)	150.0	J4	LCS	71% Recovery
				LEAD (PB)	16000.0	J4	Field Dup	72.1 RPD
				ZINC (ZN)	14000.0	J4	LCS	31% Recovery
RI3BH9-6-16	BH9-6-16B1	L010831008	05/25/2001	ARSENIC (AS)	1400.0	J4	Field Dup	59.3 RPD
				CADMIUM (CD)	790	J4	Field Dup	67.8 RPD
				CHROMIUM (CR)	120.0	J4	LCS	71% Recovery
				COPPER (CU)	8100.0	J4	Field Dup	70.0 RPD
				LEAD (PB)	10000.0	J4	Field Dup	72.1 RPD
				ZINC (ZN)	5700.0	J4, J4	Field Dup, LCS	50.6 RPD, 31% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-6-16	BH9-6-16B2 Dup	L010831009	05/25/2001	ARSENIC (AS)	760.0	J4	Field Dup	59.3 RPD
				CADMIUM (CD)	390	J4	Field Dup	67.8 RPD
				CHROMIUM (CR)	110.0	J4	LCS	71% Recovery
				COPPER (CU)	3900.0	J4	Field Dup	70.0 RPD
				LEAD (PB)	4700.0	J4	Field Dup	72.1 RPD
				ZINC (ZN)	3400.0	J4, J4	Field Dup, LCS	50.6 RPD, 31% Recovery
RI3BH9-6-16	BH9-6-16C	L010831010	05/25/2001	ARSENIC (AS)	140.0	J4	Field Dup	59.3 RPD
				CADMIUM (CD)	14	J2, J4	CCV, Field Dup	375% Recovery, 67.8 RPD
				CHROMIUM (CR)	110.0	J4	LCS	71% Recovery
				COPPER (CU)	49.0	J4	Field Dup	70.0 RPD
				LEAD (PB)	66.0	J4	Field Dup	72.1 RPD
				ZINC (ZN)	54.0	J4, J4	Field Dup, LCS	50.6 RPD, 31% Recovery
RI3BH9-6-16	BH9-6-16D	L010831011	05/25/2001	ARSENIC (AS)	43.0	J4	Field Dup	59.3 RPD
				CADMIUM (CD)	13	J4	Field Dup	67.8 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	71% Recovery
				COPPER (CU)	66.0	J4	Field Dup	70.0 RPD
				LEAD (PB)	55.0	J4	Field Dup	72.1 RPD
				ZINC (ZN)	<10.0	J4, J4	Field Dup, LCS	50.6 RPD, 31% Recovery
RI3BH9-6-17	BH9-6-17A	L010831012	05/25/2001	CHROMIUM (CR)	150.0	J4	LCS	71% Recovery
RI3BH9-6-17	BH9-6-17B	L010831013	05/25/2001	ZINC (ZN)	34000.0	J4	LCS	31% Recovery
RI3BH9-6-17	BH9-6-17C	L010831014	05/25/2001	CHROMIUM (CR)	250.0	J4	LCS	71% Recovery
RI3BH9-6-17	BH9-6-17D	L010831015	05/25/2001	ZINC (ZN)	8900.0	J4	LCS	31% Recovery
RI3BH9-6-17	BH9-6-17D	L010831015	05/25/2001	CHROMIUM (CR)	330.0	J4	LCS	71% Recovery
				ZINC (ZN)	33000.0	J4	LCS	31% Recovery
				ARSENIC (AS)	130.0	J4	Field Dup	99.0 RPD
				CADMIUM (CD)	77	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	71% Recovery
				COPPER (CU)	330.0	J4	Field Dup	85.7 RPD
RI3BH9-6-18	BH9-6-18E	L010831086	05/26/2001	LEAD (PB)	550.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	530.0	J4, J4	Field Dup, LCS	83.2 RPD, 31% Recovery
RI3BH9-6-18	BH9-6-18A	L010831082	05/26/2001	ZINC (ZN)	5900.0	J4	LCS	22% Recovery
RI3BH9-6-18	BH9-6-18B	L010831083	05/26/2001	ZINC (ZN)	9300.0	J4	LCS	22% Recovery
RI3BH9-6-18	BH9-6-18C	L010831084	05/26/2001	ZINC (ZN)	5400.0	J4	LCS	22% Recovery
RI3BH9-6-18	BH9-6-18D	L010831085	05/26/2001	ZINC (ZN)	6500.0	J4	LCS	22% Recovery
RI3BH9-6-18	BH9-6-18F	L010831059	05/26/2001	ZINC (ZN)	4400.0	J4	LCS	22% Recovery
				ARSENIC (AS)	900.0	J2	CCV	73% Recovery
				CHROMIUM (CR)	270.0	J4	LCS	51% Recovery
RI3BH9-6-18	BH9-6-18G	L010831060	05/26/2001	ZINC (ZN)	4400.0	J4	LCS	28% Recovery
				ARSENIC (AS)	4700.0	J2	CCV	73% Recovery
				CHROMIUM (CR)	270.0	J4	LCS	51% Recovery
RI3BH9-6-18	BH9-6-18H	L010831061	05/26/2001	ZINC (ZN)	34000.0	J4	LCS	28% Recovery
				CHROMIUM (CR)	270.0	J4	LCS	63% Recovery
				SELENIUM (SE)	150.0	J4	LCS	73% Recovery
RI3BH9-6-19	BH9-6-19A	L010831062	05/26/2001	ZINC (ZN)	54000.0	J4	LCS	70% Recovery
				CHROMIUM (CR)	210.0	J4	LCS	63% Recovery
				SELENIUM (SE)	170.0	J4	LCS	73% Recovery
RI3BH9-6-19	BH9-6-19B	L010831063	05/26/2001	ZINC (ZN)	23000.0	J4	LCS	70% Recovery
				CADMIUM (CD)	21	J2	CCV	333% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	220.0	J4, J4	Field Dup, LCS	51.4 RPD, 70% Recovery



**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-6-19	BH9-6-19C1	L010831064	05/26/2001	CADMIUM (CD)	16	J2	CCV	333% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	65.0	J4, J4	Field Dup, LCS	51.4 RPD, 70% Recovery
RI3BH9-6-19	BH9-6-19C2 Dup	L010831065	05/26/2001	CADMIUM (CD)	19	J2	CCV	333% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
RI3BH9-6-19	BH9-6-19C2 Dup	L010831065	05/26/2001	SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	110.0	J4, J4	Field Dup, LCS	51.4 RPD, 70% Recovery
RI3BH9-6-19	BH9-6-19D	L010831066	05/26/2001	CADMIUM (CD)	16	J2	CCV	333% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	10.0	J4, J4	Field Dup, LCS	51.4 RPD, 70% Recovery
RI3BH9-6-20	BH9-6-20A	L010831067	05/26/2001	CHROMIUM (CR)	240.0	J4	LCS	63% Recovery
				SELENIUM (SE)	120.0	J4	LCS	73% Recovery
				ZINC (ZN)	50000.0	J4	LCS	70% Recovery
RI3BH9-6-20	BH9-6-20B	L010831068	05/26/2001	CHROMIUM (CR)	330.0	J4	LCS	63% Recovery
				SELENIUM (SE)	190.0	J4	LCS	73% Recovery
				ZINC (ZN)	39000.0	J4	LCS	70% Recovery
RI3BH9-6-20	BH9-6-20C	L010831069	05/26/2001	CADMIUM (CD)	27	J2	CCV	333% Recovery
				CHROMIUM (CR)	100.0	J4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	180.0	J4, J4	Field Dup, LCS	51.4 RPD, 70% Recovery
RI3BH9-6-20	BH9-6-20D	L010831070	05/26/2001	CADMIUM (CD)	26	J2	CCV	333% Recovery
				CHROMIUM (CR)	110.0	J4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	190.0	J4, J4	Field Dup, LCS	51.4 RPD, 70% Recovery
RI3BH9-6-20	BH9-6-20E	L010831071	05/26/2001	CADMIUM (CD)	17	J2	CCV	225% Recovery
				CHROMIUM (CR)	80.0	J4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	110.0	J4, J4	Field Dup, LCS	51.4 RPD, 70% Recovery
RI3BH9-6-21	BH9-6-21A	L010832053	05/26/2001	CHROMIUM (CR)	260.0	J4	LCS	72% Recovery
				ZINC (ZN)	31000.0	J4	LCS	30% Recovery
RI3BH9-6-21	BH9-6-21B	L010832054	05/26/2001	CHROMIUM (CR)	520.0	J4	LCS	72% Recovery
				ZINC (ZN)	34000.0	J4	LCS	30% Recovery
RI3BH9-6-21	BH9-6-21C	L010832055	05/26/2001	CHROMIUM (CR)	340.0	J4	LCS	72% Recovery
				ZINC (ZN)	31000.0	J4	LCS	30% Recovery
RI3BH9-6-21	BH9-6-21D	L010832056	05/26/2001	CHROMIUM (CR)	320.0	J4	LCS	72% Recovery
				ZINC (ZN)	29000.0	J4	LCS	30% Recovery
RI3BH9-6-22	BH9-6-22A	L010831072	05/26/2001	CHROMIUM (CR)	200.0	J4	LCS	63% Recovery
				SELENIUM (SE)	130.0	J4	LCS	73% Recovery
				ZINC (ZN)	38000.0	J4	LCS	70% Recovery
RI3BH9-6-22	BH9-6-22B	L010831073	05/26/2001	CHROMIUM (CR)	160.0	J4	LCS	63% Recovery
				SELENIUM (SE)	51.0	J4	LCS	73% Recovery
				ZINC (ZN)	5200.0	J4	LCS	70% Recovery
RI3BH9-6-22	BH9-6-22C	L010831074	05/26/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	51.4 RPD, 70% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-6-22	BH9-6-22D	L010831075	05/26/2001	CADMIUM (CD)	12	J2	CCV	225% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	63% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	51.4 RPD, 70% Recovery
RI3BH9-6-23	BH9-6-23A	L010831076	05/26/2001	CHROMIUM (CR)	350.0	J4	LCS	63% Recovery
				SELENIUM (SE)	180.0	J4	LCS	73% Recovery
RI3BH9-6-23	BH9-6-23A	L010831076	05/26/2001	ZINC (ZN)	38000.0	J4	LCS	70% Recovery
RI3BH9-6-23	BH9-6-23B	L010831077	05/26/2001	CHROMIUM (CR)	440.0	J4	LCS	63% Recovery
				SELENIUM (SE)	220.0	J4	LCS	73% Recovery
				ZINC (ZN)	29000.0	J4	LCS	70% Recovery
RI3BH9-6-5	BH9-6-5A	L010831046	05/25/2001	CADMIUM (CD)	910	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	260.0	J4	LCS	51% Recovery
				ZINC (ZN)	12000.0	J4	LCS	28% Recovery
RI3BH9-6-5	BH9-6-5B	L010831047	05/25/2001	CADMIUM (CD)	1900	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	360.0	J4	LCS	51% Recovery
				ZINC (ZN)	19000.0	J4	LCS	28% Recovery
RI3BH9-6-5	BH9-6-5C	L010831048	05/25/2001	CHROMIUM (CR)	480.0	J4	LCS	51% Recovery
				ZINC (ZN)	44000.0	J4	LCS	28% Recovery
RI3BH9-6-5	BH9-6-5D	L010831049	05/25/2001	CHROMIUM (CR)	450.0	J4	LCS	51% Recovery
				ZINC (ZN)	51000.0	J4	LCS	28% Recovery
RI3BH9-6-5	BH9-6-5E1	L010831050	05/25/2001	ARSENIC (AS)	260.0	J4	Field Dup	99.0 RPD
				CADMIUM (CD)	770	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	51% Recovery
				COPPER (CU)	2400.0	J4	Field Dup	85.7 RPD
				LEAD (PB)	2000.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	2600.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery
RI3BH9-6-5	BH9-6-5E2 Dup	L010831051	05/25/2001	ARSENIC (AS)	770.0	J4, J2	Field Dup, CCV	99.0 RPD, 73% Recovery
				CADMIUM (CD)	1300	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	51% Recovery
				COPPER (CU)	6000.0	J4	Field Dup	85.7 RPD
				LEAD (PB)	5400.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	6300.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery
RI3BH9-6-5	BH9-6-5F	L010831052	05/25/2001	ARSENIC (AS)	48.0	J4, J2	Field Dup, CCV	99.0 RPD, 73% Recovery
				CADMIUM (CD)	17	J4, J2	Field Dup, CCV	51.2 RPD, 417% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	51% Recovery
				COPPER (CU)	44.0	J4	Field Dup	85.7 RPD
				LEAD (PB)	45.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	12.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery
RI3BH9-6-6	BH9-6-6A	L010831053	05/25/2001	ARSENIC (AS)	3400.0	J2	CCV	73% Recovery
				CHROMIUM (CR)	240.0	J4	LCS	51% Recovery
				ZINC (ZN)	14000.0	J4, J4	Field Dup, LCS	90.9 RPD, 28% Recovery
RI3BH9-6-6	BH9-6-6B	L010831054	05/25/2001	ARSENIC (AS)	49.0	J4, J2	Field Dup, CCV	99.0 RPD, 73% Recovery
				CADMIUM (CD)	49	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	51% Recovery
				COPPER (CU)	170.0	J4	Field Dup	85.7 RPD
				LEAD (PB)	180.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	110.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery

**TABLE A-2. SUMMARY OF FLAGGED DATE  
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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-6-7	BH9-6-7A	L010831055	05/25/2001	ARSENIC (AS)	31000.0	J2	CCV	73% Recovery
				CHROMIUM (CR)	180.0	J4	LCS	51% Recovery
				ZINC (ZN)	59000.0	J4, J4	Field Dup, LCS	90.9 RPD, 28% Recovery
RI3BH9-6-7	BH9-6-7B	L010831056	05/25/2001	ARSENIC (AS)	2900.0	J2	CCV	73% Recovery
				CHROMIUM (CR)	280.0	J4	LCS	51% Recovery
				ZINC (ZN)	19000.0	J4, J4	Field Dup, LCS	90.9 RPD, 28% Recovery
RI3BH9-6-7	BH9-6-7C	L010831057	05/25/2001	ARSENIC (AS)	130.0	J4, J2	Field Dup, CCV	99.0 RPD, 73% Recovery
				CADMIUM (CD)	54	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	51% Recovery
				COPPER (CU)	640.0	J4	Field Dup	85.7 RPD
RI3BH9-6-7	BH9-6-7C	L010831057	05/25/2001	LEAD (PB)	390.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	410.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery
RI3BH9-6-7	BH9-6-7D	L010831058	05/25/2001	ARSENIC (AS)	67.0	J4, J2	Field Dup, CCV	99.0 RPD, 73% Recovery
				CADMIUM (CD)	<10.0	UJ4	Field Dup	51.2 RPD
				CHROMIUM (CR)	87.0	J4	LCS	51% Recovery
				COPPER (CU)	57.0	J4	Field Dup	85.7 RPD
				LEAD (PB)	55.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	41.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery
RI3BH9-6-8	BH9-6-8A	L010831040	05/25/2001	CHROMIUM (CR)	290.0	J4	LCS	70% Recovery
				ZINC (ZN)	25000.0	J4	LCS	29% Recovery
RI3BH9-6-8	BH9-6-8B	L010831041	05/25/2001	ARSENIC (AS)	200.0	J4	Field Dup	99.0 RPD
				CADMIUM (CD)	280	J4	Field Dup	51.2 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	51% Recovery
				COPPER (CU)	1700.0	J4	Field Dup	85.7 RPD
				LEAD (PB)	1200.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	1300.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery
RI3BH9-6-8	BH9-6-8C	L010831042	05/25/2001	ARSENIC (AS)	54.0	J4	Field Dup	99.0 RPD
				CADMIUM (CD)	<10.0	UJ4	Field Dup	51.2 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	51% Recovery
				COPPER (CU)	66.0	J4	Field Dup	85.7 RPD
				LEAD (PB)	68.0	J4	Field Dup	91.9 RPD
				ZINC (ZN)	32.0	J4, J4	Field Dup, LCS	83.2 RPD, 28% Recovery
RI3BH9-6-9	BH9-6-9A	L010831043	05/25/2001	CHROMIUM (CR)	250.0	J4	LCS	51% Recovery
				ZINC (ZN)	42000.0	J4, J4	Field Dup, LCS	90.9 RPD, 28% Recovery
RI3BH9-6-9	BH9-6-9B1	L010831044	05/25/2001	ARSENIC (AS)	1400.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	1500	J4	Field Dup	118.9 RPD
				CHROMIUM (CR)	140.0	J4	LCS	51% Recovery
				COPPER (CU)	6300.0	J4	Field Dup	87.0 RPD
				LEAD (PB)	6600.0	J4	Field Dup	147.8 RPD
				SELENIUM (SE)	84.0	J4	Field Dup	106 mg/kg Diff
				ZINC (ZN)	7500.0	J4, J4	Field Dup, LCS	90.9 RPD, 28% Recovery
RI3BH9-6-9	BH9-6-9B2 Dup	L010831045	05/25/2001	ARSENIC (AS)	3700.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	5900	J4	Field Dup	118.9 RPD
				CHROMIUM (CR)	250.0	J4	LCS	51% Recovery
				COPPER (CU)	16000.0	J4	Field Dup	87.0 RPD
				LEAD (PB)	44000.0	J4	Field Dup	147.8 RPD
				SELENIUM (SE)	190.0	J4	Field Dup	106 mg/kg Diff
				ZINC (ZN)	20000.0	J4, J4	Field Dup, LCS	90.9 RPD, 28% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3BH9-6-9	BH9-6-9C	L010831001	05/25/2001	ARSENIC (AS)	100.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	30	J4, J2	Field Dup, CCV	118.9 RPD, 375% Recovery
RI3BH9-6-9	BH9-6-9C	L010831001	05/25/2001	CHROMIUM (CR)	90.0	J4	LCS	71% Recovery
				COPPER (CU)	240.0	J4	Field Dup	87.0 RPD
				LEAD (PB)	250.0	J4	Field Dup	147.8 RPD
				SELENIUM (SE)	<20.0	UJ4	Field Dup	106 mg/kg Diff
				ZINC (ZN)	1000.0	J4, J4	Field Dup, LCS	90.9 RPD, 31% Recovery
RI3BH9-6-9	BH9-6-9D	L010831002	05/25/2001	ARSENIC (AS)	38.0	J4	Field Dup	90.2 RPD
				CADMIUM (CD)	20	J4, J2	Field Dup, CCV	118.9 RPD, 375% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	71% Recovery
				COPPER (CU)	57.0	J4	Field Dup	87.0 RPD
				LEAD (PB)	62.0	J4	Field Dup	147.8 RPD
				SELENIUM (SE)	<20.0	UJ4	Field Dup	106 mg/kg Diff
RI3EP-119	EP-119A	L010467006	04/02/2001	CADMIUM (CD)	35	J2, J4	CCV, LCS	267% Recovery, 58% Recovery
				ZINC (ZN)	870.0	J4, J2	LCS, CCV	32% Recovery, 67% Recovery
RI3EP-119	EP-119B	L010467007	04/02/2001	CADMIUM (CD)	20	J2, J4	CCV, LCS	267% Recovery, 58% Recovery
				ZINC (ZN)	450.0	J4, J2	LCS, CCV	32% Recovery, 67% Recovery
RI3EP-119	EP-119C	L010467008	04/02/2001	CADMIUM (CD)	21	J2, J4	CCV, LCS	267% Recovery, 58% Recovery
				ZINC (ZN)	410.0	J4, J2	LCS, CCV	32% Recovery, 67% Recovery
RI3EP-119	EP-119D	L010467009	04/02/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	32% Recovery, 67% Recovery
RI3EP-119	EP-119E	L010467010	04/02/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	55.0	J4, J2	LCS, CCV	32% Recovery, 67% Recovery
RI3EP-119	EP-119F	L010467011	04/02/2001	CADMIUM (CD)	<10.0	UJ4	LCS	58% Recovery
				ZINC (ZN)	<10.0	UJ4, UJ2	LCS, CCV	32% Recovery, 68% Recovery
RI3EP-120	EP-120A	L010497033	04/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	330.0	J4	LCS	37% Recovery
RI3EP-120	EP-120B	L010497034	04/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
RI3EP-120	EP-120B	L010497034	04/06/2001	ZINC (ZN)	360.0	J4	LCS	37% Recovery
RI3EP-120	EP-120C	L010497035	04/06/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	92.0	J4	LCS	37% Recovery
RI3EP-121	EP-121A	L010497036	04/10/2001	ARSENIC (AS)	51.0	J4	Split	47.3 RPD
				CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	250.0	J4	LCS	37% Recovery
RI3EP-122	EP-122A1	L010497037	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	2000.0	J4	LCS	37% Recovery
RI3EP-122	EP-122A2 Dup	L010497042	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				ZINC (ZN)	2200.0	J4	LCS	39% Recovery

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Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3EP-122	EP-122B	L010497038	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	1200.0	J4	LCS	37% Recovery
RI3EP-122	EP-122C	L010497039	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	170.0	J4	LCS	37% Recovery
RI3EP-122	EP-122D	L010497040	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	72% Recovery
				SELENIUM (SE)	<20.0	UJ4	LCS	73% Recovery
				ZINC (ZN)	21.0	J4, J4	Field Dup, LCS	25 mg/kg Diff, 37% Recovery
RI3EP-122	EP-122E	L010497041	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	39% Recovery
RI3EP-123	EP-123A	L010497043	04/12/2001	CADMIUM (CD)	33	J2	CCV	217% Recovery
				CHROMIUM (CR)	440.0	J4	LCS	57% Recovery
				ZINC (ZN)	7600.0	J4	LCS	39% Recovery
RI3EP-123	EP-123B	L010497044	04/12/2001	CADMIUM (CD)	13	J2	CCV	217% Recovery
				CHROMIUM (CR)	130.0	J4	LCS	57% Recovery
				LEAD (PB)	170.0	J4	Field Dup	58.7 RPD
				ZINC (ZN)	250.0	J4	LCS	39% Recovery
RI3EP-123	EP-123C1	L010497045	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				LEAD (PB)	71.0	J4	Field Dup	58.7 RPD
				ZINC (ZN)	48.0	J4, J4	Field Dup, LCS	25 mg/kg Diff, 37% Recovery
RI3EP-123	EP-123C2 Dup	L010497046	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				LEAD (PB)	130.0	J4	Field Dup	58.7 RPD
				ZINC (ZN)	73.0	J4, J4	Field Dup, LCS	25 mg/kg Diff, 37% Recovery
RI3EP-123	EP-123D	L010497047	04/12/2001	CADMIUM (CD)	13	J2	CCV	217% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				LEAD (PB)	59.0	J4	Field Dup	58.7 RPD
				ZINC (ZN)	<10.0	UJ4	Field Dup, LCS	25 mg/kg Diff, 37% Recovery
RI3EP-123	EP-123E	L010497048	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				LEAD (PB)	48.0	J4	Field Dup	58.7 RPD
				ZINC (ZN)	<10.0	UJ4	Field Dup, LCS	25 mg/kg Diff, 37% Recovery
RI3EP-123	EP-123F	L010497049	04/12/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	57% Recovery
				LEAD (PB)	78.0	J4	Field Dup	58.7 RPD
				ZINC (ZN)	<10.0	UJ4	Field Dup, LCS	25 mg/kg Diff, 37% Recovery
RI3EP-125	EP-125A	L010605020	04/24/2001	CADMIUM (CD)	23	J2, J4	CCV, LCS	275% Recovery, 71% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	65% Recovery
RI3EP-126	EP-126D	L010605035	04/26/2001	CADMIUM (CD)	23	J2	CCV	400% Recovery
RI3EP-126	EP-126E2 Dup	L010605037	04/26/2001	CADMIUM (CD)	14	J2	CCV	400% Recovery
RI3EP-126	EP-126I	L010605041	04/26/2001	CHROMIUM (CR)	94.0	J4	LCS	66% Recovery
RI3EP-126	EP-126J	L010605042	04/26/2001	CADMIUM (CD)	13	J2	CCV	317% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
RI3EP-127	EP-127A	L010605043	04/27/2001	ARSENIC (AS)	46.0	J4, J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	16	J4, J2	Split, CCV	1021 mg/kg Diff, 317% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	360.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3EP-127	EP-127A	L010605043	04/27/2001	IRON (FE)	15000.0	J4	Split	112.9 RPD
				LEAD (PB)	420.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	190.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-127	EP-127B	L010605044	04/27/2001	ARSENIC (AS)	83.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	20	J4, J2	Split, CCV	1021 mg/kg Diff, 317% Recovery
				CHROMIUM (CR)	88.0	J4	LCS	66% Recovery
				COPPER (CU)	420.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-127	EP-127B	L010605044	04/27/2001	IRON (FE)	22000.0	J4	Split	112.9 RPD
				LEAD (PB)	590.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	340.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-127	EP-127C	L010605045	04/27/2001	ARSENIC (AS)	38.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	12	J4, J2	Split, CCV	1021 mg/kg Diff, 317% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	80.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-127	EP-127C	L010605045	04/27/2001	IRON (FE)	7500.0	J4	Split	112.9 RPD
				LEAD (PB)	110.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	72.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-127	EP-127D	L010605046	04/27/2001	ARSENIC (AS)	46.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	<10.0	UJ4	Split	1021 mg/kg Diff
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	22.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-127	EP-127D	L010605046	04/27/2001	IRON (FE)	7900.0	J4	Split	112.9 RPD
RI3EP-127	EP-127D	L010605046	04/27/2001	LEAD (PB)	45.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	10.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-127	EP-127E1	L010605047	04/27/2001	ARSENIC (AS)	29.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	<10.0	UJ4	Split	1021 mg/kg Diff
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	51.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-127	EP-127E1	L010605047	04/27/2001	IRON (FE)	9700.0	J4	Split	112.9 RPD
				LEAD (PB)	79.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	60.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-127	EP-127E2 Dup	L010605048	04/27/2001	ARSENIC (AS)	60.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	19	J4, J2	Split, CCV	1021 mg/kg Diff, 317% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	180.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Blas	Exceedances
RI3EP-127	EP-127E2 Dup	L010605048	04/27/2001	IRON (FE)	13000.0	J4	Split	112.9 RPD
				LEAD (PB)	290.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	190.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-128	EP-128A	L010605049	04/27/2001	ARSENIC (AS)	120.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	23	J4, J2	Split, CCV	1021 mg/kg Diff, 317% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	1900.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-128	EP-128A	L010605049	04/27/2001	IRON (FE)	24000.0	J4	Split	112.9 RPD
				LEAD (PB)	2000.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	820.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-128	EP-128B	L010605050	04/27/2001	ARSENIC (AS)	28.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	10	J4, J2	Split, CCV	1021 mg/kg Diff, 317% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	240.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-128	EP-128B	L010605050	04/27/2001	IRON (FE)	8800.0	J4	Split	112.9 RPD
				LEAD (PB)	330.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	160.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-128	EP-128C	L010605051	04/27/2001	ARSENIC (AS)	68.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	<10.0	J4	Split	1021 mg/kg Diff
RI3EP-128	EP-128C Split	L010887002	04/27/2001	CADMIUM (CD)	1031	J4	Split	1021 mg/kg Diff
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	140.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-128	EP-128C	L010605051	04/27/2001	IRON (FE)	17000.0	J4	Split	112.9 RPD
				IRON (FE)	61050.0	J4	Split	112.9 RPD
				LEAD (PB)	210.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
RI3EP-128	EP-128C	L010605051	04/27/2001	ZINC (ZN)	69	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
				ZINC (ZN)	20200	J4	Split	198.6 RPD
				ARSENIC (AS)	1566	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
RI3EP-128	EP-128D	L010605052	04/27/2001	ARSENIC (AS)	13.0	J4	Field Dup, Split	31 mg/kg Diff, 183.4 RPD
				CADMIUM (CD)	<10.0	J4	Split	1021 mg/kg Diff
				CHROMIUM (CR)	<80.0	UJ4	LCS	66% Recovery
				COPPER (CU)	<20.0	J4, J4	Field Dup, Split	129 mg/kg Diff, 198.5 RPD
RI3EP-128	EP-128D	L010605052	04/27/2001	IRON (FE)	5900.0	J4	Split	112.9 RPD
				LEAD (PB)	20.0	J4, J4	Field Dup, Split	114.4 RPD, 187.0 RPD
				ZINC (ZN)	<10.0	J4, J4	Split, Field Dup	198.6 RPD, 104 RPD
RI3EP-128	EP-128C Split	L010158005	04/27/2001	LEAD (PB)	6225	J4	Split	187.0 RPD

**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3EP-128 Split	EP-128C	L010605051	04/27/2001	COPPER (CU)	37730	J4	Split	198.5 RPD
RI3EP-129	EP-129A	L010692012	05/02/2001	ZINC (ZN)	1300.0	J4	LCS	34% Recovery
RI3EP-129	EP-129B	L010692013	05/02/2001	ZINC (ZN)	22.0	J4	LCS	34% Recovery
RI3EP-129	EP-129C	L010692014	05/02/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
RI3EP-129	EP-129D	L010692015	05/02/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
RI3EP-129	EP-129E	L010692016	05/02/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
RI3EP-129	EP-129F	L010692017	05/02/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
RI3EP-129	EP-129G1	L010692018	05/02/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
RI3EP-129	EP-129G2 Dup	L010692019	05/02/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
RI3EP-129	EP-129H	L010692020	05/02/2001	ZINC (ZN)	<10.0	UJ4	LCS	34% Recovery
RI3EP-129	EP-129I	L010692021	05/02/2001	LEAD (PB)	64.0	J4	LCS	126% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	35% Recovery
RI3EP-130	EP-130A	L010831096	05/29/2001	CADMIUM (CD)	27	J2	CCV	225% Recovery
				ZINC (ZN)	25.0	J4	LCS	22% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	22% Recovery
				ZINC (ZN)	20.0	J4	LCS	22% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	22% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	22% Recovery
RI3EP-130	EP-130F	L010831101	05/29/2001	CADMIUM (CD)	15	J2	CCV	442% Recovery
				CHROMIUM (CR)	100.0	J4	LCS	68% Recovery
				LEAD (PB)	24.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	94.0	J4	LCS	35% Recovery
RI3EP-130	EP-130G	L010831102	05/29/2001	CHROMIUM (CR)	150.0	J4	LCS	68% Recovery
				LEAD (PB)	39.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	71.0	J4	LCS	35% Recovery
RI3EP-131	EP-131A	L010831103	05/30/2001	CHROMIUM (CR)	240.0	J4	LCS	68% Recovery
				LEAD (PB)	4500.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	7700.0	J4	LCS	35% Recovery
RI3EP-131	EP-131B1	L010831104	05/30/2001	CADMIUM (CD)	14	J2	CCV	442% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	68% Recovery
				COPPER (CU)	23.0	J4	Field Dup	61 mg/kg Diff
				LEAD (PB)	80.0	J4	Lab Dup	22 mg/kg Diff
		L010831104	05/30/2001	ZINC (ZN)	47.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 35% Recovery
RI3EP-131	EP-131B2 Dup	L010831105	05/30/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	68% Recovery
				COPPER (CU)	84.0	J4	Field Dup	61 mg/kg Diff
				LEAD (PB)	93.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	69.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 35% Recovery
RI3EP-131	EP-131C	L010831106	05/30/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	68% Recovery
				COPPER (CU)	78.0	J4	Field Dup	61 mg/kg Diff
				LEAD (PB)	74.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	69.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 35% Recovery
RI3EP-131	EP-131D	L010831107	05/30/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	68% Recovery
				COPPER (CU)	34.0	J4	Field Dup	61 mg/kg Diff
				LEAD (PB)	42.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	22 mg/kg Diff, 35% Recovery
RI3EP-131	EP-131E	L010831108	05/30/2001	CHROMIUM (CR)	<80.0	UJ4	LCS	68% Recovery
				COPPER (CU)	<20.0	U4	Field Dup	61 mg/kg Diff
				LEAD (PB)	42.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	29.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 35% Recovery



**TABLE A-2. SUMMARY OF FLAGGED DATE  
ASARCO EL PASO PHASE III SOILS**

Site	Sample No	Lab No	Date	Description	Result	EPA Code	Bias	Exceedances
RI3EP-131	EP-131F	L010831109	05/30/2001	CADMIUM (CD)	10	J2	CCV	442% Recovery
				CHROMIUM (CR)	<80.0	UJ4	LCS	68% Recovery
				COPPER (CU)	32.0	J4	Field Dup	61 mg/kg Diff
				LEAD (PB)	38.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	<10.0	UJ4, UJ4	Field Dup, LCS	22 mg/kg Diff, 35% Recovery
RI3EP-131	EP-131G	L010831110	05/30/2001	CHROMIUM (CR)	87.0	J4	LCS	68% Recovery
				COPPER (CU)	20.0	J4	Field Dup	61 mg/kg Diff
				LEAD (PB)	56.0	J4	Lab Dup	22 mg/kg Diff
				ZINC (ZN)	35.0	J4, J4	Field Dup, LCS	22 mg/kg Diff, 35% Recovery
RI3EP-131	EP-131H	L010831087	05/30/2001	CADMIUM (CD)	18	J2	CCV	325% Recovery
				ZINC (ZN)	140.0	J4	LCS	22% Recovery
RI3EP-132	EP-132A1	L010831088	06/04/2001	CADMIUM (CD)	22	J2	CCV	325% Recovery
				ZINC (ZN)	480.0	J4	LCS	22% Recovery
RI3EP-132	EP-132A2 Dup	L010831089	06/04/2001	CADMIUM (CD)	24	J2	CCV	325% Recovery
				ZINC (ZN)	440.0	J4	LCS	22% Recovery
				ZINC (ZN)	920.0	J4	LCS	22% Recovery
RI3EP-132	EP-132C	L010831091	06/04/2001	CADMIUM (CD)	19	J2	CCV	225% Recovery
RI3EP-132	EP-132C	L010831091	06/04/2001	ZINC (ZN)	170.0	J4	LCS	22% Recovery
				ZINC (ZN)	10.0	J4	LCS	22% Recovery
				ZINC (ZN)	21.0	J4	LCS	22% Recovery
RI3EP-132	EP-132F	L010831094	06/04/2001	CADMIUM (CD)	13	J2	CCV	225% Recovery
				ZINC (ZN)	41.0	J4	LCS	22% Recovery
RI3EP-132	EP-132G	L010831095	06/04/2001	CADMIUM (CD)	11	J2	CCV	225% Recovery
				ZINC (ZN)	<10.0	UJ4	LCS	22% Recovery

**APPENDIX 2**  
**DATABASE**  
**(Sample Analysis Summary)**

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Page	Site Code	Site Name	Site Type	Elevation MP	Well Depth
1	BL21	BL21	Soil		
1	BL22	BL22	Soil		
1	BL23	BL23	Soil		
2	BL24	BL24	Soil		
2	BL25	BL25	Soil		
3	BL26	BL26	Soil		
3	BL27	BL27	Soil		
4	BL28	BL28	Soil		
5	BL29	BL29	Soil		
5	BL30	BL30	Soil		
6	BL31	BL31	Soil		
6	BL32	BL32	Soil		
7	BL33	BL33	Soil		
7	BL34	BL34	Soil		
8	BL35	BL35	Soil		
8	BL36	BL36	Soil		
9	BL37	BL37	Soil		
9	BL38	BL38	Soil		
10	BL39	BL39	Soil		
10	BL40	BL40	Soil		
11	BL41	BL41	Soil		
11	BL42	BL42	Soil		
11	BL43	BL43	Soil		
12	BL44	BL44	Soil		
12	BL45	BL45	Soil		
13	BL46	BL46	Soil		
13	BL47	BL47	Soil		
13	BL48	BL48	Soil		
14	BL49	BL49	Soil		
14	BL50	BL50	Soil		
15	BL51	BL51	Soil		
15	BL52	BL52	Soil		
15	RI3BH15-8	RI3BH15-8	Soil		
16	RI3BH15-12	RI3BH15-12	Soil		
17	RI3BH15-13	RI3BH15-13	Soil		
19	RI3BH16-1	RI3BH16-1	Soil		
20	RI3BH16-2	RI3BH16-2	Soil		
20	RI3BH16-3	RI3BH16-3	Soil		
21	RI3BH16-4	RI3BH16-4	Soil		
21	RI3BH16-5	RI3BH16-5	Soil		
22	RI3BH16-7	RI3BH16-7	Soil		
22	RI3BH16-8	RI3BH16-8	Soil		
23	RI3BH16-9	RI3BH16-9	Soil		
23	RI3BH16-10	RI3BH16-10	Soil		
24	RI3BH16-11	RI3BH16-11	Soil		
25	RI3BH16-14	RI3BH16-14	Soil		
25	RI3BH16-18	RI3BH16-18	Soil		
26	RI3BH16-19	RI3BH16-19	Soil		
27	RI3BH16-20	RI3BH16-20	Soil		
28	RI3BH16-21	RI3BH16-21	Soil		
29	RI3BH16-22	RI3BH16-22	Soil		
29	RI3BH16-23	RI3BH16-23	Soil		
30	RI3BH16-24	RI3BH16-24	Soil		
30	RI3BH16-25	RI3BH16-25	Soil		
31	RI3BH16-26	RI3BH16-26	Soil		
33	RI3BH16-27	RI3BH16-27	Soil		
33	RI3BH16-28	RI3BH16-28	Soil		
34	RI3BH16-29	RI3BH16-29	Soil		
34	RI3BH16-30	RI3BH16-30	Soil		
35	RI3BH16-40	RI3BH16-40	Soil		
36	RI3BH16-45	RI3BH16-45	Soil		
36	RI3BH17-1	RI3BH17-1	Soil		
37	RI3BH17-2	RI3BH17-2	Soil		
37	RI3BH17-3	RI3BH17-3	Soil		
38	RI3BH17-4	RI3BH17-4	Soil		
38	RI3BH17-5	RI3BH17-5	Soil		
39	RI3BH17-6	RI3BH17-6	Soil		
40	RI3BH17-7	RI3BH17-7	Soil		
40	RI3BH17-8	RI3BH17-8	Soil		
41	RI3BH17-9	RI3BH17-9	Soil		
41	RI3BH17-10	RI3BH17-10	Soil		

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Page	Site Code	Site Name	Site Type	Elevation MP	Well Depth
42	RI3BH17-11	RI3BH17-11	Soil		
42	RI3BH17-12	RI3BH17-12	Soil		
43	RI3BH17-13	RI3BH17-13	Soil		
44	RI3BH17-14	RI3BH17-14	Soil		
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57	RI3BH2-13	RI3BH2-13	Soil		
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103	RI3BH11-11	RI3BH11-11	Soil		
104	RI3BH11-12	RI3BH11-12	Soil		
105	RI3BH11-13	RI3BH11-13	Soil		
106	RI3BH11-14	RI3BH11-14	Soil		

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153	RI3EP-129	RI3EP-129	Soil		
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2	BL25	BL25	Soil		
3	BL26	BL26	Soil		
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138	BH14-4F	L010605006	04/10/2001RI3BH14-4	
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138	BH14-5A	L010887001	04/10/2001RI3BH14-5	
139	BH14-5B	L010605008	04/10/2001RI3BH14-5	
139	BH14-5D	L010605009	04/10/2001RI3BH14-5	
139	BH14-5E	L010605010	04/10/2001RI3BH14-5	
139	BH14-5F1	L010605011	04/10/2001RI3BH14-5	
139	BH14-5F2	L010605012	04/10/2001RI3BH14-5	
140	BH14-6A	L010605013	04/16/2001RI3BH14-6	
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30	L010372019	BH16-24D	02/23/2001RI3BH16-24	
30	L010372020	BH16-24E	02/23/2001RI3BH16-24	
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98	BH9-6-23A	L010831076	05/26/2001	RI3BH9-6-23
98	BH9-6-23B	L010831077	05/26/2001	RI3BH9-6-23
89	BH9-6-5A	L010831046	05/25/2001	RI3BH9-6-5
89	BH9-6-5B	L010831047	05/25/2001	RI3BH9-6-5
89	BH9-6-5C	L010831048	05/25/2001	RI3BH9-6-5
89	BH9-6-5D	L010831049	05/25/2001	RI3BH9-6-5
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91	BH9-6-7A	L010831055	05/25/2001	RI3BH9-6-7
91	BH9-6-7B	L010831056	05/25/2001	RI3BH9-6-7
91	BH9-6-7C	L010831057	05/25/2001	RI3BH9-6-7
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92	BH9-6-8B	L010831041	05/25/2001	RI3BH9-6-8
92	BH9-6-8B	L010887013	05/25/2001	RI3BH9-6-8
92	BH9-6-8C	L010831042	05/25/2001	RI3BH9-6-8
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92	BH9-6-9B1	L010831044	05/25/2001	RI3BH9-6-9
93	BH9-6-9B2	L010831045	05/25/2001	RI3BH9-6-9
93	BH9-6-9C	L010831001	05/25/2001	RI3BH9-6-9
93	BH9-6-9C	L010887008	05/25/2001	RI3BH9-6-9
93	BH9-6-9D	L010831002	05/25/2001	RI3BH9-6-9
93	BH9-6-9D	L010887009	05/25/2001	RI3BH9-6-9
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1	BL23A	L010834003	06/06/2001	BL23
2	BL24A	L010834004	06/06/2001	BL24
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75	L010832061	BH9-1-13B	05/24/2001	RI3BH9-1-13
70	L010832062	BH9-1-13C	05/17/2001	RI3BH9-1-13
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77	L010832070	BH9-1-14B	05/24/2001	RI3BH9-1-14
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141	L010833013	BH15-14B2	06/01/2001	RI3BH15-14
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142	L010833016	BH15-14E	06/01/2001	RI3BH15-14
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93	L010887008	BH9-6-9C	05/25/2001	RI3BH9-6-9
93	L010887009	BH9-6-9D	05/25/2001	RI3BH9-6-9
95	L010887010	BH9-6-12C	05/25/2001	RI3BH9-6-12
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4	BL27C2	L011188004	08/13/2001BL27	
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4	BL28B	L010953032	06/26/2001BL28	
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5	BL29C2	L011188007	08/13/2001BL29	
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13	BL46A	L010953035	06/28/2001BL46	
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14	BL50A	L010953041	06/28/2001BL50	
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15	BL51	L011009002	06/26/2001BL51	
15	BL52	L010953046	06/27/2001BL52	
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158	EP-132C	L010831091	06/04/2001RI3EP-132	
158	EP-132D	L010831092	06/04/2001RI3EP-132	

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131	L011062038	BH12-34C	07/18/2001RI3BH12-34	
131	L011062039	BH12-34D	07/18/2001RI3BH12-34	
131	L011062040	BH12-34E	07/18/2001RI3BH12-34	
132	L011062041	BH12-35A1	07/18/2001RI3BH12-35	
132	L011062042	BH12-35A2	07/18/2001RI3BH12-35	
132	L011062043	BH12-35B	07/18/2001RI3BH12-35	
132	L011062044	BH12-35C	07/18/2001RI3BH12-35	
132	L011062045	BH12-35D	07/18/2001RI3BH12-35	
135	L011062046	BH13-3A	07/21/2001RI3BH13-3	
135	L011062047	BH13-4A	07/21/2001RI3BH13-4	
136	L011062048	BH13-9A	07/23/2001RI3BH13-9	
136	L011062049	BH13-10A	07/23/2001RI3BH13-10	
136	L011062050	BH13-11A	07/23/2001RI3BH13-11	
137	L011062051	BH13-13A1	07/23/2001RI3BH13-13	
137	L011062052	BH13-13A2	07/23/2001RI3BH13-13	
125	L011074001	BH12-27A	07/17/2001RI3BH12-27	
125	L011074002	BH12-27B	07/17/2001RI3BH12-27	
125	L011074003	BH12-27C	07/17/2001RI3BH12-27	
126	L011074004	BH12-27D	07/17/2001RI3BH12-27	
126	L011074005	BH12-27E	07/17/2001RI3BH12-27	
124	L011074006	BH12-26A	07/17/2001RI3BH12-26	
124	L011074007	BH12-26B	07/17/2001RI3BH12-26	
124	L011074008	BH12-26C1	07/17/2001RI3BH12-26	
125	L011074009	BH12-26C2 (DUP)	07/17/2001RI3BH12-26	
125	L011074010	BH12-26D	07/17/2001RI3BH12-26	
133	L011074011	BH12-37A	07/19/2001RI3BH12-37	
134	L011074012	BH12-37B	07/19/2001RI3BH12-37	
134	L011074013	BH12-37C	07/19/2001RI3BH12-37	
134	L011074014	BH12-37D	07/19/2001RI3BH12-37	
134	L011074015	BH12-38A	07/19/2001RI3BH12-38	
126	L011074016	BH12-28A	07/18/2001RI3BH12-28	
127	L011074017	BH12-29A1	07/18/2001RI3BH12-29	
127	L011074018	BH12-29B	07/18/2001RI3BH12-29	
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127	L011074020	BH12-29D	07/18/2001RI3BH12-29	
128	L011074021	BH12-30A	07/18/2001RI3BH12-30	
128	L011074022	BH12-30B	07/18/2001RI3BH12-30	
128	L011074023	BH12-30C	07/18/2001RI3BH12-30	
128	L011074024	BH12-30D	07/18/2001RI3BH12-30	
127	L011074025	BH12-29A2 (DUP)	07/18/2001RI3BH12-29	
128	L011074026	BH12-31A	07/18/2001RI3BH12-31	
129	L011074027	BH12-31B	07/18/2001RI3BH12-31	
129	L011074028	BH12-31C	07/18/2001RI3BH12-31	
129	L011074029	BH12-31D	07/18/2001RI3BH12-31	
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109	L011074032	BH11-17A	07/19/2001RI3BH11-17	
109	L011074033	BH11-18A1	07/19/2001RI3BH11-18	
109	L011074034	BH11-18A2	07/19/2001RI3BH11-18	
109	L011074035	BH11-19A	07/19/2001RI3BH11-19	
110	L011074036	BH11-22A	07/20/2001RI3BH11-22	
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110	L011074038	BH11-24A	07/20/2001RI3BH11-24	
111	L011074039	BH11-25A	07/20/2001RI3BH11-25	
133	L011074040	BH12-36A1	07/18/2001RI3BH12-36	
133	L011074041	BH12-36A2 (DUP)	07/18/2001RI3BH12-36	
124	L011074042	BH12-36B	07/18/2001RI3BH12-36	
124	L011074043	BH12-25H	07/17/2001RI3BH12-25	
124	L011074044	BH12-25I	07/17/2001RI3BH12-25	
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4	L011188003	BL27C1	08/13/2001BL27	
4	L011188004	BL27C2	08/13/2001BL27	
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-- SAMPLE TYPE: SOIL --

SITE CODE	BL21	BL22	BL23
SAMPLE DATE	06/06/2001	06/06/2001	06/06/2001
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010834001	L010834002	L010834003
TYPE	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	0-2"	0-2"
SAMPLE NUMBER	BL21A	BL22A	BL23A

-- METALS &amp; MINOR CONSTITUENTS --

	BL21	BL22	BL23
ARSENIC (AS) TOT	34.0	22.0	38.0
CADMIUM (CD) TOT	<10.0	<10.0	13.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	94.0	89.0	230.0
IRON (FE) TOT	14000.0	14000.0	22000.0
LEAD (PB) TOT	110.0	55.0	260.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0
ZINC (ZN) TOT	16.0 J4	38.0 J4	190.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL24	BL25	BL25	BL25
SAMPLE DATE	06/06/2001	06/26/2001	06/26/2001	08/13/2001
SAMPLE TIME		16:10	16:15	10:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010834004	L010953024	L010953022	L011188001
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	0-2"	2-4"	1-2'
SAMPLE NUMBER	BL24A	BL25A	BL25B	BL25C

## -- METALS &amp; MINOR CONSTITUENTS --

	BL24	BL25A	BL25B	BL25C
ARSENIC (AS) TOT	30.0	56.0	64.0	50.0
CADMIUM (CD) TOT	12.0	18.0 J4	14.0 J4	<10.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0
COPPER (CU) TOT	180.0	381.0	354.0	130.0
IRON (FE) TOT	15000.0	12000.0 J4	9600.0 J4	13000.0
LEAD (PB) TOT	170.0	349.0	403.0	140.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	51.0 J4	229.0 J4	230.0 J4	53.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank. parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL26	BL26	BL26	BL27	BL27
SAMPLE DATE	06/26/2001	06/26/2001	08/13/2001	06/26/2001	06/26/2001
SAMPLE TIME	16:30	16:35	10:30	16:55	17:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953025	L010953023	L011188002	L010953026	L010953033
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	2-4"	1-2'	0-2"	2-4"
SAMPLE NUMBER	BL26A	BL26B	BL26C	BL27A	BL27B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	30.0	39.0	31.0	20.0	25.0
CADMIUM (CD) TOT	10.0 J4	13.0 J4	12.0 J2	14.0 J4	<10.0 UJ4
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	151.0	99.0	140.0	96.0	112.0
IRON (FE) TOT	10000.0 J4	10000.0 J4	12000.0	9900.0 J4	14000.0 J4
LEAD (PB) TOT	125.0	136.0	180.0	95.0	146.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	256.0 J4	275.0 J4	190.0 J4	85.0 J4	103.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL27	BL27	BL28	BL28	BL28
SAMPLE DATE	08/13/2001	08/13/2001	06/26/2001	06/26/2001	08/13/2001
SAMPLE TIME	11:10	11:15	17:05	17:06	11:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011188003	L011188004	L010953031	L010953032	L011188005
REMARKS		DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	1-2'	0-2"	2-4"	1-2'
SAMPLE NUMBER	BL27C1	BL27C2	BL28A	BL28B	BL28C

## -- METALS &amp; MINOR CONSTITUENTS --

	BL27	BL27	BL28	BL28	BL28
ARSENIC (AS) TOT	18.0	25.0	38.0	61.0	55.0
CADMIUM (CD) TOT	13.0 J2	<10.0	<10.0 UJ4	<10.0 UJ4	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0 UJ4	<80.0 UJ4	<80.0
COPPER (CU) TOT	140.0	150.0	79.0	70.0	80.0
IRON (FE) TOT	12000.0	13000.0	15000.0 J4	15000.0 J4	13000.0
LEAD (PB) TOT	130.0	140.0	50.0	65.0	77.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	110.0 J4	140.0 J4	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1,Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	BL29	BL29	BL29	BL29	BL30
SAMPLE DATE	06/26/2001	06/26/2001	08/13/2001	08/13/2001	06/26/2001
SAMPLE TIME	17:10	17:11	12:40	13:10	17:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953027	L010953034	L011188006	L011188007	L010953029
REMARKS				DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	2-4"	1-2'	1-2'	0-2"
SAMPLE NUMBER	BL29A	BL29B	BL29C	BL29C2	BL30A

## -- METALS &amp; MINOR CONSTITUENTS --

	BL29	BL29	BL29	BL29	BL30
ARSENIC (AS) TOT	192.0	23.0	37.0	33.0	145.0
CADMIUM (CD) TOT	42.0 J4	<10.0 UJ4	<10.0	<10.0	24.0 J4
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0	<80.0	85.0 J4
COPPER (CU) TOT	1400.0	38.0	74.0	57.0	1360.0
IRON (FE) TOT	16000.0 J4	12000.0 J4	11000.0	14000.0	32000.0
LEAD (PB) TOT	1600.0	48.0	130.0 J4	61.0 J4	662.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	1100.0 J4	19.0 J4	21.0 J4	32.0 J4	1380.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL30	BL31	BL31	BL32
SAMPLE DATE	06/26/2001	06/27/2001	06/27/2001	06/27/2001
SAMPLE TIME	17:30	09:20	09:21	10:25
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953028	L010953001	L010953002	L010953011
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-4"	0-2"	2-4"	0-2"
SAMPLE NUMBER	BL30B	BL31A	BL31B	BL32A

## -- METALS &amp; MINOR CONSTITUENTS --

	BL30	BL31	BL31	BL32
ARSENIC (AS) TOT	23.0	25.0	35.0	37.0
CADMIUM (CD) TOT	13.0 J4	<10.0	<10.0	18.0 J2
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0	<80.0	<80.0
COPPER (CU) TOT	36.0	121.0	25.0	240.0
IRON (FE) TOT	13000.0 J4	14000.0	12000.0	12000.0
LEAD (PB) TOT	44.0	134.0	38.0	300.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	54.0 J4	<10.0 UJ4	149.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL32	BL33	BL33	BL34
SAMPLE DATE	06/27/2001	06/27/2001	06/27/2001	06/27/2001
SAMPLE TIME	10:30	11:00	11:01	11:25
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953003	L010953006	L010953005	L010953004
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-4"	0-2"	2-4"	0-2"
SAMPLE NUMBER	BL32B	BL33A	BL33B	BL34A

## -- METALS &amp; MINOR CONSTITUENTS --

	BL32	BL33	BL33	BL34
ARSENIC (AS) TOT	35.0	40.0	28.0	37.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	42.0	299.0	54.0	261.0
IRON (FE) TOT	11000.0	17000.0	5700.0	15000.0
LEAD (PB) TOT	62.0	230.0	59.0	163.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	130.0 J4	<10.0 UJ4	78.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL34	BL35	BL35	BL36
SAMPLE DATE	06/27/2001	06/27/2001	06/27/2001	06/27/2001
SAMPLE TIME	11:30	11:40	11:45	14:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953008	L010953007	L010953010	L010953009
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-4"	0-2"	2-4"	0-2"
SAMPLE NUMBER	BL34B	BL35A	BL35B	BL36A

## -- METALS &amp; MINOR CONSTITUENTS --

	BL34	BL35	BL35	BL36
ARSENIC (AS) TOT	19.0	33.0	29.0	38.0
CADMIUM (CD) TOT	<10.0	10.0 J2	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	<20.0	158.0	89.0	145.0
IRON (FE) TOT	5100.0	15000.0	12000.0	16000.0
LEAD (PB) TOT	45.0	206.0	101.0	135.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	74.0 J4	<10.0 UJ4	37.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	BL36	BL37	BL37	BL38
SAMPLE DATE	06/27/2001	06/27/2001	06/27/2001	06/27/2001
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953013	L010953016	L010953014	L010953012
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-4"	0-2"	2-4"	0-2"
SAMPLE NUMBER	BL36B	BL37A	BL37B	BL38A

-- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	38.0	27.0	11.0	12.0
CADMIUM (CD) TOT	11.0 J2	<10.0	<10.0	18.0 J2
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	23.0	49.0	<20.0	23.0
IRON (FE) TOT	13000.0	17000.0	17000.0	12000.0
LEAD (PB) TOT	44.0	38.0	40.0	37.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	17.0 J4	<10.0 UJ4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	BL39	BL39	BL40	BL40
SAMPLE DATE	06/27/2001	06/27/2001	06/27/2001	06/27/2001
SAMPLE TIME		15:45	16:00	16:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953015	L010953018	L010953017	L010953019
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	2-4"	0-2"	2-4"
SAMPLE NUMBER	BL39A	BL39B	BL40A	BL40B

-- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	62.0	51.0	54.0	54.0
CADMIUM (CD) TOT	<10.0	<10.0	18.0 J2	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	91.0	<80.0
COPPER (CU) TOT	668.0	101.0	711.0	177.0
IRON (FE) TOT	20000.0	16000.0	22000.0	13000.0
LEAD (PB) TOT	414.0	95.0	440.0	171.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	344.0 J4	<10.0 UJ4	306.0 J4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL41	BL41	BL42	BL43
SAMPLE DATE	06/27/2001	06/27/2001	06/28/2001	06/28/2001
SAMPLE TIME	16:20	16:25		11:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953021	L010953020	L010953047	L010953039
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	2-4"	0-2"	0-2"
SAMPLE NUMBER	BL41A	BL41B	BL42	BL43A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	20.0	38.0	31.0 J4	235.0 J4
CADMIUM (CD) TOT	12.0 J4	<10.0	12.0	34.0 J4
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0	<80.0 UJ4	130.0 J4
COPPER (CU) TOT	274.0	284.0	71.0	1790.0
IRON (FE) TOT	13000.0	11000.0	22000.0	38000.0
LEAD (PB) TOT	205.0	258.0	79.0	1180.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	277.0 J4	105.0 J4	155.0 J4	1940.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL43	BL44	BL44	BL45
SAMPLE DATE	06/28/2001	06/27/2001	06/28/2001	06/27/2001
SAMPLE TIME	11:50	12:15	12:00	13:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011009005	L010953036	L010953040	L010953037
REMARKS	SPLIT			
TYPE	6010	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	0-2"	2-4"	0-2"
SAMPLE NUMBER	BL43A	BL44A	BL44B	BL45A

## -- METALS &amp; MINOR CONSTITUENTS --

	BL43	BL44	BL44	BL45
ARSENIC (AS) TOT	155.0 J4	27.0	40.0 J4	37.0
CADMIUM (CD) TOT	34.0	12.0 J4	11.0 J4	<10.0 UJ4
CHROMIUM (CR) TOT	39.0	90.0 J4	<80.0 UJ4	85.0 J4
COPPER (CU) TOT	1698.0	46.0	56.0	38.0
IRON (FE) TOT	30500.0	23000.0	15000.0	26000.0
LEAD (PB) TOT	1075.0	46.0	73.0	36.0
SELENIUM (SE) TOT	<10.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	1961.0	18.0 J4	<10.0 UJ4	59.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	BL46	BL47	BL48
SAMPLE DATE	06/28/2001	06/27/2001	06/28/2001
SAMPLE TIME	13:20	14:00	14:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953035	L010953038	L010953045
TYPE	EDXRF	EDXRF	EDXRF
DEPTH	0-2"	0-2"	0-2"
SAMPLE NUMBER	BL46A	BL47	BL48

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	36.0 J4	33.0	39.0 J4
CADMIUM (CD) TOT	<10.0 UJ4	<10.0 UJ4	10.0
CHROMIUM (CR) TOT	<80.0 UJ4	83.0 J4	83.0 J4
COPPER (CU) TOT	48.0	46.0	109.0
IRON (FE) TOT	22000.0	22000.0	20000.0
LEAD (PB) TOT	47.0	42.0	96.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0
ZINC (ZN) TOT	62.0 J4	79.0 J4	118.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BL49	BL49	BL50	BL50	BL50
SAMPLE DATE	06/28/2001	06/28/2001	06/28/2001	06/28/2001	06/28/2001
SAMPLE TIME	15:20	15:25	15:30	15:30	15:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953043	L010953044	L010953041	L011009004	L010953042
REMARKS				SPLIT	
TYPE	EDXRF	EDXRF	EDXRF	6010	EDXRF
DEPTH	0-2"	2-4"	0-2"	0-2"	2-4"
SAMPLE NUMBER	BL49A	BL49B	BL50A	BL50A	BL50B

## -- METALS &amp; MINOR CONSTITUENTS --

	BL49	BL49	BL50	BL50	BL50
ARSENIC (AS) TOT	62.0	43.0	187.0	152.0	60.0
CADMIUM (CD) TOT	<10.0	<10.0	47.0	34.0	<10.0
CHROMIUM (CR) TOT	<80.0 UJ4	83.0 J4	117.0 J4	40.0	<80.0 UJ4
COPPER (CU) TOT	449.0	34.0	1940.0	1913.0	59.0
IRON (FE) TOT	24000.0	16000.0	32000.0	31200.0	13000.0
LEAD (PB) TOT	245.0	28.0	1160.0	1062.0	64.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<10.0	<20.0
ZINC (ZN) TOT	254.0 J4	14.0 J4	1440.0 J4	1709.0	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	BLS1	BLS1	BLS2	RI3BH15-8
SAMPLE DATE	06/26/2001	06/26/2001	06/27/2001	02/20/2001
SAMPLE TIME	17:45	17:45		12:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010953030	L011009002	L010953046	L010370001
REMARKS		SPLIT		
TYPE	EDXRF	6010	EDXRF	EDXRF
DEPTH	0-2"	0-2"	0-2"	1-2'
SAMPLE NUMBER	BLS1	BLS1	BLS2	BH15-8B

## -- METALS &amp; MINOR CONSTITUENTS --

	BLS1	BLS1	BLS2	RI3BH15-8
ARSENIC (AS) TOT	166.0	216.0	15.0	20000.0
CADMIUM (CD) TOT	29.0 J4	39.0	<10.0	890.0
CHROMIUM (CR) TOT	<80.0 UJ4	26.0	<80.0 UJ4	<200.0
COPPER (CU) TOT	991.0	970.0	<20.0	30000.0 J4
IRON (FE) TOT	7800.0 J4	14100.0 J4	11000.0	49000.0 J4
LEAD (PB) TOT	1690.0	1551.0	38.0	3700.0
SELENIUM (SE) TOT	<20.0	11.0	<20.0	<40.0
ZINC (ZN) TOT	758.0 J4	1551.0 J4	<10.0 UJ4	4100.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect; Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1, Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH15-8	RI3BH15-8	RI3BH15-8	RI3BH15-8	RI3BH15-12
SAMPLE DATE	02/20/2001	02/20/2001	02/20/2001	02/20/2001	02/20/2001
SAMPLE TIME	13:00	13:00	13:10	13:15	14:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370002	L010458001	L010370003	L010370004	L010370005
REMARKS		SPLIT			
TYPE	EDXRF	6010	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	2-3'	4-5'	5-6'	7-8'
SAMPLE NUMBER	BH15-8C	BH15-8C	BH15-8E	BH15-8F	BH15-12C

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	900.0	1087.0	1900.0	25.0	66.0
CADMIUM (CD) TOT	320.0	241.0	310.0	39.0	<10.0
CHROMIUM (CR) TOT	<200.0	<30.0 UJ4	<200.0	<200.0	<200.0
COPPER (CU) TOT	38000.0 J4	29400.0	19000.0 J4	200.0 J4	430.0 J4
IRON (FE) TOT	10000.0 J4	19180.0 J4	18000.0 J4	6600.0 J4	19000.0 J4
LEAD (PB) TOT	520.0	418.0	1000.0	45.0 J4	790.0
SELENIUM (SE) TOT	<40.0	<10.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	3700.0	4097.0	3900.0	880.0	660.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH15-12	RI3BH15-12	RI3BH15-12	RI3BH15-12	RI3BH15-13
SAMPLE DATE	02/20/2001	02/20/2001	02/20/2001	02/20/2001	06/01/2001
SAMPLE TIME	14:55	15:00	15:00	15:05	09:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370006	L010370007	L010370008	L010370009	L010833001
REMARKS			DUPLICATE		
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	8-9'	9-10'	9-10'	10-11'	20-21'
SAMPLE NUMBER	BH15-12D	BH15-12E1	BH15-12E2	BH15-12F	BH15-13A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH15-12	RI3BH15-12	RI3BH15-12	RI3BH15-12	RI3BH15-13
ARSENIC (AS) TOT	22.0	17.0	29.0	19.0	38.0
CADMIUM (CD) TOT	<10.0	18.0	<10.0	130.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<80.0 UJ4
COPPER (CU) TOT	37.0 J4	37.0 J4	130.0 J4	39.0 J4	42.0
IRON (FE) TOT	7200.0 J4	7200.0 J4	8600.0 J4	7400.0 J4	19000.0
LEAD (PB) TOT	32.0 J4	170.0 J4	280.0 J4	51.0 J4	57.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<20.0
ZINC (ZN) TOT	17.0	220.0	290.0	1300.0	15.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH15-13	RI3BH15-13	RI3BH15-13	RI3BH15-13	RI3BH15-13	RI3BH15-13
SAMPLE DATE	06/01/2001	06/01/2001	06/01/2001	06/01/2001	06/01/2001	06/01/2001
SAMPLE TIME	09:28	09:42	10:24	10:50	11:09	11:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010833002	L010833003	L010833004	L010833005	L010833006	L010833007
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	25-26'	30-31'	40-41'	45-46'	50-51'	55-56'
SAMPLE NUMBER	BH15-13B	BH15-13C	BH15-13D	BH15-13E	BH15-13F	BH15-13G

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	34.0	33.0	40.0	21.0	27.0	32.0
CADMIUM (CD) TOT	<10.0	12.0 J2	<10.0	<10.0	11.0 J2	<10.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	50.0	67.0	34.0	52.0	31.0	70.0
IRON (FE) TOT	18000.0	20000.0	19000.0	8800.0	19000.0	22000.0
LEAD (PB) TOT	41.0 J4	40.0 J4	36.0 J4	47.0 J4	47.0 J4	42.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	15.0 J4	<10.0 J4	16.0 J4	<10.0 J4	<10.0 J4	<10.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH15-13	RI3BH15-13	RI3BH15-13	RI3BH16-1
SAMPLE DATE	06/01/2001	06/01/2001	06/01/2001	02/28/2001
SAMPLE TIME	11:59	12:39	13:00	10:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010833008	L010833009	L010833010	L010371022
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	60-61'	65-66'	70-71'	11-12'
SAMPLE NUMBER	BH15-13H	BH15-13I	BH15-13J	BH16-1F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	29.0	34.0	35.0	43.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0 UJ4	82.0 J4	110.0 J4	<200.0
COPPER (CU) TOT	<20.0	27.0	48.0	71.0
IRON (FE) TOT	15000.0	30000.0	33000.0	18000.0
LEAD (PB) TOT	46.0 J4	38.0 J4	23.0 J4	89.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<40.0
ZINC (ZN) TOT	<10.0 J4	45.0 J4	80.0 J4	63.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank; parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-2	RI3BH16-2	RI3BH16-3	RI3BH16-3	RI3BH16-3
SAMPLE DATE	02/28/2001	02/28/2001	02/21/2001	02/21/2001	02/28/2001
SAMPLE TIME	10:05	10:05	09:20	09:30	10:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371023	L010371024	L010371025	L010371026	L010371027
REMARKS		DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	15-17'	15-17'	3.5-4.5'	4.5-5.5'	11-12'
SAMPLE NUMBER	BH16-2E1	BH16-2E2	BH16-3D	BH16-3E	BH16-3F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	44.0	53.0	34.0	36.0	<10.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	32.0	58.0	<20.0	52.0	<20.0
IRON (FE) TOT	19000.0	19000.0	14000.0	12000.0	6700.0
LEAD (PB) TOT	47.0	52.0	80.0	100.0	26.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	46.0	49.0	37.0	58.0	43.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-4	RI3BH16-5	RI3BH16-5	RI3BH16-5	RI3BH16-5
SAMPLE DATE	02/28/2001	02/28/2001	02/28/2001	02/28/2001	02/28/2001
SAMPLE TIME	11:20	13:40	10:20	14:30	14:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371028	L010371030	L010371029	L010371031	L010371032
REMARKS					DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	5-6'	15-16'	20-21'	20-21'
SAMPLE NUMBER	BH16-4G	BH16-5F	BH16-5G	BH16-5H1	BH16-5H2

-- METALS & MINOR CONSTITUENTS --

	18.0	47.0	68.0	71.0	77.0
ARSENIC (AS) TOT	18.0	47.0	68.0	71.0	77.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	13.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	23.0	28.0 J4	220.0 J4	63.0 J4	<20.0 UJ4
IRON (FE) TOT	9900.0	19000.0	15000.0	17000.0	18000.0
LEAD (PB) TOT	32.0	59.0	290.0	77.0	79.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	23.0	23.0	41.0	47.0	31.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-7	RI3BH16-8	RI3BH16-8	RI3BH16-8
SAMPLE DATE	02/28/2001	02/28/2001	02/28/2001	02/28/2001
SAMPLE TIME	11:18	14:05	15:05	15:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371033	L010371034	L010371035	L010371036
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	5-6'	11-12'	15-16'
SAMPLE NUMBER	BH16-7B	BH16-8D	BH16-8E	BH16-8F

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-7	RI3BH16-8	RI3BH16-8	RI3BH16-8
ARSENIC (AS) TOT	43.0	51.0	59.0	42.0
CADMIUM (CD) TOT	32.0	1000.0	710.0	570.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	190.0 J4	120.0 J4	25.0 J4	150.0 J4
IRON (FE) TOT	13000.0	16000.0	19000.0	21000.0
LEAD (PB) TOT	220.0	70.0	53.0	65.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	120.0	620.0	660.0	570.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-9	RI3BH16-9	RI3BH16-10	RI3BH16-10	RI3BH16-10
SAMPLE DATE	02/21/2001	02/21/2001	03/01/2001	03/01/2001	03/01/2001
SAMPLE TIME	14:30	14:35	08:50	09:05	09:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371001	L010371002	L010371003	L010371004	L010371005
REMARKS					DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	5-6'	30-31'	35-36'	35-36'
SAMPLE NUMBER	BH16-9E	BH16-9F	BH16-10A	BH16-10B1	BH16-10B2

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-9	RI3BH16-9	RI3BH16-10	RI3BH16-10	RI3BH16-10
ARSENIC (AS) TOT	150.0	36.0	32.0	33.0	42.0
CADMIUM (CD) TOT	62.0	11.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	700.0	39.0	74.0 J4	130.0 J4	68.0 J4
IRON (FE) TOT	13000.0	20000.0	15000.0	19000.0	20000.0
LEAD (PB) TOT	1600.0	49.0	95.0	120.0	120.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	410.0	35.0	27.0	45.0	38.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-11	RI3BH16-11	RI3BH16-11	RI3BH16-11	RI3BH16-11
SAMPLE DATE	02/22/2001	02/22/2001	02/22/2001	02/22/2001	02/22/2001
SAMPLE TIME	08:27	08:34	08:40	08:37	08:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371006	L010371007	L010371008	L010371009	L010371010
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	3-4'	4-5'	5-6'	6-7'	7-8'
SAMPLE NUMBER	BH16-11B	BH16-11C	BH16-11D	BH16-11E	BH16-11F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	35.0	240.0	110.0	69.0	56.0
CADMIUM (CD) TOT	<10.0	33.0	22.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	120.0	2100.0	860.0	350.0	87.0
IRON (FE) TOT	17000.0	20000.0	23000.0	19000.0	18000.0
LEAD (PB) TOT	190.0	3500.0	1100.0	580.0	100.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	43.0	450.0	180.0	110.0	46.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-14	RI3BH16-14	RI3BH16-14	RI3BH16-18	RI3BH16-18
SAMPLE DATE	02/22/2001	02/22/2001	02/22/2001	02/22/2001	02/22/2001
SAMPLE TIME	09:55	09:59	14:35	13:22	13:22
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371011	L010371012	L010371013	L010371014	L010371015
REMARKS					
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	3-4'	4-5'	10-11'	1-2'	1-2'
SAMPLE NUMBER	BH16-14D	BH16-14E	BH16-14F	BH16-18B1	BH16-18B2

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-14	RI3BH16-14	RI3BH16-14	RI3BH16-18	RI3BH16-18
ARSENIC (AS) TOT	59.0	59.0	75.0	34.0	26.0
CADMIUM (CD) TOT	13.0	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	880.0	93.0	510.0	82.0	91.0
IRON (FE) TOT	21000.0	19000.0	19000.0	9500.0	9900.0
LEAD (PB) TOT	750.0	75.0	560.0	88.0	82.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	230.0	57.0	350.0	19.0	<10.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## ANALYSES SUMMARY REPORT

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-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-18	RI3BH16-18	RI3BH16-18	RI3BH16-18	RI3BH16-19
SAMPLE DATE	02/22/2001	02/22/2001	02/22/2001	02/22/2001	02/22/2001
SAMPLE TIME	13:27	13:30	13:35	13:40	13:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372001	L010372002	L010372003	L010372004	L010372005
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	4-5'	5-6'	0-1'
SAMPLE NUMBER	BH16-18C	BH16-18D	BH16-18E	BH16-18F	BH16-19A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	130.0	80.0	130.0	58.0	1200.0
CADMIUM (CD) TOT	18.0	13.0	21.0	11.0	410.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	1400.0	620.0	1800.0	260.0	3800.0
IRON (FE) TOT	13000.0	9500.0	11000.0	9800.0	16000.0
LEAD (PB) TOT	560.0	470.0	680.0	310.0	6900.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	75.0
ZINC (ZN) TOT	220.0	120.0	250.0	82.0	2400.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-19	RI3BH16-19	RI3BH16-19	RI3BH16-19	RI3BH16-20
SAMPLE DATE	02/22/2001	02/22/2001	02/22/2001	02/22/2001	02/22/2001
SAMPLE TIME	13:45	13:48	13:45	14:10	15:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010458008	L010372006	L010372007	L010372008	L010372009
REMARKS	SPLIT				
TYPE	6010	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	4-5'	5-6'	3-4'
SAMPLE NUMBER	BH16-19A	BH16-19B	BH16-19C	BH16-19D	BH16-20C

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-19	RI3BH16-19	RI3BH16-19	RI3BH16-19	RI3BH16-20
ARSENIC (AS) TOT	1001.0	52.0	100.0	43.0	1700.0
CADMIUM (CD) TOT	400.0	<10.0	40.0	11.0	530.0
CHROMIUM (CR) TOT	57.0 J4	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	4548.0	300.0	520.0	59.0	3900.0
IRON (FE) TOT	19320.0	9300.0	12000.0	6100.0	25000.0
LEAD (PB) TOT	6802.0	440.0	860.0	120.0	11000.0
SELENIUM (SE) TOT	54.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	3418.0	110.0	170.0	<10.0	3000.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-20	RI3BH16-20	RI3BH16-20	RI3BH16-21	RI3BH16-21
SAMPLE DATE	02/22/2001	02/22/2001	02/22/2001	02/23/2001	02/23/2001
SAMPLE TIME	15:05	15:40	15:45	08:30	08:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372010	L010372011	L010372012	L010372013	L010458009
REMARKS					
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	SPLIT
DEPTH	5-6'	13-14'	16-17'	14-15'	6030
SAMPLE NUMBER	BH16-20D	BH16-20E	BH16-20F	BH16-21G	BH16-21G

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-20	RI3BH16-20	RI3BH16-20	RI3BH16-21	RI3BH16-21
ARSENIC (AS) TOT	1100.0	450.0	140.0	70.0	48.0
CADMIUM (CD) TOT	410.0	120.0	<10.0	10.0	12.0
CHROMIUM (CR) TOT	<200.0	<200.0	230.0	<200.0	61.0 JA
COPPER (CU) TOT	3700.0	900.0	43.0	340.0	312.0
IRON (FE) TOT	20000.0	19000.0	19000.0	9200.0	12530.0
LEAD (PB) TOT	7300.0	4100.0	110.0	2000.0	1870.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<10.0
ZINC (ZN) TOT	2300.0	930.0	80.0	470.0	506.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-22	RI3BH16-22	RI3BH16-23	RI3BH16-23	RI3BH16-23
SAMPLE DATE	02/23/2001	02/23/2001	02/23/2001	02/23/2001	02/23/2001
SAMPLE TIME	09:06	09:15	10:07	10:10	10:10
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372014	L010372015	L010372016	L010372017	L010372018
REMARKS					DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	8-9'	14-15'	8-9'	9-10'	9-10'
SAMPLE NUMBER	BH16-22E	BH16-22F	BH16-23F	BH16-23G1	BH16-23G2

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-22	RI3BH16-22	RI3BH16-23	RI3BH16-23	RI3BH16-23
ARSENIC (AS) TOT	23.0	42.0	140.0	34.0	49.0
CADMIUM (CD) TOT	<10.0	<10.0	49.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	42.0	39.0	590.0	47.0	55.0
IRON (FE) TOT	9700.0	17000.0	15000.0	16000.0	16000.0
LEAD (PB) TOT	61.0	39.0	900.0	49.0	50.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	27.0	39.0	480.0	40.0	40.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## ANALYSES SUMMARY REPORT

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-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-24	RI3BH16-24	RI3BH16-24	RI3BH16-24	RI3BH16-25
SAMPLE DATE	02/23/2001	02/23/2001	02/23/2001	02/23/2001	02/23/2001
SAMPLE TIME	11:07	11:10	11:15	11:17	13:23
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372019	L010372020	L010372021	L010372022	L010372023
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	3-4'	4-5'	8-9'	11-12'	3-4'
SAMPLE NUMBER	BH16-24D	BH16-24E	BH16-24F	BH16-24G	BH16-25D

-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	100.0	450.0	490.0	190.0	94.0
CADMIUM (CD) TOT	22.0	140.0	55.0	290.0	27.0
CHROMIUM (CR) TOT	<200.0	260.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	154.0	940.0	560.0	450.0	150.0
IRON (FE) TOT	8300.0	9600.0	11000.0	15000.0	10000.0
LEAD (PB) TOT	110.0	630.0	1700.0 J4	1300.0 J4	690.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	100.0	950.0	490.0	990.0	130.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spikes, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-25	RI3BH16-25	RI3BH16-25	RI3BH16-25	RI3BH16-26
SAMPLE DATE	02/23/2001	02/23/2001	02/23/2001	02/23/2001	02/23/2001
SAMPLE TIME	11:10	13:27	13:30	13:40	14:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372024	L010372025	L010372026	L010372027	L010372028
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	5-6'	9-10'	14-15'	1-2'
SAMPLE NUMBER	BH16-25E	BH16-25F	BH16-25G	BH16-25H	BH16-26A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-25	RI3BH16-25	RI3BH16-25	RI3BH16-25	RI3BH16-26
ARSENIC (AS) TOT	160.0	44.0	49.0	21.0	100.0 J4
CADMIUM (CD) TOT	47.0	<10.0	<10.0	<10.0	98.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	700.0	160.0	64.0	22.0	590.0
IRON (FE) TOT	10000.0	9900.0	10000.0	7200.0	11000.0
LEAD (PB) TOT	1700.0 J4	370.0 J4	200.0 J4	68.0 J4	730.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	360.0	69.0	28.0	31.0	620.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-26	RI3BH16-26	RI3BH16-26	RI3BH16-26	RI3BH16-26	RI3BH16-26
SAMPLE DATE	02/23/2001	02/23/2001	02/23/2001	02/23/2001	02/23/2001	02/23/2001
SAMPLE TIME	14:22	14:25	14:25	14:27	14:30	14:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372029	L010372030	L010372031	L010372032	L010372033	L010372034
REMARKS			DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	3-4'	4-5'	6-7'	9-10'
SAMPLE NUMBER	BH16-26B	BH16-26C1	BH16-26C2	BH16-26D	BH16-26E	BH16-26F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	40.0 J4	170.0 J4	110.0 J4	83.0 J4	34.0 J4	44.0 J4
CADMIUM (CD) TOT	<10.0	70.0	92.0	58.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	51.0	930.0	770.0	340.0	42.0	150.0
IRON (FE) TOT	11000.0	16000.0	13000.0	11000.0	13000.0	8800.0
LEAD (PB) TOT	68.0 J4	2100.0 J4	1700.0 J4	1000.0 J4	39.0 J4	240.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	12.0	850.0	720.0	200.0	40.0	65.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (PLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

	RI3BH16-27	RI3BH16-27	RI3BH16-28	RI3BH16-28	RI3BH16-28
SITE CODE	RI3BH16-27	RI3BH16-27	RI3BH16-28	RI3BH16-28	RI3BH16-28
SAMPLE DATE	02/23/2001	02/23/2001	02/26/2001	02/26/2001	02/26/2001
SAMPLE TIME	15:40	15:42	08:15	08:20	08:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372035	L010372036	L010372037	L010372038	L010458010
REMARKS					SPLIT
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	6010
DEPTH	10-11'	11-12'	3.5-4.5'	4.5-5.5'	4.5-5.5'
SAMPLE NUMBER	BH16-27F	BH16-27G	BH16-28D	BH16-28E	BH16-28E

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-27	RI3BH16-27	RI3BH16-28	RI3BH16-28	RI3BH16-28
ARSENIC (AS) TOT	190.0 J4	71.0 J4	52.0	49.0	15.0
CADMIUM (CD) TOT	110.0	48.0	<10.0	23.0	14.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	65.0 J4
COPPER (CU) TOT	500.0	68.0	220.0 J4	210.0 J4	126.0 J4
IRON (FE) TOT	11000.0	16000.0	20000.0	21000.0	29190.0
LEAD (PB) TOT	1000.0 J4	250.0 J4	310.0 J4	120.0 J4	92.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<10.0
ZINC (ZN) TOT	610.0	230.0	120.0	110.0	125.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

	RI3BH16-28	RI3BH16-29	RI3BH16-30	RI3BH16-30
SITE CODE	RI3BH16-28	RI3BH16-29	RI3BH16-30	RI3BH16-30
SAMPLE DATE	02/26/2001	02/26/2001	02/26/2001	02/26/2001
SAMPLE TIME	08:22	08:48	13:02	13:02
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010372039	L010372040	L010371016	L010458006
REMARKS				SPLIT
TYPE	EDXRF	EDXRF	EDXRF	6010
DEPTH	5.5-6'	8-9'	1-2'	1-2'
SAMPLE NUMBER	BH16-28F	BH16-29G	BH16-30B	BH16-30B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH16-28	RI3BH16-29	RI3BH16-30	RI3BH16-30
ARSENIC (AS) TOT	22.0	160.0	64.0	37.0
CADMIUM (CD) TOT	10.0	65.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	58.0 J4
COPPER (CU) TOT	<20.0 J4	150.0 J4	100.0 J4	79.0 J4
IRON (FE) TOT	13000.0	13000.0	14000.0	19060.0
LEAD (PB) TOT	35.0 J4	180.0 J4	230.0	183.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	11.0
ZINC (ZN) TOT	24.0	490.0	42.0	100.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-30	RI3BH16-30	RI3BH16-30	RI3BH16-40
SAMPLE DATE	02/26/2001	02/26/2001	02/26/2001	02/26/2001
SAMPLE TIME	13:05	13:10	13:10	16:43
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371017	L010371018	L010371019	L010371020
REMARKS			DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	5-6'	5-6'	5-6'
SAMPLE NUMBER	BH16-30C	BH16-30D1	BH16-30D2	BH16-40F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	90.0	36.0	43.0	22.0
CADMIUM (CD) TOT	10.0	<10.0	<10.0	17.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	280.0 J4	56.0 J4	33.0 J4	47.0 J4
IRON (FE) TOT	12000.0	11000.0	12000.0	8600.0
LEAD (PB) TOT	220.0	49.0	62.0	170.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	90.0	38.0	35.0	71.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH16-45	RI3BH17-1	RI3BH17-1	RI3BH17-1
SAMPLE DATE	02/28/2001	03/01/2001	03/01/2001	03/01/2001
SAMPLE TIME	08:20	11:00	11:00	11:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371021	L010370010	L010370011	L010370012
REMARKS			DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	61-62'	10-11'	10-11'	15-16'
SAMPLE NUMBER	BH16-45A	BH17-1A1	BH17-1A2	BH17-1B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	70.0	250.0	190.0	61.0
CADMIUM (CD) TOT	89.0	78.0	61.0	35.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	120.0	<20.0 J4	39.0 J4	<20.0 J4
IRON (FE) TOT	16000.0	9000.0	6500.0	8500.0
LEAD (PB) TOT	180.0	47.0	46.0	39.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	640.0	280.0	250.0	110.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless Field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-2	RI3BH17-2	RI3BH17-3	RI3BH17-3
SAMPLE DATE	03/01/2001	03/01/2001	03/01/2001	03/01/2001
SAMPLE TIME	12:20	14:00	15:00	15:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAS NUMBER	L010370013	L010370014	L010370015	L010370016
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	22-23'	27-28'	15-16'	19-20'
SAMPLE NUMBER	BH17-2A	BH17-2B	BH17-3A	BH17-3B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	430.0	150.0	34.0	54.0
CADMIUM (CD) TOT	20.0	<10.0	<10.0	36.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	94.0 J4	51.0 J4	43.0 J4	57.0 J4
IRON (FE) TOT	22000.0	21000.0	12000.0	13000.0
LEAD (PB) TOT	64.0	97.0	78.0	170.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	690.0	93.0	65.0	370.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-4	RI3BH17-4	RI3BH17-4	RI3BH17-5	RI3BH17-5
SAMPLE DATE	03/01/2001	03/01/2001	03/01/2001	03/02/2001	03/02/2001
SAMPLE TIME	16:25	16:25	16:30	08:25	08:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370017	L010370018	L010370019	L010370020	L010370021
REMARKS		DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	17-18'	17-18'	21-22'	12-13'	17-18'
SAMPLE NUMBER	BH17-4A1	BH17-4A2	BH17-4B	BH17-5A	BH17-5B1

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	37.0	32.0	21.0	230.0	470.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	<10.0	23.0
CHROMIUM (CR) TOT	210.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	38.0 J4	<20.0 J4	25.0 J4	53.0 J4	94.0
IRON (FE) TOT	9900.0	12000.0	12000.0	11000.0 J4	20000.0 J4
LEAD (PB) TOT	100.0	96.0	52.0	34.0	54.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	34.0 J4	120.0 J4	64.0 J4	58.0	600.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-5	RI3BH17-6	RI3BH17-6	RI3BH17-6
SAMPLE DATE	03/02/2001	03/02/2001	03/02/2001	03/02/2001
SAMPLE TIME	08:40	09:10	09:10	09:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370022	L010370023	L010458002	L010370024
REMARKS	DUPLICATE		SPLIT	
TYPE	EDXRF	EDXRF	6010	EDXRF
DEPTH	17-18'	10-11'	10-11'	15-16'
SAMPLE NUMBER	BH17-5B2	BH17-6A	BH17-6A	BH17-6B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH17-5	RI3BH17-6	RI3BH17-6	RI3BH17-6
ARSENIC (AS) TOT	460.0	31.0	11.0	25.0
CADMIUM (CD) TOT	31.0	13.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	79.0 J4	<200.0
COPPER (CU) TOT	82.0	35.0	10.0	29.0
IRON (FE) TOT	20000.0 J4	16000.0 J4	24070.0 J4	9100.0 J4
LEAD (PB) TOT	68.0	54.0	14.0	50.0
SELENIUM (SE) TOT	<40.0	<40.0	<10.0	<40.0
ZINC (ZN) TOT	580.0	28.0	53.0	74.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-7	RI3BH17-7	RI3BH17-8	RI3BH17-8	RI3BH17-8
SAMPLE DATE	03/02/2001	03/02/2001	03/02/2001	03/02/2001	03/02/2001
SAMPLE TIME	09:55	10:00	11:30	11:35	11:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370025	L010370026	L010370027	L010370028	L010370029
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	15-16'	21-22'	1-2'	3-4'	5-6'
SAMPLE NUMBER	BH17-7A	BH17-7B	BH17-8A	BH17-8B	BH17-8C1

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	31.0	36.0	290.0	65.0	48.0
CADMIUM (CD) TOT	58.0	24.0	66.0	12.0	10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	32.0	43.0	1200.0	28.0	120.0
IRON (FE) TOT	13000.0 J4	7500.0 J4	14000.0 J4	14000.0 J4	9700.0 J4
LEAD (PB) TOT	48.0	66.0	1200.0	62.0	96.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	56.0	100.0	5000.0	180.0	320.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-8	RI3BH17-9	RI3BH17-9	RI3BH17-10
SAMPLE DATE	03/02/2001	03/02/2001	03/02/2001	03/02/2001
SAMPLE TIME	11:40	11:00	11:05	11:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370030	L010370031	L010370032	L010370033
REMARKS	DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	5-6'	5-6'	10-11'	9-10'
SAMPLE NUMBER	BH17-8C2	BH17-9A	BH17-9B	BH17-10B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	62.0	39.0	25.0	76.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	32.0
CHROMIUM (CR) TOT	<200.0	290.0	<200.0	<200.0
COPPER (CU) TOT	82.0	56.0	<20.0	32.0
IRON (FE) TOT	9500.0 J4	16000.0 J4	15000.0 J4	17000.0 J4
LEAD (PB) TOT	92.0	120.0	74.0	24.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	320.0	210.0	140.0	28.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-10	RI3BH17-11	RI3BH17-11	RI3BH17-12
SAMPLE DATE	03/02/2001	03/02/2001	03/02/2001	03/02/2001
SAMPLE TIME	11:45	14:30	14:35	16:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370034	L010370035	L010370036	L010370037
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	14-15'	20-21'	25-26'	33-34'
SAMPLE NUMBER	BH17-10C	BH17-11A	BH17-11B	BH17-12A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	56.0	33.0	11.0	34.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	11.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	47.0	27.0	<20.0	29.0
IRON (FE) TOT	7000.0 J4	14000.0 J4	7700.0 J4	13000.0 J4
LEAD (PB) TOT	240.0	75.0	26.0	32.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	23.0	50.0	31.0	35.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect; Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-12	RI3BH17-13	RI3BH17-13	RI3BH17-13
SAMPLE DATE	03/02/2001	03/05/2001	03/05/2001	03/05/2001
SAMPLE TIME	16:15	09:50	10:05	16:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370038	L010370039	L010371037	L010458007
REMARKS				SPLIT
TYPE	EDXRF	EDXRF	EDXRF	6010
DEPTH	38-39'	25-26'	30-31'	30-31'
SAMPLE NUMBER	BH17-12B	BH17-13A	BH17-13B	BH17-13B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH17-12	RI3BH17-13	RI3BH17-13	RI3BH17-13
ARSENIC (AS) TOT	57.0	50.0	36.0	16.0
CADMIUM (CD) TOT	10.0	89.0	39.0	43.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	56.0 J4
COPPER (CU) TOT	42.0	64.0 J4	140.0 J4	74.0 J4
IRON (FE) TOT	12000.0 J4	19000.0	21000.0	23200.0
LEAD (PB) TOT	54.0	96.0 J4	140.0 J4	82.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<10.0
ZINC (ZN) TOT	28.0	1500.0	980.0	1088.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-14	RI3BH17-14	RI3BH17-15	RI3BH17-15
SAMPLE DATE	03/05/2001	03/05/2001	03/05/2001	03/05/2001
SAMPLE TIME	10:20	10:23	10:40	10:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371038	L010371039	L010371040	L010371041
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	20-21'	25-26'	15-16'	20-21'
SAMPLE NUMBER	BH17-14A	BH17-14B	BH17-15A	BH17-15B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	22.0	67.0	20.0	32.0
CADMIUM (CD) TOT	61.0	28.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	22.0 J4	77.0 J4	20.0 J4	34.0 J4
IRON (FE) TOT	9900.0	18000.0	11000.0	14000.0
LEAD (PB) TOT	54.0 J4	73.0 J4	57.0 J4	51.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	490.0	1100.0	87.0	23.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-16	RI3BH17-16	RI3BH17-17	RI3BH17-17	RI3BH17-17
SAMPLE DATE	03/05/2001	03/05/2001	03/05/2001	03/05/2001	03/05/2001
SAMPLE TIME	14:15	14:20	15:15	15:20	15:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371042	L010371043	L010371044	L010371045	L010371046
REMARKS					DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	15-16'	10-11'	15-16'	15-16'
SAMPLE NUMBER	BH17-16A	BH17-16B	BH17-17E	BH17-17F1	BH17-17F2

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	87.0	22.0	95.0	<10.0	21.0
CADMIUM (CD) TOT	<10.0	24.0	120.0	42.0	56.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	35.0 J4	36.0 J4	120.0 J4	<20.0 UJ4	<20.0 UJ4
IRON (FE) TOT	14000.0	7800.0	12000.0	5400.0	5700.0
LEAD (PB) TOT	42.0 J4	41.0 J4	66.0 J4	27.0 J4	20.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	68.0	280.0	280.0	110.0	100.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-18	RI3BH17-18	RI3BH17-19	RI3BH17-19	RI3BH17-19
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	13:30	13:40	16:05	16:20	16:25
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371047	L010371048	L010371049	L010371050	L010371051
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	13-14'	18-19'	0-1'	15-16'	20-21'
SAMPLE NUMBER	BH17-18A	BH17-18B	BH17-19A	BH17-19B	BH17-19C

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	13.0	<10.0	86.0	35.0	<10.0
CADMIUM (CD) TOT	<10.0	<10.0	36.0	11.0	11.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	29.0	<20.0	240.0	20.0	<20.0
IRON (FE) TOT	9600.0	7400.0	7600.0	15000.0	4700.0
LEAD (PB) TOT	53.0	21.0	220.0	110.0	10.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	66.0	36.0	150.0	240.0	16.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect; Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH17-20	RI3BH17-20	RI3BH18-1	RI3BH18-1	RI3BH18-1
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	17:10	17:15	09:35	09:47	09:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010371052	L010371053	L010370040	L010370041	L010370042
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	18-19'	23-24'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH17-20A	BH17-20B	BH18-1A	BH18-1B	BH18-1C

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	<10.0	35.0	240.0	44.0	64.0
CADMIUM (CD) TOT	<10.0	13.0	18.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	300.0	<200.0	<200.0
COPPER (CU) TOT	21.0	<20.0	1200.0	32.0	160.0
IRON (FE) TOT	5900.0	7600.0	44000.0	15000.0	14000.0
LEAD (PB) TOT	21.0	49.0	610.0	51.0 J4	90.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	12.0	19.0	2200.0	57.0	83.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH18-1	RI3BH18-1	RI3BH18-1	RI3BH18-1	RI3BH18-2
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	09:45	09:50	09:50	09:50	10:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370043	L010370044	L010458003	L010370045	L010370046
REMARKS			SPLIT	DUPLICATE	
TYPE	EDXRF	EDXRF	6010	EDXRF	EDXRF
DEPTH	3-4'	4-5'	4-5'	4-5'	1-2'
SAMPLE NUMBER	BH18-1D	BH18-1E1	BH18-1E1	BH18-1E2	BH18-2A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH18-1	RI3BH18-1	RI3BH18-1	RI3BH18-1	RI3BH18-2
ARSENIC (AS) TOT	22.0	48.0	27.0	40.0	93.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	46.0 J4	<200.0	<200.0
COPPER (CU) TOT	<20.0	53.0	27.0	47.0	100.0
IRON (FE) TOT	13000.0	14000.0	16040.0	13000.0	14000.0
LEAD (PB) TOT	33.0 J4	56.0 J4	17.0 J4	37.0 J4	80.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<10.0	<40.0	<40.0
ZINC (ZN) TOT	33.0	37.0	87.0	43.0	71.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH18-2	RI3BH18-2	RI3BH18-2	RI3BH18-2	RI3BH18-3
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	10:05	10:07	10:10	10:15	10:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370047	L010370048	L010370049	L010370050	L010370051
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	4-5'	5-6'	0.2-1'
SAMPLE NUMBER	BH18-2B	BH18-2C	BH18-2D	BH18-2E	BH18-3A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	78.0	55.0	25.0	36.0	51.0
CADMIUM (CD) TOT	<10.0	10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	<20.0	50.0	27.0	48.0	100.0
IRON (FE) TOT	19000.0	17000.0	14000.0	14000.0	13000.0
LEAD (PB) TOT	51.0 J4	49.0 J4	36.0 J4	47.0 J4	100.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	46.0	43.0	45.0	30.0	67.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH18-3	RI3BH18-3	RI3BH18-3	RI3BH18-3	RI3BH18-3	RI3BH18-3
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	10:43	10:45	10:47	10:50	10:50	10:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370052	L010370053	L010370054	L010370055	L010370056	L010370057
REMARKS					DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	1-5'	1-5'	5-6'
SAMPLE NUMBER	BH18-3B	BH18-3C	BH18-3D	BH18-3E1	BH18-3E2	BH18-3F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	49.0	98.0	97.0	130.0	120.0	110.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	16.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	47.0	110.0	71.0	470.0	360.0	<20.0
IRON (FE) TOT	13000.0	15000.0	16000.0	15000.0	16000.0	16000.0
LEAD (PB) TOT	50.0 J4	69.0 J4	49.0 J4	150.0 J4	98.0 J4	49.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	80.0	73.0	22.0	280.0	290.0	33.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH18-4	RI3BH18-4	RI3BH18-4	RI3BH18-4	RI3BH18-4	RI3BH18-4
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	11:05	11:05	11:07	11:07	11:10	11:12
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370058	L010370059	L010370060	L010458004	L010370061	L010370062
REMARKS		DUPLICATE		SPLIT		
TYPE	EDXRF	EDXRF	EDXRF	6010	EDXRF	EDXRF
DEPTH	0.1-1'	0.1-1'	1-2'	1-2'	2-3'	3-4'
SAMPLE NUMBER	BH18-4A1	BH18-4A2	BH18-4B	BH18-4B	BH18-4C	BH18-4D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	44.0 J4	73.0 J4	68.0 J4	64.0	62.0 J4	48.0 J4
CADMIUM (CD) TOT	11.0	26.0	11.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	38.0 J4	<200.0	<200.0
COPPER (CU) TOT	230.0 J4	420.0 J4	410.0 J4	380.0	62.0 J4	78.0 J4
IRON (FE) TOT	13000.0	14000.0	14000.0	16420.0	12000.0	13000.0
LEAD (PB) TOT	200.0 J4	560.0 J4	450.0 J4	510.0	74.0 J4	37.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<10.0	<40.0	<40.0
ZINC (ZN) TOT	120.0 J4	290.0 J4	380.0 J4	391.0	68.0 J4	48.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH18-4	RI3BH18-4	RI3BH18-5	RI3BH18-5	RI3BH18-5
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	11:15	11:20	11:25	11:25	11:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370063	L010370064	L010370065	L010458005	L010370066
REMARKS				SPLIT	
TYPE	EDXRF	EDXRF	EDXRF	6010	EDXRF
DEPTH	4-5'	5-6'	0.2-1'	0.2-1'	1-2'
SAMPLE NUMBER	BH18-4E	BH18-4F	BH18-5A	BH18-5A	BH18-5B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH18-4	RI3BH18-4	RI3BH18-5	RI3BH18-5	RI3BH18-5
ARSENIC (AS) TOT	30.0 J4	28.0 J4	260.0	251.0	67.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	48.0 J4	<200.0
COPPER (CU) TOT	28.0 J4	24.0 J4	820.0	725.0	23.0
IRON (FE) TOT	10000.0	12000.0	15000.0	16570.0	17000.0
LEAD (PB) TOT	35.0 J4	24.0 J4	160.0 J4	109.0 J4	43.0 J4
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<10.0	<40.0
ZINC (ZN) TOT	25.0 J4	42.0 J4	100.0 J4	151.0 J4	56.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH18-5	RI3BH18-5	RI3BH18-5	RI3BH18-5	RI3BH18-5
SAMPLE DATE	03/06/2001	03/06/2001	03/06/2001	03/06/2001	03/06/2001
SAMPLE TIME	11:32	11:35	11:35	11:37	11:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010370067	L010370068	L010370069	L010370070	L010370071
REMARKS			DUPLICATE		
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	3-4'	4-5'	5-6'
SAMPLE NUMBER	BH18-5C	BH18-5D1	BH18-5D2	BH18-5E	BH18-5F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	70.0	33.0	32.0	150.0	35.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	10.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	120.0	23.0	32.0	300.0	<20.0
IRON (FE) TOT	11000.0	12000.0	13000.0	15000.0	8500.0
LEAD (PB) TOT	69.0 J4	40.0 J4	37.0 J4	120.0 J4	38.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	58.0 J4	54.0 J4	44.0 J4	140.0 J4	39.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-21	RI3BH9-6-21	RI3BH9-6-21	RI3BH9-6-21	RI3BH2-8
SAMPLE DATE	05/26/2001	05/26/2001	05/26/2001	05/26/2001	03/28/2001
SAMPLE TIME	10:00	10:03	10:05	10:10	11:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832053	L010832054	L010832055	L010832056	L010423001
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	65-66'
SAMPLE NUMBER	BH9-6-21A	BH9-6-21B	BH9-6-21C	BH9-6-21D	BH2-8A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	18000.0	5900.0	4700.0	4400.0	190.0
CADMIUM (CD) TOT	4700.0	16000.0	14000.0	14000.0	<10.0
CHROMIUM (CR) TOT	260.0 J4	520.0 J4	340.0 J4	320.0 J4	<200.0
COPPER (CU) TOT	80000.0	22000.0	17000.0	17000.0	64.0 J4
IRON (FE) TOT	61000.0	35000.0	35000.0	34000.0	17000.0
LEAD (PB) TOT	32000.0	58000.0	49000.0	47000.0	100.0
SELENIUM (SE) TOT	190.0	210.0	180.0	170.0	<40.0
ZINC (ZN) TOT	31000.0 J4	34000.0 J4	31000.0 J4	29000.0 J4	160.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH2-8	RI3BH2-9	RI3BH2-9	RI3BH2-9
SAMPLE DATE	03/28/2001	03/28/2001	03/28/2001	03/28/2001
SAMPLE TIME	12:00	15:40	16:00	16:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010423002	L010423003	L010423004	L010423005
REMARKS				DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	70-71'	62-63'	66-67'	66-67'
SAMPLE NUMBER	BH2-8B	BH2-9A	BH2-9B1	BH2-9B2

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH2-8	RI3BH2-9	RI3BH2-9	RI3BH2-9
ARSENIC (AS) TOT	180.0	930.0	74.0	64.0
CADMIUM (CD) TOT	12.0	<10.0	14.0	15.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	39.0 J4	38.0 J4	15.0 J4	67.0 J4
IRON (FE) TOT	16000.0	24000.0	17000.0	17000.0
LEAD (PB) TOT	120.0	150.0	58.0	48.0
SELENIUM (SE) TOT	<40.0	50.0	<40.0	<40.0
ZINC (ZN) TOT	230.0 J4	200.0 J4	150.0 J4	110.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH2-10	RI3BH2-10	RI3BH2-11	RI3BH2-11
SAMPLE DATE	03/29/2001	03/29/2001	03/29/2001	03/29/2001
SAMPLE TIME	10:45	10:55	13:50	14:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010423006	L010423007	L010423008	L010423009
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	47-48'	51-52'	21-22'	26-27'
SAMPLE NUMBER	BH2-10A	BH2-10B	BH2-11A	BH2-11B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	66.0	55.0	120.0	87.0
CADMIUM (CD) TOT	<10.0	<10.0	45.0	<10.0
CHROMIUM (CR) TOT	<200.0	<200.0	<200.0	<200.0
COPPER (CU) TOT	28.0	62.0	41.0	34.0
IRON (FE) TOT	12000.0	16000.0	13000.0	13000.0
LEAD (PB) TOT	48.0	51.0	63.0	43.0
SELENIUM (SE) TOT	<40.0	<40.0	<40.0	<40.0
ZINC (ZN) TOT	44.0 J4	35.0 J4	150.0 J4	53.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH2-12	RI3BH2-12	RI3BH2-13	RI3BH2-13	RI3BH2-13
SAMPLE DATE	03/30/2001	03/30/2001	03/30/2001	03/30/2001	03/30/2001
SAMPLE TIME	08:40	08:50	11:50	12:00	12:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467001	L010467002	L010467003	L010467004	L010532001
REMARKS					SPLIT
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	6010
DEPTH	18-19'	23-24'	15-16'	18-19'	18-19'
SAMPLE NUMBER	BH2-12A	BH2-12B	BH2-13A	BH2-13B	BH2-13B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	65.0	62.0	46.0	42.0	29.0
CADMIUM (CD) TOT	82.0 J4	55.0 J4	<10.0 UJ4	<10.0 UJ4	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	30.0
COPPER (CU) TOT	95.0	100.0	180.0	130.0	120.0
IRON (FE) TOT	12000.0	20000.0	20000.0	17000.0	20800.0
LEAD (PB) TOT	45.0	78.0	120.0	65.0	32.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<10.0
ZINC (ZN) TOT	340.0 J4	580.0 J4	150.0 J4	11.0 J4	169.0 J4
	J2	J2	J2	J2	

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH2-13	RI3BH8-5	RI3BH8-5	RI3BH8-5	RI3BH8-5
SAMPLE DATE	03/30/2001	04/11/2001	04/11/2001	04/11/2001	04/11/2001
SAMPLE TIME	15:45	08:00	08:05	08:10	08:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467005	L010497001	L010497002	L010497003	L010497004
REMARKS		Contains Slag	Contains Slag	Contains Slag	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	26-27'	0-1'	1-2'	2-3'	15-16'
SAMPLE NUMBER	BH2-13C	BH8-5A	BH8-5B	BH8-5C	BH8-5D

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH2-13	RI3BH8-5	RI3BH8-5	RI3BH8-5	RI3BH8-5
ARSENIC (AS) TOT	86.0	6100.0	2100.0	3300.0	48.0
CADMIUM (CD) TOT	<10.0 UJ4	2200.0	910.0	880.0	51.0
CHROMIUM (CR) TOT	<80.0	120.0	110.0	190.0	42.0
COPPER (CU) TOT	30.0	17000.0	8200.0	14000.0	170.0
IRON (FE) TOT	20000.0	57000.0 J4	41000.0 J4	100000.0	7600.0 J4
LEAD (PB) TOT	77.0	24000.0	13000.0	22000.0	150.0
SELENIUM (SE) TOT	<20.0	140.0	74.0	110.0	<20.0
ZINC (ZN) TOT	26.0 J4	12000.0 J4	7200.0 J4	8300.0 J4	180.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1,Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-5	RI3BH8-6	RI3BH8-6	RI3BH8-6	RI3BH8-6
SAMPLE DATE	04/11/2001	04/11/2001	04/11/2001	04/11/2001	04/11/2001
SAMPLE TIME	08:50	09:25	09:25	09:28	09:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497005	L010497006	L010532003	L010497007	L010497008
REMARKS			SPLIT	Contains Slag	Contains Slag
TYPE	EDXRF	EDXRF	6010	EDXRF	EDXRF
DEPTH	20-21'	1-2'	1-2'	2-3'	3-4'
OTHER INFO		Contains Slag			
SAMPLE NUMBER	BH8-5E	BH8-6A	BH8-6A	BH8-6B	BH8-6C

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH8-5	RI3BH8-6	RI3BH8-6	RI3BH8-6	RI3BH8-6
ARSENIC (AS) TOT	22.0	32.0	18.0	3500.0	1600.0
CADMIUM (CD) TOT	17.0 J2	<10.0	<10.0	280.0	300.0
CHROMIUM (CR) TOT	<80.0	<80.0	32.0	200.0	120.0
COPPER (CU) TOT	52.0	330.0	245.0	18000.0	21000.0
IRON (FE) TOT	6500.0 J4	7000.0 J4	10340.0 J4	95000.0 J4	58000.0 J4
LEAD (PB) TOT	49.0	330.0	248.0	43000.0	22000.0
SELENIUM (SE) TOT	<20.0	<20.0	<10.0	130.0	97.0
ZINC (ZN) TOT	170.0 J4	83.0 J4	231.0 J4	9000.0 J4	6500.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total, DIS: Dissolved, TRC: Total Recoverable, E: Estimated, <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous, UJ1: Blank, J2, UJ2: Standard, J3: Hold Time, J4, UJ4: Duplicate, Spike, or Split Exceedance,  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-6	RI3BH8-6	RI3BH8-6	RI3BH8-6	RI3BH8-7
SAMPLE DATE	04/11/2001	04/11/2001	04/11/2001	04/11/2001	04/11/2001
SAMPLE TIME	09:35	09:35	10:00	10:00	10:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497009	L010497010	L010497011	L010497012	L010497013
REMARKS	Contains Slag			DUPLICATE	Contains Slag
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	15-16'	20-21'	20-21'	0-1'
SAMPLE NUMBER	BH8-6D	BH8-6E	BH8-6F1	BH8-6F2	BH8-7A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	190.0	<10.0	19.0	<10.0	4900.0
CADMIUM (CD) TOT	18.0 J2	<10.0	12.0	<10.0	520.0
CHROMIUM (CR) TOT	270.0	<80.0	<80.0	<80.0	220.0
COPPER (CU) TOT	10000.0	60.0	23.0	<20.0	46000.0
IRON (FE) TOT	130000.0	7500.0 J4	11000.0 J4	4700.0 J4	98000.0 J4
LEAD (PB) TOT	830.0	33.0	23.0	17.0	24000.0
SELENIUM (SS) TOT	<20.0	<20.0	<20.0	<20.0	110.0
ZINC (ZN) TOT	1700.0 J4	19.0 J4	24.0 J4	<10.0 UJ4	10000.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-7	RI3BH8-7	RI3BH8-7	RI3BH8-7	RI3BH8-7	RI3BH8-7
SAMPLE DATE	04/11/2001	04/11/2001	04/11/2001	04/11/2001	04/11/2001	04/11/2001
SAMPLE TIME	10:30	10:40	10:45	10:50	11:30	11:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497014	L010497015	L010497016	L010497017	L010497018	L010497019
REMARKS	Contains Slag	Contains Slag	Contains Slag	Contains Slag		
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	4-5'	15-16'	20-21'
SAMPLE NUMBER	BH8-7B	BH8-7C	BH8-7D	BH8-7E	BH8-7F	BH8-7G

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	380.0	37.0	87.0	290.0	19.0	28.0
CADMIUM (CD) TOT	36.0	16.0	25.0	72.0	14.0	<10.0
CHROMIUM (CR) TOT	420.0	<80.0	<80.0	<80.0	<80.0	80.0
COPPER (CU) TOT	12000.0	950.0	2700.0	5900.0	700.0	<20.0
IRON (FE) TOT	180000.0	13000.0 J4	15000.0 J4	22000.0 J4	7600.0 J4	22000.0 J4
LEAD (PB) TOT	860.0	160.0	350.0	3200.0	35.0	51.0
SELENIUM (SE) TOT	24.0	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	8300.0 J4	200.0 J4	550.0 J4	1900.0 J4	85.0 J4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-8	RI3BH8-8	RI3BH8-8	RI3BH8-8	RI3BH8-8
SAMPLE DATE	04/11/2001	04/11/2001	04/11/2001	04/11/2001	04/11/2001
SAMPLE TIME	13:40	13:45	14:35	14:35	14:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497020	L010497021	L010497022	L010497023	L010497024
REMARKS	Contains Slag	Contains Slag		DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	12-13'	12-13'	18-19'
SAMPLE NUMBER	BH8-8A	BH8-8B	BH8-8C1	BH8-8C2	BH8-8D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	340.0	860.0	<10.0	<10.0	<10.0
CADMIUM (CD) TOT	93.0	160.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	120.0 J4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	6100.0	9800.0	48.0	<20.0	<20.0
IRON (FE) TOT	22000.0 J4	48000.0	6500.0 J4	4800.0 J4	6300.0 J4
LEAD (PB) TOT	2700.0	9200.0	74.0 J4	16.0 J4	28.0 J4
SELENIUM (SE) TOT	21.0	37.0 J4	<20.0 UJ4	<20.0 UJ4	<20.0 UJ4
ZINC (ZN) TOT	1900.0 J4	5500.0 J4	170.0 J4	36.0 J4	23.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-9	RI3BH8-9	RI3BH8-9	RI3BH8-9	RI3BH8-10
SAMPLE DATE	04/11/2001	04/11/2001	04/11/2001	04/11/2001	04/11/2001
SAMPLE TIME	15:15	15:18	15:18	15:50	16:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497025	L010497026	L010532004	L010497027	L010497028
REMARKS	Contains Slag		SPLIT		
TYPE	EDXRF	EDXRF	6010	EDXRF	EDXRF
DEPTH	0-0.5'	7-8'	7-8'	12-13'	10-11'
SAMPLE NUMBER	BH8-9A	BH8-9B	BH8-9B	BH8-9C	BH8-10A1

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH8-9	RI3BH8-9	RI3BH8-9	RI3BH8-9	RI3BH8-10
ARSENIC (AS) TOT	4700.0	130.0	118.0	13.0	41.0
CADMIUM (CD) TOT	350.0	96.0	131.0	<10.0	40.0
CHROMIUM (CR) TOT	300.0 J4	<80.0 UJ4	47.0	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	85000.0	1700.0	1259.0	<20.0	91.0
IRON (FE) TOT	140000.0	12000.0 J4	17850.0 J4	8400.0 J4	6200.0 J4
LEAD (PB) TOT	38000.0	210.0	184.0	25.0 J4	120.0
SELENIUM (SE) TOT	240.0 J4	<20.0 UJ4	<10.0	<20.0 UJ4	<20.0 UJ4
ZINC (ZN) TOT	12000.0 J4	440.0	385.0 J4	14.0 J4	1400.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-10	RI3BH8-10	RI3BH8-11	RI3BH8-11	RI3BH8-11
SAMPLE DATE	04/11/2001	04/11/2001	04/12/2001	04/12/2001	04/12/2001
SAMPLE TIME	16:30	16:40	08:50	08:55	08:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497029	L010497030	L010497050	L010497051	L010532005
REMARKS	DUPLICATE		Contains Slag		SPLIT
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	6010
DEPTH	10-11'	15-16'	0-1'	1-2'	1-2'
OTHER INFO				Contains Slag	Contains Slag
SAMPLE NUMBER	BH8-10A2	BH8-10B	BH8-11A	BH8-11B	BH8-11B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH8-10	RI3BH8-10	RI3BH8-11	RI3BH8-11	RI3BH8-11
ARSENIC (AS) TOT	45.0	18.0	15000.0	130.0	108.0
CADMIUM (CD) TOT	37.0	13.0	730.0	570.0	545.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	180.0 J4	<80.0 UJ4	47.0
COPPER (CU) TOT	90.0	<20.0	45000.0	1500.0	1067.0
IRON (FE) TOT	6100.0 J4	4500.0	93000.0	15000.0	18650.0
LEAD (PB) TOT	150.0	23.0	51000.0	1100.0	1039.0
SELENIUM (SE) TOT	<20.0 UJ4	<20.0 UJ4	200.0	<20.0	<10.0
ZINC (ZN) TOT	1400.0 J4	85.0 J4	11000.0 J4	2700.0 J4	2320.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-11	RI3BH8-11	RI3BH8-11	RI3BH8-11	RI3BH8-12
SAMPLE DATE	04/12/2001	04/12/2001	04/12/2001	04/12/2001	04/16/2001
SAMPLE TIME	08:56	08:58	09:00	09:05	09:25
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497052	L010497053	L010497054	L010497055	L010605053
REMARKS	Contains Slag	Contains Slag			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	4-5'	10-11'	0-1'
SAMPLE NUMBER	BH8-11C	BH8-11D	BH8-11E	BH8-11F	BH8-12A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	230.0	96.0	75.0	<10.0	1600.0
CADMIUM (CD) TOT	750.0	27.0	23.0	<10.0	1500.0
CHROMIUM (CR) TOT	89.0 UJ4	110.0 J4	<80.0 UJ4	<80.0 UJ4	130.0 J4
COPPER (CU) TOT	2200.0	960.0	750.0	<20.0	38000.0
IRON (FE) TOT	30000.0	44000.0	13000.0	4400.0	52000.0
LEAD (PB) TOT	1500.0	1300.0	430.0	<10.0	6300.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	25.0
ZINC (ZN) TOT	2100.0 J4	3900.0 J4	400.0 J4	19.0 J4	18000.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH8-12	RI3BH8-12	RI3BH8-12	RI3BH8-12	RI3BH9-1-6
SAMPLE DATE	04/16/2001	04/16/2001	04/16/2001	04/16/2001	05/16/2001
SAMPLE TIME	09:30	09:35	09:40	09:45	11:24
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010605054	L010605055	L010605056	L010605057	L010832007
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	9-10'	0-1'
SAMPLE NUMBER	BH8-12B	BH8-12C	BH8-12D	BH8-12E	BH9-1-6A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	70.0	110.0	<10.0	25.0	1000.0
CADMIUM (CD) TOT	1900.0	580.0	<10.0	13.0	500.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	80.0 J4	83.0
COPPER (CU) TOT	1900.0	6500.0	1300.0	36.0	1900.0
IRON (FE) TOT	9200.0	12000.0	5800.0	16000.0	24000.0
LEAD (PB) TOT	300.0	760.0	130.0	48.0	1900.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	46.0
ZINC (ZN) TOT	22000.0	9300.0	420.0	150.0	3100.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect; Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-6	RI3BH9-1-6	RI3BH9-1-6	RI3BH9-1-6	RI3BH9-1-7
SAMPLE DATE	05/16/2001	05/16/2001	05/16/2001	05/16/2001	05/16/2001
SAMPLE TIME	11:21	11:20	11:50	11:45	12:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832008	L010832009	L010832010	L010832011	L010832012
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	4-5'	5-6'	0-1'
SAMPLE NUMBER	BH9-1-6B	BH9-1-6C	BH9-1-6D	BH9-1-6E	BH9-1-7A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	81.0	110.0	62.0	50.0	8500.0
CADMIUM (CD) TOT	200.0	230.0	19.0 J2	<10.0	6800.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	130.0
COPPER (CU) TOT	<20.0	<20.0	35.0	58.0	23000.0
IRON (FE) TOT	8400.0	11000.0	8500.0	7900.0	33000.0
LEAD (PB) TOT	47.0	44.0	68.0	56.0	11000.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	130.0
ZINC (ZN) TOT	550.0 J4	710.0 J4	580.0 J4	230.0 J4	27000.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-7	RI3BH9-1-7	RI3BH9-1-10	RI3BH9-1-10	RI3BH9-1-10
SAMPLE DATE	05/16/2001	05/16/2001	05/17/2001	05/17/2001	05/17/2001
SAMPLE TIME	12:05	12:20	15:15	15:18	15:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832013	L010832014	L010832029	L010832030	L010832031
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH9-1-7B	BH9-1-7C	BH9-1-10A	BH9-1-10B	BH9-1-10C

-- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-7	RI3BH9-1-7	RI3BH9-1-10	RI3BH9-1-10	RI3BH9-1-10
ARSENIC (AS) TOT	200.0	19000.0	3500.0	190.0 J4	250.0 J4
CADMIUM (CD) TOT	110.0	8600.0	1600.0	64.0 J4	87.0 J4
CHROMIUM (CR) TOT	180.0	140.0	140.0 J4	87.0 J4	80.0 J4
COPPER (CU) TOT	1200.0	27000.0	8300.0	590.0 J4	830.0 J4
IRON (FE) TOT	29000.0	48000.0	34000.0	33000.0	29000.0
LEAD (PB) TOT	1000.0	35000.0	9500.0	600.0 J4	860.0 J4
SELENIUM (SE) TOT	<20.0	210.0	140.0	<20.0	<20.0
ZINC (ZN) TOT	730.0 J4	24000.0 J4	8400.0 J4	490.0 J4	650.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-10	RI3BH9-1-10	RI3BH9-1-10	RI3BH9-1-10	RI3BH9-1-11
SAMPLE DATE	05/17/2001	05/17/2001	05/17/2001	05/17/2001	05/17/2001
SAMPLE TIME	15:25	16:20	16:20	16:25	16:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832032	L010832033	L010832006	L010832034	L010832035
REMARKS			DUPLICATE		
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	3-4'	4-5'	4-5'	5-6'	0-1'
SAMPLE NUMBER	BH9-1-10D	BH9-1-10E1	BH9-1-10E2	BH9-1-10F	BH9-1-11A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	220.0	J4	1000.0	J4	500.0	J4	160.0	J4	2500.0
CADMIUM (CD) TOT	75.0	J4	320.0	J4	140.0	J4	37.0	J4	1300.0
CHROMIUM (CR) TOT	83.0	J4	<80.0	UJ4	<80.0		<80.0	UJ4	110.0 J4
COPPER (CU) TOT	340.0	J4	2400.0	J4	1500.0	J4	300.0	J4	4400.0
IRON (FE) TOT	30000.0		22000.0		19000.0		18000.0		33000.0
LEAD (PB) TOT	270.0	J4	3000.0	J4	1500.0	J4	340.0	J4	6100.0
SELENIUM (SE) TOT	<20.0		34.0		23.0		<20.0		54.0
ZINC (ZN) TOT	540.0	J4	2400.0	J4	1300.0	J4	240.0	J4	9500.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-11	RI3BH9-1-11	RI3BH9-1-11	RI3BH9-1-13	RI3BH9-1-13
SAMPLE DATE	05/17/2001	05/17/2001	05/17/2001	05/17/2001	05/17/2001
SAMPLE TIME	16:35	16:38	16:40	08:20	08:23
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832036	L010832001	L010832002	L010832062	L010832063
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	2-3'	3-4'
SAMPLE NUMBER	BH9-1-11B	BH9-1-11C	BH9-1-11D	BH9-1-13C	BH9-1-13D

## -- METALS &amp; MINOR CONSTITUENTS --

	95.0	J4	180.0	J4	280.0	J4	5200.0	10000.0
ARSENIC (AS) TOT	95.0	J4	180.0	J4	280.0	J4	5200.0	10000.0
CADMIUM (CD) TOT	110.0	J4	170.0	J4	64.0	J4	3500.0	6400.0
CHROMIUM (CR) TOT	<80.0	UJ4	<80.0		<80.0		120.0	120.0 J4
COPPER (CU) TOT	240.0	J4	330.0	J4	210.0	J4	18000.0	15000.0
IRON (FE) TOT	10000.0		15000.0		14000.0		40000.0	43000.0
LEAD (PB) TOT	91.0	J4	76.0	J4	36.0	J4	13000.0	17000.0 J4
SELENIUM (SE) TOT	<20.0		<20.0		<20.0		140.0	150.0
ZINC (ZN) TOT	950.0	J4	1200.0	J4	960.0	J4	16000.0	15000.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect; Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-7	RI3BH9-1-7	RI3BH9-1-7	RI3BH9-1-8	RI3BH9-1-8
SAMPLE DATE	05/17/2001	05/17/2001	05/17/2001	05/17/2001	05/17/2001
SAMPLE TIME	11:30	11:30	11:35	12:00	12:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832015	L010832003	L010832016	L010832017	L011009007
REMARKS		DUPLICATE			SPLIT
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	6010
DEPTH	4-5'	4-5'	5-6'	0-1'	0-1'
SAMPLE NUMBER	BH9-1-7D1	BH9-1-7D2	BH9-1-7E	BH9-1-8A	BH9-1-8A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	87.0	76.0	41.0	1300.0	1102.0
CADMIUM (CD) TOT	61.0	42.0	110.0	530.0	507.0
CHROMIUM (CR) TOT	80.0	95.0	97.0	<80.0	98.0
COPPER (CU) TOT	300.0	230.0	370.0	3500.0	3330.0
IRON (FE) TOT	30000.0	29000.0	26000.0	14000.0	15400.0
LEAD (PB) TOT	550.0	430.0	560.0	3400.0	2796.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	47.0	50.0
ZINC (ZN) TOT	330.0 J4	260.0 J4	310.0 J4	4000.0 J4	3708.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless Field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-8	RI3BH9-1-8	RI3BH9-1-8	RI3BH9-1-8	RI3BH9-1-8
SAMPLE DATE	05/17/2001	05/17/2001	05/17/2001	05/17/2001	05/17/2001
SAMPLR TIME	12:05	12:10	12:15	12:20	12:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832018	L010832019	L010832020	L010832021	L010832004
REMARKS					DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	4-5'	5-6'	5-6'
SAMPLE NUMBER	BH9-1-8B	BH9-1-8C	BH9-1-8D	BH9-1-8E1	BH9-1-8E2

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	54.0	60.0	230.0	50.0	55.0
CADMIUM (CD) TOT	12.0	14.0	68.0	16.0	19.0 J2
CHROMIUM (CR) TOT	110.0	100.0	98.0	<80.0 UJ4	<80.0
COPPER (CU) TOT	160.0 J4	150.0 J4	560.0 J4	60.0 J4	150.0 J4
IRON (FE) TOT	35000.0	35000.0	34000.0	19000.0	20000.0
LEAD (PB) TOT	130.0	120.0	480.0	96.0	98.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	140.0 J4	150.0 J4	710.0 J4	61.0 J4	84.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-9	RI3BH9-1-9	RI3BH9-1-9	RI3BH9-1-9	RI3BH9-1-9	RI3BH9-1-9
SAMPLE DATE	05/17/2001	05/17/2001	05/17/2001	05/17/2001	05/17/2001	05/17/2001
SAMPLE TIME	12:25	12:28	12:30	12:30	12:30	12:33
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832022	L010832023	L010832024	L010832005	L011009001	L010832025
REMARKS				DUPLICATE	SPLIT	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	6010	EDXRF
DEPTH	0-1'	1-2'	2-3'	2-3'	2-3'	3-4'
SAMPLE NUMBER	BH9-1-9A	BH9-1-9B	BH9-1-9C1	BH9-1-9C2	BH9-1-9C2	BH9-1-9D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	1700.0	J4	190.0	J4	370.0	J4	1600.0	J4	1519.0		200.0	J4
CADMIUM (CD) TOT	610.0	J4	73.0	J4	170.0	J4	1100.0	J4	959.0		190.0	J4
CHROMIUM (CR) TOT	<80.0	UJ4	<80.0	UJ4	<80.0	UJ4	81.0		144.0		<80.0	UJ4
COPPER (CU) TOT	7600.0	J4	620.0	J4	2000.0	J4	3900.0	J4	3638.0		140.0	J4
IRON (FE) TOT	16000.0	J4	8500.0	J4	6700.0	J4	11000.0	J4	13000.0		6200.0	J4
LEAD (PB) TOT	6100.0	J4	520.0	J4	930.0	J4	4800.0	J4	3673.0		330.0	J4
SELENIUM (SE) TOT	57.0	J4	<20.0	J4	<20.0	J4	66.0	J4	66.0		<20.0	J4
ZINC (ZN) TOT	6400.0	J4	1100.0	J4	1800.0	J4	4900.0	J4	4477.0		930.0	J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-9	RI3BH9-1-9	RI3BH9-1-9	RI3BH9-1-12	RI3BH9-1-12
SAMPLE DATE	05/17/2001	05/17/2001	05/17/2001	05/21/2001	05/21/2001
SAMPLE TIME	13:15	13:25	15:10	09:43	09:44
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832026	L010832027	L010832028	L010832057	L010832058
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	5-6'	6-7'	7-8'	0-1'	1-2'
SAMPLE NUMBER	BH9-1-9E	BH9-1-9F	BH9-1-9G	BH9-1-12A	BH9-1-12B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-9E	RI3BH9-1-9F	RI3BH9-1-9G	RI3BH9-1-12A	RI3BH9-1-12B
ARSENIC (AS) TOT	240.0 J4	100.0 J4	75.0 J4	1300.0	160.0
CADMIUM (CD) TOT	400.0 J4	88.0 J4	150.0 J4	510.0	65.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	80.0 J4	<80.0 UJ4
COPPER (CU) TOT	74.0 J4	<20.0 UJ4	<20.0 J4	2700.0	65.0
IRON (FE) TOT	11000.0 J4	3700.0 J4	4000.0 J4	16000.0	10000.0
LEAD (PB) TOT	160.0 J4	41.0 J4	28.0 J4	2700.0	23.0
SELENIUM (SE) TOT	<20.0 J4	<20.0 J4	<20.0 J4	44.0	<20.0
ZINC (ZN) TOT	2400.0 J4	1400.0 J4	640.0 J4	3900.0 J4	630.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-12	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13
SAMPLE DATE	05/21/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001
SAMPLE TIME	09:45	08:15	08:17	18:17	08:26
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832059	L010832060	L010832061	L011009008	L010832064
REMARKS				SPLIT	
TYPE	EDXRF	EDXRF	EDXRF	6010	EDXRF
DEPTH	3-4'	0-1'	1-2'	1-2'	4-5'
SAMPLE NUMBER	BH9-1-12C	BH9-1-13A	BH9-1-13B	BH9-1-13B	BH9-1-13E

-- METALS & MINOR CONSTITUENTS --

	RI3BH9-1-12	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13
ARSENIC (AS) TOT	42.0	12000.0	450.0	526.0	230.0
CADMIUM (CD) TOT	77.0	5400.0	200.0	263.0	180.0
CHROMIUM (CR) TOT	<80.0 UJ4	110.0 J4	100.0 J4	55.0	<80.0 UJ4
COPPER (CU) TOT	24.0	28000.0	1500.0	1442.0	1000.0
IRON (FE) TOT	7600.0	35000.0	32000.0	33600.0	26000.0
LEAD (PB) TOT	25.0	10000.0	1300.0 J4	1448.0	1300.0 J4
SELENIUM (SE) TOT	<20.0	170.0	<20.0	12.0	<20.0
ZINC (ZN) TOT	350.0 J4	28000.0 J4	870.0 J4	1075.0	680.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-14
SAMPLE DATE	05/24/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001
SAMPLE TIME	08:26	08:29	08:34	08:40	09:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011009009	L010832065	L010832066	L010832067	L010832068
REMARKS	SPLIT				
TYPE	6010	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	5-6'	6-7'	7-8'	0-1'
SAMPLE NUMBER	BH9-1-13E	BH9-1-13F	BH9-1-13G	BH9-1-13H	BH9-1-14A1

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-13	RI3BH9-1-14
ARSENIC (AS) TOT	261.0	150.0	5000.0	4100.0	1800.0
CADMIUM (CD) TOT	231.0	180.0	2900.0	2600.0	790.0
CHROMIUM (CR) TOT	65.0	89.0 J4	130.0 J4	110.0 J4	<80.0 UJ4
COPPER (CU) TOT	882.0	630.0	8500.0	7600.0	7700.0
IRON (FE) TOT	28000.0	26000.0	40000.0	36000.0	19000.0
LEAD (PB) TOT	1239.0	860.0 J4	12000.0 J4	9000.0 J4	5600.0 J4
SELENIUM (SE) TOT	<10.0	<20.0	120.0	120.0	54.0
ZINC (ZN) TOT	887.0	610.0 J4	9000.0 J4	8700.0 J4	6700.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-14	RI3BH9-1-14	RI3BH9-1-14	RI3BH9-1-14	RI3BH9-1-14	RI3BH9-1-14
SAMPLE DATE	05/24/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001
SAMPLE TIME	09:05	09:10	09:15	09:20	09:25	09:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832069	L010832070	L010832071	L010832037	L010832038	L010832039
REMARKS	DUPLICATE					
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	4-5'	6-7'
SAMPLE NUMBER	BH9-1-14A2	BH9-1-14B	BH9-1-14C	BH9-1-14D	BH9-1-14E	BH9-1-14F

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	1300.0	2000.0	100.0 J4	68.0 J4	69.0 J4	2400.0
CADMIUM (CD) TOT	590.0	1600.0	55.0	65.0	61.0	630.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	81.0 J4	<80.0 UJ4	98.0 J4	<80.0 UJ4
COPPER (CU) TOT	5400.0	11000.0	500.0	390.0	180.0	4000.0
IRON (FE) TOT	15000.0	20000.0	30000.0	28000.0	26000.0	17000.0
LEAD (PB) TOT	3800.0 J4	7000.0 J4	450.0 J4	730.0 J4	450.0 J4	1400.0 J4
SELENIUM (SE) TOT	43.0	60.0	<20.0	<20.0	<20.0	40.0
ZINC (ZN) TOT	4800.0 J4	10000.0 J4	320.0 J4	440.0 J4	200.0 J4	6800.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-15	RI3BH9-1-15	RI3BH9-1-15	RI3BH9-1-15	RI3BH9-1-15
SAMPLE DATE	05/24/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001
SAMPLE TIME	10:00	10:05	10:10	10:15	10:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832040	L010832041	L010832042	L010832043	L010832044
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	4-5'
SAMPLE NUMBER	BH9-1-15A	BH9-1-15B	BH9-1-15C	BH9-1-15D	BH9-1-15E

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-15	RI3BH9-1-15	RI3BH9-1-15	RI3BH9-1-15	RI3BH9-1-15
ARSENIC (AS) TOT	10000.0	2200.0	210.0	60.0 J4	310.0
CADMIUM (CD) TOT	4200.0	520.0	220.0	140.0	240.0
CHROMIUM (CR) TOT	120.0 J4	120.0 J4	98.0 J4	92.0 J4	91.0 J4
COPPER (CU) TOT	23000.0	3300.0	500.0	380.0	1600.0
IRON (FE) TOT	31000.0	30000.0	28000.0	28000.0	26000.0
LEAD (PB) TOT	8800.0 J4	4800.0 J4	890.0 J4	540.0 J4	1200.0 J4
SELENIUM (SE) TOT	140.0	46.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	24000.0 J4	5200.0 J4	740.0 J4	410.0 J4	1300.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16
SAMPLE DATE	05/24/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001
SAMPLE TIME	11:40	11:40	11:45	11:50	11:55	12:06
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832045	L010832046	L010832047	L010832048	L010832049	L010832050
REMARKS	DUPLICATE					
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	0-1'	1-2'	2-3'	3-4'	4-5'
SAMPLE NUMBER	BH9-1-16A1	BH9-1-16A2	BH9-1-16B	BH9-1-16C	BH9-1-16D	BH9-1-16E

-- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16	RI3BH9-1-16
ARSENIC (AS) TOT	2300.0	2000.0	250.0 J4	110.0	91.0 J4	290.0
CADMIUM (CD) TOT	510.0	540.0	110.0	21.0 J2	14.0 J2	35.0 J2
CHROMIUM (CR) TOT	130.0 J4	130.0 J4	110.0 J4	130.0 J4	130.0 J4	120.0 J4
COPPER (CU) TOT	17000.0	15000.0	1700.0	190.0	77.0	2300.0
IRON (FE) TOT	51000.0	43000.0	38000.0	40000.0	38000.0	42000.0
LEAD (PB) TOT	29000.0	23000.0	1900.0	150.0	82.0	4000.0
SELENIUM (SE) TOT	170.0	160.0	<20.0	<20.0	<20.0	42.0
ZINC (ZN) TOT	11000.0 J4	10000.0 J4	1700.0 J4	230.0 J4	110.0 J4	1400.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-17	RI3BH9-1-17	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18
SAMPLE DATE	05/24/2001	05/24/2001	05/24/2001	05/24/2001	05/24/2001
SAMPLE TIME	14:30	14:35	15:15	15:15	15:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010832051	L010832052	L010831029	L010887011	L010831030
REMARKS				SPLIT	
TYPE	EDXRF	EDXRF	EDXRF	6010	EDXRF
DEPTH	0-1'	1-2'	0-1'	0-1'	1-2'
SAMPLE NUMBER	BH9-1-17A	BH9-1-17B	BH9-1-18A	BH9-1-18A	BH9-1-18B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-17	RI3BH9-1-17	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18
ARSENIC (AS) TOT	1600.0	600.0	530.0	481.0	100.0 J4
CADMIUM (CD) TOT	360.0	250.0	510.0	507.0	<10.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	120.0 J4	69.0	120.0 J4
COPPER (CU) TOT	570.0	210.0	4000.0	5374.0	420.0
IRON (FE) TOT	19000.0	11000.0	31000.0	32380.0	38000.0
LEAD (PB) TOT	360.0	110.0	4100.0	4413.0	110.0
SELENIUM (SE) TOT	<20.0	<20.0	27.0	26.0	<20.0
ZINC (ZN) TOT	2800.0 J4	1400.0 J4	3500.0 J4	4037.0	180.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18
SAMPLE DATE	05/24/2001	05/24/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	15:25	15:25	08:30	08:36	08:38	08:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831031	L010887012	L010831032	L010831033	L010831034	L010831035
REMARKS		SPLIT				
TYPE	EDXRF	6010	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	2-3'	4-5'	5-6'	6-7'	7-8'
SAMPLE NUMBER	BH9-1-18C	BH9-1-18C	BH9-1-18D	BH9-1-18E	BH9-1-18F	BH9-1-18G1

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18
ARSENIC (AS) TOT	110.0 J4	74.0 J4	230.0	72.0	65.0	77.0
CADMIUM (CD) TOT	13.0 J2	<10.0	75.0 J2	<10.0	<10.0	13.0 J2
CHROMIUM (CR) TOT	120.0 J4	54.0	120.0 J4	130.0 J4	140.0 J4	110.0 J4
COPPER (CU) TOT	620.0	655.0	2000.0	230.0	110.0	130.0
IRON (FE) TOT	38000.0	38750.0	38000.0	41000.0	42000.0	38000.0
LEAD (PB) TOT	160.0	175.0	780.0	110.0 J4	48.0 J4	150.0 J4
SELENIUM (SE) TOT	<20.0	<10.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	230.0 J4	223.0	890.0 J4	150.0 J4	89.0 J4	120.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; B:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-6-10
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	08:40	08:42	14:00	14:10	11:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831036	L010831037	L010831038	L010831039	L010831003
REMARKS	DUPLICATE				
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	7-8'	8-9'	9-10'	10-11'	0-1'
SAMPLE NUMBER	BH9-1-18G2	BH9-1-18H	BH9-1-18I	BH9-1-18J	BH9-6-20A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-1-18	RI3BH9-6-10
ARSENIC (AS) TOT	69.0	67.0	54.0	62.0	5200.0 J4
CADMIUM (CD) TOT	<10.0	17.0 J2	18.0 J2	<10.0	2100.0 J4
CHROMIUM (CR) TOT	120.0 J4	120.0 J4	<80.0 UJ4	<80.0 UJ4	220.0 J4
COPPER (CU) TOT	110.0	310.0	200.0	35.0	44000.0
IRON (FE) TOT	37000.0	40000.0	20000.0	15000.0	46000.0
LEAD (PB) TOT	94.0 J4	69.0 J4	200.0 J4	53.0 J4	19000.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	120.0 J4
ZINC (ZN) TOT	67.0 J4	98.0 J4	130.0 J4	<10.0 UJ4	20000.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FID) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-10	RI3BH9-6-10	RI3BH9-6-10	RI3BH9-6-11	RI3BH9-6-11
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	11:52	11:55	11:58	14:10	14:12
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831004	L010831005	L010831006	L010831016	L010831017
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	0-1'	1-2'
SAMPLE NUMBER	BH9-6-10B	BH9-6-10C	BH9-6-10D	BH9-6-11A	BH9-6-11B

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	280.0	J4	62.0	J4	73.0	J4	6200.0	3100.0
CADMIUM (CD) TOT	260.0	J4	46.0	J4	31.0	J4	3900.0	8200.0
						J2		
CHROMIUM (CR) TOT	<80.0	UJ4	<80.0	UJ4	<80.0	UJ4	290.0	340.0
COPPER (CU) TOT	1800.0	J4	85.0	J4	76.0	J4	57000.0	13000.0
IRON (FE) TOT	18000.0		17000.0		18000.0		44000.0	35000.0
LEAD (PB) TOT	1600.0	J4	73.0	J4	63.0	J4	46000.0	63000.0
SELENIUM (SE) TOT	<20.0	UJ4	<20.0	UJ4	<20.0	UJ4	180.0	166.0
ZINC (ZN) TOT	1700.0	J4	300.0	J4	230.0	J4	21000.0	20000.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance,  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-11	RI3BH9-6-11	RI3BH9-6-12	RI3BH9-6-12	RI3BH9-6-12
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	14:15	14:18	14:25	14:28	14:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831018	L010831019	L010831020	L010831021	L010831022
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	0-1'	1-2'	2-2.5'
SAMPLE NUMBER	BH9-6-11C	BH9-6-11D	BH9-6-12A	BH9-6-12B	BH9-6-12C

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	1400.0	94.0	7200.0	6100.0	400.0
CADMIUM (CD) TOT	2200.0	31.0	1800.0	8300.0	450.0
CHROMIUM (CR) TOT	170.0 J4	83.0 J4	260.0 J4	390.0 J4	86.0 J4
COPPER (CU) TOT	9200.0	390.0	46000.0	21000.0	1600.0
IRON (FE) TOT	25000.0	18000.0	40000.0	57000.0	21000.0
LEAD (PB) TOT	14000.0	230.0	24000.0	120000.0	2900.0
SELENIUM (SE) TOT	92.0	<20.0	140.0	170.0	26.0
ZINC (ZN) TOT	7500.0 J4	140.0 J4	21000.0 J4	30000.0 J4	2300.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

	RI3BH9-6-12	RI3BH9-6-13	RI3BH9-6-14	RI3BH9-6-14
SITE CODE	RI3BH9-6-12	RI3BH9-6-13	RI3BH9-6-14	RI3BH9-6-14
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	14:30	14:50	15:35	15:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010887010	L010831023	L010831024	L010831025
REMARKS	SPLIT			DUPLICATE
TYPE	6010	EDXRF	EDXRF	EDXRF
DEPTH	2-2.5'	0-1.2'	0-1'	0-1'
SAMPLE NUMBER	BH9-6-12C	BH9-6-13A	BH9-6-14A1	BH9-6-14A2

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-12	RI3BH9-6-13	RI3BH9-6-14	RI3BH9-6-14
ARSENIC (AS) TOT	285.0	4900.0	3800.0	3700.0
CADMIUM (CD) TOT	433.0	7900.0	1200.0	1100.0
CHROMIUM (CR) TOT	84.0	280.0 J4	230.0 J4	250.0 J4
COPPER (CU) TOT	1141.0	28000.0	29000.0	23000.0
IRON (FE) TOT	23400.0	42000.0	34000.0	30000.0
LEAD (PB) TOT	2803.0	60000.0	6000.0	6100.0
SELENIUM (SE) TOT	26.0	170.0	120.0	110.0
ZINC (ZN) TOT	2044.0	24000.0 J4	10000.0 J4	9400.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1, Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-14	RI3BH9-6-14	RI3BH9-6-14	RI3BH9-6-15	RI3BH9-6-15
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	15:38	15:40	15:42	16:50	16:51
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831026	L010831027	L010831028	L010831078	L010831079
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	0-1'	1-2'
SAMPLE NUMBER	BH9-6-14B	BH9-6-14C	BH9-6-14D	BH9-6-15A	BH9-6-15B1

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-14	RI3BH9-6-14	RI3BH9-6-14	RI3BH9-6-15	RI3BH9-6-15
ARSENIC (AS) TOT	17000.0	29000.0	4500.0	10000.0	120.0 J4
CADMIUM (CD) TOT	3100.0	5000.0	6700.0	4900.0	17.0 J2
CHROMIUM (CR) TOT	180.0 J4	210.0 J4	350.0 J4	410.0 J4	<80.0 UJ4
COPPER (CU) TOT	77000.0	91000.0	15000.0	31000.0	190.0 J4
IRON (FE) TOT	59000.0	67000.0	43000.0	65000.0	18000.0
LEAD (PB) TOT	59000.0	65000.0	56000.0	64000.0	290.0 J4
SELENIUM (SE) TOT	190.0	210.0	160.0	160.0 J4	<20.0 UJ4
ZINC (ZN) TOT	44000.0 J4	46000.0 J4	22000.0 J4	30000.0 J4	120.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

-- SAMPLE TYPE: SOIL --

	RI3BH9-6-15	RI3BH9-6-15	RI3BH9-6-16	RI3BH9-6-16	RI3BH9-6-16
SITE CODE	RI3BH9-6-15	RI3BH9-6-15	RI3BH9-6-16	RI3BH9-6-16	RI3BH9-6-16
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	16:51	16:52	17:00	17:03	17:03
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831080	L010831081	L010831007	L010831008	L010831009
REMARKS	DUPLICATE				DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	0-1'	1-2'	1-2'
SAMPLE NUMBER	BH9-6-15B2	BH9-6-15C	BH9-6-16A	BH9-6-16B1	BH9-6-16B2

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-15	RI3BH9-6-15	RI3BH9-6-16	RI3BH9-6-16	RI3BH9-6-16
ARSENIC (AS) TOT	82.0 J4	91.0 J4	3200.0	1400.0 J4	760.0 J4
CADMIUM (CD) TOT	<10.0	12.0 J2	1600.0	790.0 J4	390.0 J4
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0	150.0 J4	120.0 J4	110.0 J4
COPPER (CU) TOT	52.0 J4	130.0 J4	21000.0	8100.0 J4	3900.0 J4
IRON (FE) TOT	16000.0	20000.0	31000.0	26000.0	25000.0
LEAD (PB) TOT	140.0 J4	160.0 J4	16000.0 J4	10000.0 J4	4700.0 J4
SELENIUM (SE) TOT	<20.0 UJ4	<20.0	83.0	60.0	33.0
ZINC (ZN) TOT	28.0 J4	50.0 J4	14000.0 J4	5700.0 J4	3400.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-16	RI3BH9-6-16	RI3BH9-6-17	RI3BH9-6-17	RI3BH9-6-17
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	17:05	17:10	08:25	08:30	08:33
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831010	L010831011	L010831012	L010831013	L010831014
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH9-6-16C	BH9-6-16D	BH9-6-17A	BH9-6-17B	BH9-6-17C

-- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-16	RI3BH9-6-16	RI3BH9-6-17	RI3BH9-6-17	RI3BH9-6-17
ARSENIC (AS) TOT	140.0 J4	43.0 J4	14000.0	2400.0	4600.0
CADMIUM (CD) TOT	14.0 J4	13.0 J4	3400.0	1200.0	13000.0
	J2				
CHROMIUM (CR) TOT	110.0 J4	<80.0 UJ4	150.0 J4	250.0 J4	330.0 J4
COPPER (CU) TOT	49.0 J4	66.0 J4	55000.0	17000.0	21000.0
IRON (FE) TOT	31000.0	18000.0	40000.0	27000.0	35000.0
LEAD (PB) TOT	66.0 J4	55.0 J4	34000.0	18000.0	90000.0
SELENIUM (SE) TOT	<20.0	<20.0	120.0	78.0	180.0
ZINC (ZN) TOT	54.0 J4	<10.0 UJ4	34000.0 J4	8900.0 J4	33000.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FID) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank; parameter not tested  
 Validation Flags: A: Anomalous; UJ1, Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-17	RI3BH9-6-5	RI3BH9-6-5	RI3BH9-6-5	RI3BH9-6-5
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	08:35	09:55	09:58	10:00	10:02
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831015	L010831046	L010831047	L010831048	L010831049
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	3-4'	0-1'	1-2'	2-3'	3-4'
SAMPLE NUMBER	BH9-6-17D	BH9-6-5A	BH9-6-5B	BH9-6-5C	BH9-6-5D

-- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-17	RI3BH9-6-5	RI3BH9-6-5	RI3BH9-6-5	RI3BH9-6-5
ARSENIC (AS) TOT	130.0 J4	4600.0	4300.0	9700.0	9100.0
CADMIUM (CD) TOT	77.0 J4	910.0 J4	1900.0 J4	12000.0	12000.0
CHROMIUM (CR) TOT	<80.0 UJ4	260.0 J4	360.0 J4	480.0 J4	450.0 J4
COPPER (CU) TOT	330.0 J4	71000.0	110000.0	51000.0	40000.0
IRON (FE) TOT	20000.0	42000.0	44000.0	29000.0	29000.0
LEAD (PB) TOT	550.0 J4	16000.0	31000.0	100000.0	92000.0
SELENIUM (SE) TOT	<20.0	170.0	150.0	280.0	230.0
ZINC (ZN) TOT	530.0 J4	12000.0 J4	19000.0 J4	44000.0 J4	51000.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-5	RI3BH9-6-5	RI3BH9-6-5	RI3BH9-6-6	RI3BH9-6-6
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	10:20	10:20	10:23	10:48	10:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831050	L010831051	L010831052	L010831053	L010831054
REMARKS		DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	4-5'	5-5.5'	0-1'	1-2'
SAMPLE NUMBER	BH9-6-5E1	BH9-6-5E2	BH9-6-5F	BH9-6-6A	BH9-6-6B

-- METALS & MINOR CONSTITUENTS --

	260.0	J4	770.0	J4	48.0	J4	3400.0	J2	49.0	J4
ARSENIC (AS) TOT				J2		J2				J2
CADMIUM (CD) TOT	770.0	J4	1300.0	J4	17.0	J4	5100.0		49.0	J4
						J2				
CHROMIUM (CR) TOT	<80.0	UJ4	<80.0	UJ4	<80.0	UJ4	240.0	J4	<80.0	UJ4
COPPER (CU) TOT	2400.0	J4	6000.0	J4	44.0	J4	26000.0		170.0	J4
IRON (FE) TOT	16000.0		21000.0		15000.0		32000.0		15000.0	
LEAD (PB) TOT	2000.0	J4	5400.0	J4	45.0	J4	12000.0		180.0	J4
SELENIUM (SE) TOT	<20.0		35.0		<20.0		130.0		<20.0	
ZINC (ZN) TOT	2600.0	J4	6300.0	J4	12.0	J4	14000.0	J4	110.0	J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-7	RI3BH9-6-7	RI3BH9-6-7	RI3BH9-6-7	RI3BH9-6-8
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	11:02	11:03	11:05	11:07	11:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831055	L010831056	L010831057	L010831058	L010831040
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	0-1'
SAMPLE NUMBER	BH9-6-7A	BH9-6-7B	BH9-6-7C	BH9-6-7D	BH9-6-8A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-7	RI3BH9-6-7	RI3BH9-6-7	RI3BH9-6-7	RI3BH9-6-8
ARSENIC (AS) TOT	31000.0 J2	2900.0 J2	130.0 J4 J2	67.0 J4 J2	9200.0
CADMIUM (CD) TOT	5600.0	8100.0	54.0 J4	<10.0 UJ4	4000.0
CHROMIUM (CR) TOT	180.0 J4	280.0 J4	<80.0 UJ4	87.0 J4	290.0 J4
COPPER (CU) TOT	110000.0	14000.0	640.0 J4	57.0 J4	46000.0
IRON (FE) TOT	51000.0	33000.0	18000.0	20000.0	41000.0
LEAD (PB) TOT	31000.0	32000.0	390.0 J4	55.0 J4	30000.0
SELENIUM (SE) TOT	160.0	170.0	<20.0	<20.0	150.0
ZINC (ZN) TOT	59000.0 J4	19000.0 J4	410.0 J4	41.0 J4	25000.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-8	RI3BH9-6-8	RI3BH9-6-8	RI3BH9-6-9	RI3BH9-6-9
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	11:32	11:32	11:35	11:40	11:42
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831041	L010887013	L010831042	L010831043	L010831044
REMARKS		SPLIT			
TYPE	EDXRF	6010	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	1-2'	2-2.5'	0-1'	1-2'
SAMPLE NUMBER	BH9-6-8B	BH9-6-8B	BH9-6-8C	BH9-6-9A	BH9-6-9B1

## -- METALS &amp; MINOR CONSTITUENTS --

	200.0	J4	180.0	54.0	J4	20000.0	1400.0	J4
ARSENIC (AS) TOT	280.0	J4	359.0	<10.0	UJ4	7000.0	1500.0	J4
CADMIUM (CD) TOT	<80.0	UJ4	50.0	<80.0	UJ4	250.0	140.0	J4
CHROMIUM (CR) TOT	1700.0	J4	1348.0	66.0	J4	79000.0	6300.0	J4
COPPER (CU) TOT	19000.0		21210.0	16000.0		57000.0	31000.0	
IRON (FE) TOT	1200.0	J4	1183.0	68.0	J4	65000.0	6600.0	J4
LEAD (PB) TOT	<20.0		16.0	<20.0		200.0	84.0	J4
SELENIUM (SE) TOT	1300.0	J4	1250.0	32.0	J4	42000.0	7500.0	J4
ZINC (ZN) TOT								

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-9	RI3BH9-6-9	RI3BH9-6-9	RI3BH9-6-9	RI3BH9-6-9
SAMPLE DATE	05/25/2001	05/25/2001	05/25/2001	05/25/2001	05/25/2001
SAMPLE TIME	11:42	11:45	11:45	11:48	11:48
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831045	L010831001	L010887008	L010831002	L010887009
REMARKS	DUPLICATE		SPLIT		SPLIT
TYPE	EDXRF	EDXRF	6010	EDXRF	6010
DEPTH	1-2'	2-3'	2-3'	3-3.5'	3-3.5'
SAMPLE NUMBER	BH9-6-9B2	BH9-6-9C	BH9-6-9C	BH9-6-9D	BH9-6-9D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	3700.0	J4	100.0	J4	54.0	38.0	J4	26.0
CADMIUM (CD) TOT	5900.0	J4	30.0	J4	20.0	20.0	J4	14.0
			J2			J2		
CHROMIUM (CR) TOT	250.0	J4	90.0	J4	35.0	<80.0	UJ4	66.0
COPPER (CU) TOT	16000.0	J4	240.0	J4	169.0	57.0	J4	84.0
IRON (FE) TOT	38000.0		24000.0		27000.0	10000.0		13300.0
LEAD (PB) TOT	44000.0	J4	250.0	J4	227.0	62.0	J4	74.0
SELENIUM (SE) TOT	190.0	J4	<20.0	UJ4	<10.0	<20.0	UJ4	<10.0
ZINC (ZN) TOT	20000.0	J4	1000.0	J4	860.0	750.0	J4	570.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-18	RI3BH9-6-18	RI3BH9-6-18	RI3BH9-6-18	RI3BH9-6-18	RI3BH9-6-18
SAMPLE DATE	05/26/2001	05/26/2001	05/26/2001	05/26/2001	05/26/2001	05/26/2001
SAMPLE TIME	08:50	08:52	08:55	08:57	09:00	09:03
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831082	L010831083	L010831084	L010831085	L010831086	L010831059
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	4-5'	5-6'
SAMPLE NUMBER	BH9-6-18A	BH9-6-18B	BH9-6-18C	BH9-6-18D	BH9-6-18E	BH9-6-18F

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-18A	RI3BH9-6-18B	RI3BH9-6-18C	RI3BH9-6-18D	RI3BH9-6-18E	RI3BH9-6-18F	
ARSENIC (AS) TOT	680.0	2100.0	980.0	4500.0	950.0	900.0	J2
CADMIUM (CD) TOT	120.0	230.0	160.0	400.0	140.0	250.0	
CHROMIUM (CR) TOT	340.0	270.0	190.0	220.0	270.0	270.0	J4
COPPER (CU) TOT	220000.0	180000.0	280000.0	180000.0	180000.0	140000.0	
IRON (FE) TOT	71000.0	73000.0	47000.0	64000.0	45000.0	59000.0	
LEAD (PB) TOT	6000.0	7800.0	2600.0	12000.0	4500.0	6800.0	
SELENIUM (SE) TOT	98.0	110.0	52.0	140.0	67.0	78.0	
ZINC (ZN) TOT	5900.0 J4	9300.0 J4	5400.0 J4	6500.0 J4	4400.0 J4	4400.0 J4	

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-18	RI3BH9-6-18	RI3BH9-6-19	RI3BH9-6-19	RI3BH9-6-19
SAMPLE DATE	05/26/2001	05/26/2001	05/26/2001	05/26/2001	05/26/2001
SAMPLE TIME	09:05	09:08	09:10	09:12	09:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831060	L010831061	L010831062	L010831063	L010831064
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	6-7'	7-8'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH9-6-18G	BH9-6-18H	BH9-6-19A	BH9-6-19B	BH9-6-19C1

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-18	RI3BH9-6-18	RI3BH9-6-19	RI3BH9-6-19	RI3BH9-6-19
ARSENIC (AS) TOT	4700.0 J2	6600.0	5000.0	74.0	64.0
CADMIUM (CD) TOT	1800.0	4700.0	5200.0	21.0 J2	16.0 J2
CHROMIUM (CR) TOT	270.0 J4	270.0 J4	210.0 J4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	140000.0	94000.0	34000.0	290.0	110.0
IRON (FE) TOT	54000.0	45000.0	39000.0	17000.0	17000.0
LEAD (PB) TOT	14000.0	30000.0	19000.0	140.0	73.0
SELENIUM (SE) TOT	160.0	150.0 J4	170.0 J4	<20.0 UJ4	<20.0 UJ4
ZINC (ZN) TOT	34000.0 J4	54000.0 J4	23000.0 J4	220.0 J4	65.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

	RI3BH9-6-19	RI3BH9-6-19	RI3BH9-6-20	RI3BH9-6-20	RI3BH9-6-20
SITE CODE	RI3BH9-6-19	RI3BH9-6-19	RI3BH9-6-20	RI3BH9-6-20	RI3BH9-6-20
SAMPLE DATE	05/26/2001	05/26/2001	05/26/2001	05/26/2001	05/26/2001
SAMPLE TIME	09:15	09:18	09:50	10:00	09:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831065	L010831066	L010831067	L010831068	L010831069
REMARKS	DUPLICATE				
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	3-4'	0-1'	1-1.5'	5-6'
SAMPLE NUMBER	BH9-6-19C2	BH9-6-19D	BH9-6-20A	BH9-6-20B	BH9-6-20C

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-19	RI3BH9-6-19	RI3BH9-6-20	RI3BH9-6-20	RI3BH9-6-20
ARSENIC (AS) TOT	62.0	53.0	30000.0	11000.0	140.0
CADMIUM (CD) TOT	19.0 J2	16.0 J2	8600.0	6200.0	27.0 J2
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	240.0 J4	330.0 J4	100.0 J4
COPPER (CU) TOT	130.0	72.0	110000.0	28000.0	180.0
IRON (FE) TOT	17000.0	17000.0	59000.0	64000.0	36000.0
LEAD (PB) TOT	92.0	38.0	20000.0	79000.0	150.0
SELENIUM (SE) TOT	<20.0 UJ4	<20.0 UJ4	120.0 J4	190.0 J4	<20.0 UJ4
ZINC (ZN) TOT	110.0 J4	10.0 J4	50000.0 J4	39000.0 J4	180.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-20	RI3BH9-6-20	RI3BH9-6-22	RI3BH9-6-22	RI3BH9-6-22
SAMPLE DATE	05/26/2001	05/26/2001	05/26/2001	05/26/2001	05/26/2001
SAMPLE TIME	09:35	09:40	11:30	11:32	11:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831070	L010831071	L010831072	L010831073	L010831074
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	6-7'	7-8'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH9-6-20D	BH9-6-20E	BH9-6-22A	BH9-6-22B	BH9-6-22C

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	100.0	67.0	12000.0	1300.0	83.0
CADMIUM (CD) TOT	26.0 J2	17.0 J2	4200.0	1100.0	<10.0
CHROMIUM (CR) TOT	110.0 J4	80.0 J4	200.0 J4	160.0 J4	<80.0 UJ4
COPPER (CU) TOT	100.0	97.0	69000.0	6900.0	88.0
IRON (FE) TOT	34000.0	24000.0	52000.0	52000.0	17000.0
LEAD (PB) TOT	100.0	360.0	15000.0	7700.0	51.0
SELENIUM (SE) TOT	<20.0 UJ4	<20.0 UJ4	130.0 J4	51.0 J4	<20.0 UJ4
ZINC (ZN) TOT	190.0 J4	110.0 J4	38000.0 J4	5200.0 J4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH9-6-22	RI3BH9-6-23	RI3BH9-6-23	RI3BH11-5
SAMPLE DATE	05/26/2001	05/26/2001	05/26/2001	05/09/2001
SAMPLE TIME	11:40	12:15	12:20	10:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010831075	L010831076	L010831077	L010692048
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	3-4'	0-1'	1-2'	0-1'
SAMPLE NUMBER	BH9-6-22D	BH9-6-23A	BH9-6-23B	BH11-5A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH9-6-22	RI3BH9-6-23	RI3BH9-6-23	RI3BH11-5
ARSENIC (AS) TOT	53.0	11000.0	6000.0	170.0
CADMIUM (CD) TOT	12.0 J2	5900.0	3500.0	31.0 J2
CHROMIUM (CR) TOT	<80.0 UJ4	350.0 J4	440.0 J4	<80.0
COPPER (CU) TOT	39.0	66000.0	47000.0	2000.0
IRON (FE) TOT	17000.0	67000.0	98000.0	30000.0
LEAD (PB) TOT	70.0	34000.0	33000.0	1400.0 J4
SELENIUM (SE) TOT	<20.0 UJ4	180.0 J4	220.0 J4	<20.0
ZINC (ZN) TOT	<10.0 UJ4	38000.0 J4	29000.0 J4	1200.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank, parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-5	RI3BH11-5	RI3BH11-5	RI3BH11-5	RI3BH11-6
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	10:05	10:15	10:15	10:18	10:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692049	L010692050	L010692051	L010692052	L010692053
REMARKS			DUPLICATE		
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	2-3'	3-4'	0-1'
SAMPLE NUMBER	BH11-5B	BH11-5C1	BH11-5C2	BH11-5D	BH11-6A

## -- METALS &amp; MINOR CONSTITUENTS --

	45.0	35.0	26.0	41.0	95.0
ARSENIC (AS) TOT	45.0	35.0	26.0	41.0	95.0
CADMIUM (CD) TOT	18.0 J2	<10.0	17.0 J2	<10.0	31.8 J2
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	490.0	270.0	280.0	480.0	1300.0
IRON (FE) TOT	14000.0	12000.0	12000.0	14000.0	22000.0
LEAD (PB) TOT	460.0 J4	280.0 J4	300.0 J4	410.0 J4	930.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	340.0 J4	180.0 J4	220.0 J4	260.0 J4	770.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-6	RI3BH11-7	RI3BH11-7	RI3BH11-7
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	10:35	11:00	11:05	11:08
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692054	L010692055	L010692056	L010692057
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH11-6B	BH11-7A	BH11-7B	BH11-7C

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-6	RI3BH11-7	RI3BH11-7	RI3BH11-7
ARSENIC (AS) TOT	140.0	82.0	89.0	54.0
CADMIUM (CD) TOT	32.0 J2	18.0 J2	26.0 J2	<10.0
CHROMIUM (CR) TOT	<80.0	87.0	<80.0	<80.0
COPPER (CU) TOT	1400.0	830.0	1300.0	380.0
IRON (FE) TOT	20000.0	22000.0	17000.0	14000.0
LEAD (PB) TOT	980.0 J4	540.0 J4	960.0 J4	370.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	830.0 J4	620.0 J4	680.0 J4	260.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-8	RI3BH11-8	RI3BH11-8	RI3BH11-8	RI3BH11-8
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	11:15	11:25	11:25	11:30	11:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692036	L010692037	L010887006	L010692038	L010692039
REMARKS			SPLIT		
TYPE	EDXRF	EDXRF	6010	EDXRF	EDXRF
DEPTH	0-1'	1-2'	1-2'	2-3'	3-4'
SAMPLE NUMBER	BH11-8A	BH11-8B	BH11-8B	BH11-8C	BH11-8D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	98.0	190.0	182.0	53.0	43.0
CADMIUM (CD) TOT	22.0 J2	36.0 J2	44.0	16.0 J2	14.0 J2
CHROMIUM (CR) TOT	86.0	<80.0	44.0	<80.0	<80.0
COPPER (CU) TOT	1300.0	1800.0	1949.0	500.0	390.0
IRON (FE) TOT	29000.0	23000.0	25860.0	15000.0	15000.0
LEAD (PB) TOT	640.0 J4	1700.0 J4	1587.0	440.0 J4	340.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<10.0	<20.0	<20.0
ZINC (ZN) TOT	930.0 J4	1100.0 J4	1460.0	240.0 J4	250.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-9	RI3BH11-9	RI3BH11-9	RI3BH11-9	RI3BH11-9
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	13:10	13:10	13:15	13:20	13:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692040	L010897007	L010692041	L010692042	L010692043
REMARKS		SPLIT			DUPLICATE
TYPE	EDXRF	6010	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	0-1'	1-2'	2-3'	2-3'
SAMPLE NUMBER	BH11-9A	BH11-9A	BH11-9B	BH11-9C1	BH11-9C2

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-9	RI3BH11-9	RI3BH11-9	RI3BH11-9	RI3BH11-9
ARSENIC (AS) TOT	110.0 J4	101.0	59.0 J4	62.0 J4	29.0 J4
CADMIUM (CD) TOT	20.0 J2	20.0	10.0 J2	22.0 J2	16.0 J2
CHROMIUM (CR) TOT	110.0	44.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	1400.0	1375.0	510.0 J4	720.0 J4	250.0 J4
IRON (FE) TOT	30000.0	32040.0	16000.0	18000.0	15000.0
LEAD (PB) TOT	670.0 J4	663.0	510.0 J4	620.0 J4	260.0 J4
SELENIUM (SE) TOT	<20.0	<10.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	1000.0 J4	1314.0	380.0 J4	440.0 J4	170.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

	RI3BH11-10	RI3BH11-10	RI3BH11-10	RI3BH11-10	RI3BH11-11
SITE CODE	RI3BH11-10	RI3BH11-10	RI3BH11-10	RI3BH11-10	RI3BH11-11
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	13:30	13:35	13:40	13:45	13:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692044	L010692045	L010692046	L010692047	L010692024
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	0-1'
SAMPLE NUMBER	BH11-10A	BH11-10B	BH11-10C	BH11-10D	BH11-11A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-10	RI3BH11-10	RI3BH11-10	RI3BH11-10	RI3BH11-11
ARSENIC (AS) TOT	110.0 J4	55.0 J4	68.0 J4	41.0 J4	180.0 J4
CADMIUM (CD) TOT	14.0 J2	13.0 J2	12.0 J2	18.0 J2	48.0
CHROMIUM (CR) TOT	81.0	<80.0	<80.0	<80.0	87.0
COPPER (CU) TOT	930.0 J4	280.0 J4	700.0 J4	280.0 J4	2000.0
IRON (FE) TOT	24000.0	20000.0	16000.0	12000.0	29000.0
LEAD (PB) TOT	620.0 J4	320.0 J4	640.0 J4	260.0 J4	1500.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	720.0 J4	190.0 J4	440.0 J4	180.0 J4	1200.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank; parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-11	RI3BH11-11	RI3BH11-11	RI3BH11-11	RI3BH11-12
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	13:50	13:55	14:05	14:10	14:51
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010887004	L010692025	L010692026	L010692027	L010692028
REMARKS	SPLIT				
TYPE	6010	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	0-1'
SAMPLE NUMBER	BH11-11A	BH11-11B	BH11-11C	BH11-11D	BH11-12A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	193.0	63.0 J4	71.0 J4	60.0 J4	270.0
CADMIUM (CD) TOT	45.0	26.0	19.0	23.0	53.0
CHROMIUM (CR) TOT	42.0	<80.0	<80.0	92.0	92.0
COPPER (CU) TOT	2449.0	870.0 J4	590.0 J4	650.0 J4	2700.0
IRON (FE) TOT	32230.0	16000.0	14000.0	16000.0	33000.0
LEAD (PB) TOT	1421.0	760.0 J4	520.0 J4	590.0 J4	1900.0 J4
SELENIUM (SE) TOT	<10.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	1587.0	520.0 J4	390.0 J4	360.0 J4	1700.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-12	RI3BH11-12	RI3BH11-12	RI3BH11-12	RI3BH11-12
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	14:51	14:20	14:30	14:30	14:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010887005	L010692029	L010692030	L010692031	L010692032
REMARKS	SPLIT			DUPLICATE	
TYPE	6010	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	2-3'	3-4'
SAMPLE NUMBER	BH11-12A	BH11-12B	BH11-12C1	BH11-12C2	BH11-12D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	278.0	35.0	23.0	15.0	46.0
CADMIUM (CD) TOT	57.0	11.0	15.0	<10.0	14.0 J2
CHROMIUM (CR) TOT	53.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	3255.0	200.0	130.0	150.0	280.0
IRON (FE) TOT	34340.0	11000.0	11000.0	11000.0	13000.0
LEAD (PB) TOT	1876.0	200.0 J4	130.0 J4	180.0 J4	300.0 J4
SELENIUM (SE) TOT	<10.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	2140.0	170.0 J4	77.0 J4	150.0 J4	190.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-13	RI3BH11-13	RI3BH11-13	RI3BH11-14	RI3BH11-14
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	05/09/2001	05/09/2001
SAMPLE TIME	14:50	14:57	15:02	09:40	09:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692033	L010692034	L010692035	L010692001	L010887003
REMARKS					SPLIT
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	6010
DEPTH	0-1'	1-2'	2-3'	0-1'	0-1'
SAMPLE NUMBER	BH11-13A	BH11-13B	BH11-13C	BH11-14A	BH11-14A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-13	RI3BH11-13	RI3BH11-13	RI3BH11-14	RI3BH11-14
ARSENIC (AS) TOT	91.0	40.0	21.0	140.0	146.0
CADMIUM (CD) TOT	18.0 J2	12.0 J2	15.0 J2	38.0 J2	31.0
CHROMIUM (CR) TOT	110.0	<80.0	<80.0	95.0	43.0
COPPER (CU) TOT	810.0	360.0	100.0	1800.0	1913.0
IRON (FE) TOT	31000.0	11000.0	14000.0	27000.0	29610.0
LEAD (PB) TOT	370.0 J4	360.0 J4	120.0 J4	990.0	972.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<10.0
ZINC (ZN) TOT	620.0 J4	290.0 J4	75.0 J4	1100.0 J4	1383.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

	RI3BH11-14	RI3BH11-14'	RI3BH11-14	RI3BH11-15	RI3BH11-15
SITE CODE	RI3BH11-14	RI3BH11-14'	RI3BH11-14	RI3BH11-15	RI3BH11-15
SAMPLE DATE	05/09/2001	05/09/2001	05/09/2001	07/17/2001	07/17/2001
SAMPLE TIME	09:45	09:50	09:58	09:56	10:01
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692002	L010692003	L010692004	L011062001	L011062002
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	0-1'	1-2'
SAMPLE NUMBER	BH11-14B	BH11-14C	BH11-14D	BH11-15A	BH11-15B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-14	RI3BH11-14'	RI3BH11-14	RI3BH11-15	RI3BH11-15
ARSENIC (AS) TOT	84.0	32.0	33.0	1200.0	1300.0
CADMIUM (CD) TOT	<10.0	<10.0	12.0 J2	200.0	440.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	820.0	200.0	300.0	10000.0	15000.0
IRON (FE) TOT	16000.0	12000.0	14000.0	31000.0	40000.0
LEAD (PB) TOT	640.0	180.0	290.0	7900.0	12000.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	61.0	76.0
ZINC (ZN) TOT	470.0 J4	92.0 J4	180.0 J4	4200.0 J4	6800.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-15	RI3BH11-15	RI3BH11-15	RI3BH11-15	RI3BH11-16
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/19/2001
SAMPLE TIME	10:07	10:08	10:15	10:16	12:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062003	L011202005	L011062004	L011202006	L011074031
REMARKS		SPLIT		SPLIT	
TYPE	EDXRF	6010	EDXRF	6010	EDXRF
DEPTH	2-3'	2-3'	3-4'	3-4'	15-16'
SAMPLE NUMBER	BH11-15C	BH11-15C	BH11-15D	BH11-15D	BH11-16A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-15	RI3BH11-15	RI3BH11-15	RI3BH11-15	RI3BH11-16
ARSENIC (AS) TOT	570.0	677.0	910.0	788.0	28.0 J4
CADMIUM (CD) TOT	140.0	172.0	280.0	271.0	15.0 J2
CHROMIUM (CR) TOT	<80.0	56.0	87.0	165.0	<80.0
COPPER (CU) TOT	3900.0 J4	6192.0 J4	5700.0	6369.0	150.0
IRON (FE) TOT	23000.0	25700.0	21000.0	23000.0	11000.0
LEAD (PB) TOT	3700.0	5031.0	7600.0	7969.0	260.0
SELENIUM (SE) TOT	23.0	29.0	40.0	35.0	<20.0
ZINC (ZN) TOT	2200.0 J4	2779.0	3900.0 J4	4053.0	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



## -- SAMPLE TYPE: SOIL --

	RI3BH11-17	RI3BH11-18	RI3BH11-18	RI3BH11-19
SITE CODE	RI3BH11-17	RI3BH11-18	RI3BH11-18	RI3BH11-19
SAMPLE DATE	07/19/2001	07/19/2001	07/19/2001	07/19/2001
SAMPLE TIME	14:38	15:45	15:45	17:09
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074032	L011074033	L011074034	L011074035
REMARKS			DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	25-26'	40-41'	40-41'	10-11'
SAMPLE NUMBER	BH11-17A	BH11-18A1	BH11-18A2	BH11-19A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-17	RI3BH11-18	RI3BH11-18	RI3BH11-19
ARSENIC (AS) TOT	25.0 J4	32.0 J4	53.0 J4	<10.0 J4
CADMIUM (CD) TOT	13.0 J2	12.0 J2	<10.0	11.0 J2
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	60.0	110.0	110.0	29.0
IRON (FE) TOT	15000.0	18000.0	21000.0	9400.0
LEAD (PB) TOT	60.0	130.0	170.0	34.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	27.0 J4	100.0 J4	180.0 J4	16.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

	RI3BH11-22	RI3BH11-23	RI3BH11-24
SITE CODE	RI3BH11-22	RI3BH11-23	RI3BH11-24
SAMPLE DATE	07/20/2001	07/20/2001	07/20/2001
SAMPLE TIME	11:55	12:55	15:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074036	L011074037	L011074038
TYPE	EDXRF	EDXRF	EDXRF
DEPTH	20-21'	12-13'	15-16'
SAMPLE NUMBER	BH11-22A	BH11-23A	BH11-24A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH11-22	RI3BH11-23	RI3BH11-24
ARSENIC (AS) TOT	37.0	29.0	24.0
CADMIUM (CD) TOT	47.0	13.0 J2	11.0 J2
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0
COPPER (CU) TOT	68.0	56.0	<20.0
IRON (FE) TOT	11000.0	22000.0	17000.0
LEAD (PB) TOT	400.0	80.0	43.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0
ZINC (ZN) TOT	230.0 J4	38.0 J4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-25	RI3BH11-26	RI3BH11-26	RI3BH11-26	RI3BH11-26
SAMPLE DATE	07/20/2001	04/30/2001	04/30/2001	04/30/2001	04/30/2001
SAMPLE TIME	15:55	14:15	14:20	14:30	14:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074039	L010692005	L010692006	L010692007	L010692008
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	0-1'	1-2'	2-3'	3-4'
SAMPLE NUMBER	BH11-25A	BH11-26A	BH11-26B	BH11-26C	BH11-26D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	22.0	34.0	15.0	15.0	16.0
CADMIUM (CD) TOT	<10.0	10.0 J2	12.0 J2	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	24.0	120.0	23.0	25.0	32.0
IRON (FE) TOT	14000.0	17000.0	11000.0	6700.0	3800.0
LEAD (PB) TOT	26.0	170.0	73.0	57.0	51.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	77.0 J4	14.0 J4	<10.0 UJ4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH11-26	RI3BH11-26	RI3BH11-26	RI3BH11-26	RI3BH11-26
SAMPLE DATE	04/30/2001	04/30/2001	04/30/2001	04/30/2001	04/30/2001
SAMPLE TIME	14:40	14:40	14:40	14:45	15:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010692009	L010692010	L010692011	L010692022	L010692023
REMARKS			DUPLICATE		
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	10-11'	10-11'	15-16'	25-26'
SAMPLE NUMBER	BH11-26E	BH11-26F1	BH11-26F2	BH11-26G	BH11-26H

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	33.0	15.0	15.0	25.0	22.0
CADMIUM (CD) TOT	<10.0	<10.0	14.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	66.0	44.0	29.0	65.0	37.0
IRON (FE) TOT	11000.0	11000.0	11000.0	4000.0	9400.0
LEAD (PB) TOT	59.0	51.0	58.0	56.0 J4	48.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-10	RI3BH12-11	RI3BH12-11	RI3BH12-11
SAMPLE DATE	04/03/2001	04/03/2001	04/03/2001	04/03/2001
SAMPLE TIME	10:40	14:10	14:20	16:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467012	L010467013	L010467014	L010467038
REMARKS				DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	52-23'	37-38'	42-43'	42-43'
SAMPLE NUMBER	BH12-10A	BH12-11A	BH12-11B1	BH12-11B2

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	12.0	57.0	43.0	43.0
CADMIUM (CD) TOT	13.0 J2 J4	<10.0 UJ4	<10.0 UJ4	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	48.0	53.0	53.0	47.0
IRON (FE) TOT	3000.0	14000.0	9600.0	11000.0
LEAD (PB) TOT	78.0	41.0	44.0	48.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ2 UJ4	<10.0 UJ2 UJ4	<10.0 UJ2 UJ4	<10.0 UJ2 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-12	RI3BH12-12	RI3BH12-13	RI3BH12-13	RI3BH12-13
SAMPLE DATE	04/03/2001	04/03/2001	04/04/2001	04/04/2001	04/04/2001
SAMPLE TIME	08:40	08:50	11:50	11:50	12:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467015	L010467016	L010467017	L010467018	L010467019
REMARKS				DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	47-48'	52-53'	46-47'	46-47'	51-52'
SAMPLE NUMBER	BH12-12A	BH12-12B	BH12-13A1	BH12-13A2	BH12-13B
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	50.0	19.0	18.0	20.0	41.0
CADMIUM (CD) TOT	13.0 J2	11.0 J2	<10.0 UJ4	12.0 J2	13.0 J2
	J4	J4		J4	J4
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	140.0	100.0	52.0	33.0	93.0
IRON (FE) TOT	8100.0	5000.0	11000.0	10000.0	6000.0
LEAD (PB) TOT	200.0	55.0	60.0	43.0	140.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	91.0 J4	<10.0 UJ2	75.0 J4	43.0 J4	12.0 J4
	J2	UJ4	J2	J2	J2

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-14	RI3BH12-14	RI3BH12-15	RI3BH12-15	RI3BH12-15
SAMPLE DATE	04/04/2001	04/04/2001	04/04/2001	04/04/2001	04/04/2001
SAMPLE TIME	11:15	11:30	14:40	14:40	14:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467020	L010467021	L010467022	L010532002	L010467023
REMARKS				SPLIT	
TYPE	EDXRF	EDXRF	EDXRF	6010	EDXRF
DEPTH	43-44'	50-51'	49-50'	49-50'	51-52'
SAMPLE NUMBER	BH12-14A	BH12-14B	BH12-15A	BH12-15A	BH12-15B

-- METALS & MINOR CONSTITUENTS --

	RI3BH12-14	RI3BH12-14	RI3BH12-15	RI3BH12-15	RI3BH12-15
ARSENIC (AS) TOT	27.0	37.0	520.0	616.0	73.0
CADMIUM (CD) TOT	<10.0 UJ4	<10.0	2800.0 J4	1945.0 J4	11.0 J2
CHROMIUM (CR) TOT	<80.0	<80.0	97.0	168.0	<80.0
COPPER (CU) TOT	45.0	110.0	1500.0	1383.0	250.0
IRON (FE) TOT	13000.0	12000.0	13000.0	16680.0	12000.0
LEAD (PB) TOT	70.0	77.0 J4	1500.0 J4	1487.0	230.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<10.0	<20.0
ZINC (ZN) TOT	100.0 J4	29.0 J4	7700.0 J4	8017.0	75.0 J4
	J2	J2	J2		J2

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-16	RI3BH12-16	RI3BH12-17	RI3BH12-17	RI3BH12-17
SAMPLE DATE	04/04/2001	04/04/2001	04/05/2001	04/05/2001	04/05/2001
SAMPLE TIME	16:05	16:15	08:30	09:00	09:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467024	L010467025	L010467026	L010467027	L010467028
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	48-49'	53-54'	48-49'	51-52'	55-56'
SAMPLE NUMBER	BH12-16A	BH12-16B	BH12-17A	BH12-17B	BH12-17C

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-16	RI3BH12-16	RI3BH12-17	RI3BH12-17	RI3BH12-17
ARSENIC (AS) TOT	49.0	30.0	250.0	87.0	39.0
CADMIUM (CD) TOT	<10.0	<10.0	72.0	17.0 J2	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	190.0	<80.0	<80.0
COPPER (CU) TOT	150.0	77.0	900.0	510.0	200.0
IRON (FE) TOT	15000.0	7400.0	57000.0	16000.0	7500.0
LEAD (PB) TOT	100.0 J4	65.0 J4	1100.0 J4	510.0 J4	230.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	410.0 J4	<10.0 UJ4	1500.0 J4	720.0 J4	220.0 J4
	J2	UJ2	J2	J2	J2

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-18	RI3BH12-18	RI3BH12-19	RI3BH12-19	RI3BH12-19
SAMPLE DATE	04/05/2001	04/05/2001	04/05/2001	04/05/2001	04/05/2001
SAMPLE TIME	10:20	10:50	13:40	13:40	13:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467029	L010467030	L010467031	L010467032	L010467033
REMARKS				DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	43-44'	48-49'	40-41'	40-41'	45-46'
SAMPLE NUMBER	BH12-18A	BH12-18B	BH12-19A1	BH12-19A2	BH12-19B

-- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-18	RI3BH12-18	RI3BH12-19	RI3BH12-19	RI3BH12-19
ARSENIC (AS) TOT	47.0	47.0	59.0	46.0	34.0
CADMIUM (CD) TOT	11.0 J2	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	160.0	83.0	78.0	51.0	93.0
IRON (FE) TOT	11000.0	17000.0	20000.0	20000.0	16000.0
LEAD (PB) TOT	51.0 J4	60.0 J4	54.0 J4	64.0 J4	64.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	11.0 J4	49.0 J4	22.0 J4	<10.0 UJ4
	UJ2	J2	J2	J2	UJ2

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

	RI3BH12-20	RI3BH12-20	RI3BH12-20	RI3BH12-21	RI3BH12-21
SITE CODE	RI3BH12-20	RI3BH12-20	RI3BH12-20	RI3BH12-21	RI3BH12-21
SAMPLE DATE	04/05/2001	04/05/2001	04/05/2001	04/05/2001	04/05/2001
SAMPLE TIME	14:45	14:45	14:55	15:35	15:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010467034	L010467039	L010467035	L010467036	L010467037
REMARKS		DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	31-32'	31-32'	36-37'	20-21'	25-26'
SAMPLE NUMBER	BH12-20A1	BH12-20A2	BH12-20B	BH12-21A	BH12-21B

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-20	RI3BH12-20	RI3BH12-20	RI3BH12-21	RI3BH12-21
ARSENIC (AS) TOT	21.0	24.0	29.0	85.0	39.0
CADMIUM (CD) TOT	<10.0	11.0	10.0	14.0	12.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	<20.0	36.0	45.0	67.0	38.0
IRON (FE) TOT	17000.0	17000.0	17000.0	20000.0	24000.0
LEAD (PB) TOT	46.0 J4	37.0 J4	45.0 J4	51.0 J4	59.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4
	UJ2	UJ2	UJ2	UJ2	UJ2

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-22	RI3BH12-22	RI3BH12-23	RI3BH12-23	RI3BH12-23
SAMPLE DATE	04/06/2001	04/06/2001	07/17/2001	07/17/2001	07/17/2001
SAMPLE TIME	08:50	09:05	10:55	11:00	11:10
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010497031	L010497032	L011062005	L011062006	L011062007
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	25-26'	31-32'	0-1'	1-2'	3-4'
SAMPLE NUMBER	BH12-22A	BH12-22B	BH12-23A	BH12-23B	BH12-23D

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-22	RI3BH12-22	RI3BH12-23	RI3BH12-23	RI3BH12-23
ARSENIC (AS) TOT	88.0	40.0	2700.0	2200.0	1800.0
CADMIUM (CD) TOT	<10.0	<10.0	2700.0	2600.0	2200.0
CHROMIUM (CR) TOT	<80.0 UJ4	97.0 J4	180.0	130.0	160.0
COPPER (CU) TOT	80.0	55.0	13000.0	10000.0	8800.0
IRON (FE) TOT	20000.0	21000.0	37000.0	31000.0	37000.0
LEAD (PB) TOT	42.0	55.0	24000.0	19000.0	17000.0
SELENIUM (SE) TOT	<20.0 UJ4	<20.0 UJ4	130.0	120.0	110.0
ZINC (ZN) TOT	<10.0 UJ4	<10.0 UJ4	10000.0 J4	8700.0 J4	7600.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-23	RI3BH12-23	RI3BH12-23	RI3BH12-23	RI3BH12-23	RI3BH12-23
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001
SAMPLE TIME	11:15	11:20	11:20	11:24	11:30	11:38
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062008	L011062009	L011062010	L011062011	L011062012	L011062013
REMARKS			DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	7-8'	7-8'	10-11'	12-13'	15-16'
SAMPLE NUMBER	BH12-23E	BH12-23F1	BH12-23F2	BH12-23G	BH12-23H	BH12-23I

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	1100.0	23.0	21.0	29.0	27.0	36.0
CADMIUM (CD) TOT	780.0	<10.0	<10.0	<10.0	<10.0	19.0
CHROMIUM (CR) TOT	320.0	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	5300.0	73.0	66.0	45.0	120.0	190.0
IRON (FE) TOT	120000.0	12000.0	12000.0	15000.0	13000.0	14000.0
LEAD (PB) TOT	9300.0	78.0	63.0	68.0	96.0	140.0
SELENIUM (SE) TOT	91.0	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	8500.0 J4	22.0 J4	10.0 J4	<10.0 UJ4	280.0 J4	260.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-24
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001
SAMPLE TIME	13:25	13:30	13:31	13:35	13:50	13:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062014	L011062015	L011062016	L011062017	L011062018	L011062019
REMARKS						DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	4-5'	7-8'	7-8'
SAMPLE NUMBER	BH12-24A	BH12-24B	BH12-24C	BH12-24E	BH12-24F1	BH12-24F2 (DUP)

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-24
ARSENIC (AS) TOT	3200.0	730.0	2400.0	88.0 J4	35.0 J4	40.0 J4
CADMIUM (CD) TOT	3200.0	450.0	1500.0	41.0	<10.0	14.0
CHROMIUM (CR) TOT	210.0	440.0	370.0	95.0	<80.0	<80.0
COPPER (CU) TOT	16000.0	3100.0	10000.0	670.0 J4	330.0 J4	170.0 J4
IRON (FE) TOT	38000.0	190000.0	120000.0	27000.0	13000.0	16000.0
LEAD (PB) TOT	28000.0	1100.0	19000.0	560.0 J4	230.0 J4	76.0 J4
SELENIUM (SE) TOT	150.0	<20.0	150.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	11000.0 J4	11000.0 J4	12000.0 J4	840.0 J4	140.0 J4	190.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank; parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-25	RI3BH12-25
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001
SAMPLE TIME	13:54	14:01	14:06	14:35	14:36
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062020	L011062021	L011062022	L011062023	L011062024
REMARKS					
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	SPLIT
DEPTH	10-11'	12-13'	15-16'	0-1'	0-1'
SAMPLE NUMBER	BH12-24G	BH12-24H	BH12-24I	BH12-25A	BH12-25A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-24	RI3BH12-24	RI3BH12-24	RI3BH12-25	RI3BH12-25
ARSENIC (AS) TOT	22.0 J4	33.0 J4	25.0 J4	190.0 J4	112.0 J4
CADMIUM (CD) TOT	11.0	<10.0	12.0 J2	280.0	265.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	120.0	100.0
COPPER (CU) TOT	70.0 J4	250.0 J4	120.0 J4	1500.0	1589.0
IRON (FE) TOT	10000.0	10000.0	6600.0	46000.0	65100.0
LEAD (PB) TOT	71.0 J4	120.0 J4	78.0 J4	1100.0	942.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	16.0
ZINC (ZN) TOT	<10.0 UJ4	300.0 J4	72.0 J4	3100.0 J4	5353.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-25	RI3BH12-25	RI3BH12-25	RI3BH12-25	RI3BH12-25	RI3BH12-25
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001
SAMPLE TIME	14:40	14:45	14:50	14:55	15:00	15:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062024	L011062025	L011062026	L011062027	L011062028	L011062029
REMARKS					DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	2-3'	3-4'	5-6'	5-6'	7-8'
SAMPLE NUMBER	BH12-25B	BH12-25C	BH12-25D	BH12-25E1	BH12-25E2	BH12-25F

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-25	RI3BH12-25	RI3BH12-25	RI3BH12-25	RI3BH12-25	RI3BH12-25
ARSENIC (AS) TOT	89.0 J4	23.0 J4	24.0 J4	21.0 J4	30.0 J4	36.0 J4
CADMIUM (CD) TOT	31.0 J2	19.0 J2	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	220.0	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	1200.0	96.0	45.0	70.0	68.0	35.0
IRON (FE) TOT	84000.0	14000.0	12000.0	10000.0	11000.0	11000.0
LEAD (PB) TOT	180.0	77.0	81.0	85.0	97.0	51.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	3600.0 J4	130.0 J4	58.0 J4	42.0 J4	83.0 J4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-25	RI3BH12-25	RI3BH12-26	RI3BH12-26	RI3BH12-26
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001
SAMPLE TIME	15:05	15:13	16:03	16:10	16:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074043	L011074044	L011074006	L011074007	L011074008
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	12-13'	15-16'	4-5'	7-8'	10-11'
SAMPLE NUMBER	BH12-25H	BH12-25I	BH12-26A	BH12-26B	BH12-26C1

-- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-25	RI3BH12-25	RI3BH12-26	RI3BH12-26	RI3BH12-26
ARSENIC (AS) TOT	19.0 J4	18.0 J4	25.0	44.0	13.0
CADMIUM (CD) TOT	11.0 J2 J4	<10.0 UJ4	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	77.0	78.0	100.0	210.0	59.0
IRON (FE) TOT	2100.0	5300.0	13000.0 J4	15000.0 J4	14000.0 J4
LEAD (PB) TOT	88.0	77.0	130.0 J4	150.0 J4	66.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	60.0 J4	65.0 J4	79.0 J4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.



## -- SAMPLE TYPE: SOIL --

	RI3BH12-26	RI3BH12-26	RI3BH12-27	RI3BH12-27	RI3BH12-27
SITE CODE	RI3BH12-26	RI3BH12-26	RI3BH12-27	RI3BH12-27	RI3BH12-27
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/17/2001	07/17/2001
SAMPLE TIME	16:15	16:20	16:35	16:38	16:43
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074009	L011074010	L011074001	L011074002	L011074003
REMARKS	DUPLICATE				
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	12-13'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH12-26C2 (DUP)	BH12-26D	BH12-27A	BH12-27B	BH12-27C

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-26	RI3BH12-26	RI3BH12-27	RI3BH12-27	RI3BH12-27
ARSENIC (AS) TOT	29.0	26.0	2200.0	210.0	330.0
CADMIUM (CD) TOT	11.0	14.0	2200.0	30.0	270.0
CHROMIUM (CR) TOT	<80.0	88.0	140.0	<80.0	<80.0
COPPER (CU) TOT	54.0	98.0	13000.0	1700.0	2000.0
IRON (FE) TOT	15000.0 J4	20000.0 J4	33000.0	15000.0 J4	8700.0 J4
LEAD (PB) TOT	44.0 J4	92.0 J4	20000.0 J4	1400.0 J4	3500.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	110.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	240.0 J4	9600.0 J4	1300.0 J4	1700.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-27	RI3BH12-27	RI3BH12-27	RI3BH12-28
SAMPLE DATE	07/17/2001	07/17/2001	07/17/2001	07/18/2001
SAMPLE TIME	16:44	16:48	16:54	08:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011202002	L011074004	L011074005	L011074016
REMARKS	SPLIT			
TYPE	6010	EDXRF	EDXRF	EDXRF
DEPTH	2-3'	4-5'	7-8'	15-16'
SAMPLE NUMBER	BH12-27C	BH12-27D	BH12-27E	BH12-28A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	336.0	16.0	34.0	36.0
CADMIUM (CD) TOT	313.0	20.0	<10.0	24.0 J2
CHROMIUM (CR) TOT	70.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	1979.0	130.0	160.0	140.0
IRON (FE) TOT	14300.0 J4	1900.0 J4	1900.0 J4	4800.0
LEAD (PB) TOT	3723.0	170.0 J4	180.0 J4	190.0 J4
SELENIUM (SE) TOT	25.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	1978.0	<10.0 UJ4	<10.0 UJ4	55.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank; parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-29	RI3BH12-29	RI3BH12-29	RI3BH12-29	RI3BH12-29
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001	07/18/2001
SAMPLE TIME	09:25	09:25	09:35	09:40	09:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074017	L011074025	L011074018	L011074019	L011074020
REMARKS		DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	4-5'	7-8'	10-11'	13-13'
SAMPLE NUMBER	BH12-29A1	BH12-29A2 (DUP)	BH12-29B	BH12-29C	BH12-29D

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	24.0	32.0	44.0	25.0	34.0
CADMIUM (CD) TOT	10.0 J2	<10.0	16.0 J2	12.0 J2	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	45.0	72.0	52.0	46.0	100.0
IRON (FE) TOT	11000.0	12000.0	15000.0	14000.0	9600.0
LEAD (PB) TOT	87.0 J4	81.0	64.0 J4	43.0 J4	80.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	38.0 J4	38.0 J4	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank; parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

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## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-30	RI3BH12-30	RI3BH12-30	RI3BH12-30	RI3BH12-31
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001	07/18/2001
SAMPLE TIME	10:10	10:15	10:20	10:25	11:18
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074021	L011074022	L011074023	L011074024	L011074026
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	12-13'	15-16'	17-18'	7-8'
SAMPLE NUMBER	BH12-30A	BH12-30B	BH12-30C	BH12-30D	BH12-31A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	31.0	22.0	22.0	23.0	35.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	12.0	10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	82.0	37.0	59.0	<20.0	90.0
IRON (FE) TOT	18000.0	14000.0	11000.0	9800.0	14000.0
LEAD (PB) TOT	47.0	41.0	59.0	53.0	91.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	180.0 J4	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4	17.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-31	RI3BH12-31	RI3BH12-31	RI3BH12-32	RI3BH12-32
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001	07/18/2001
SAMPLE TIME	11:22	11:27	11:31	13:30	13:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074027	L011074028	L011074029	L011074030	L011062031
REMARKS					DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	12-13'	15-16'	7-8'	7-8'
SAMPLE NUMBER	BH12-31B	BH12-31C	BH12-31D	BH12-32A1	BH12-32A2

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	27.0	33.0	32.0	120.0 J4	73.0 J4
CADMIUM (CD) TOT	13.0	<10.0	<10.0	26.0	25.0 J2
CHROMIUM (CR) TOT	<80.0	86.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	41.0	41.0	<20.0	530.0	580.0
IRON (FE) TOT	14000.0	23000.0	18000.0	19000.0	17000.0
LEAD (PB) TOT	52.0	26.0	47.0	670.0	780.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0 UJ4	18.0 J4	<10.0 UJ4	350.0 J4	370.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-32	RI3BH12-32	RI3BH12-33	RI3BH12-34
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001
SAMPLE TIME	13:39	13:43	14:15	14:41
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062032	L011062033	L011062034	L011062035
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	12-13'	15-16'	12-13'	4-5'
SAMPLE NUMBER	BH12-32B	BH12-32C	BH12-33A	BH12-34A1

-- METALS & MINOR CONSTITUENTS --

	RI3BH12-32	RI3BH12-32	RI3BH12-33	RI3BH12-34
ARSENIC (AS) TOT	34.0 J4	44.0 J4	15.0 J4	49.0 J4
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	39.0 J4
				J2
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	190.0	190.0	180.0	440.0 J4
IRON (FE) TOT	11000.0	15000.0	6500.0	18000.0
LEAD (PB) TOT	120.0	150.0	91.0	510.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	370.0 J4	94.0 J4	170.0 J4	590.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-34	RI3BH12-34	RI3BH12-34	RI3BH12-34	RI3BH12-34
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001	07/18/2001
SAMPLE TIME	14:41	14:46	14:50	14:55	14:59
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062036	L011062037	L011062038	L011062039	L011062040
REMARKS	DUPLICATE				
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	4-5'	7-8'	10-11'	12-13'	15-16'
SAMPLE NUMBER	BH12-34A2 (DUP)	BH12-34B	BH12-34C	BH12-34D	BH12-34E

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	430.0	J4	160.0	J4	73.0	J4	250.0	J4	140.0	J4
CADMIUM (CD) TOT	470.0	J4	58.0	J4	14.0	J4	180.0	J4	100.0	J4
					J2					
CHROMIUM (CR) TOT	97.0		<80.0		140.0		100.0		<80.0	
COPPER (CU) TOT	3000.0	J4	1300.0	J4	720.0	J4	1700.0	J4	1100.0	J4
IRON (FE) TOT	22000.0		18000.0		55000.0		26000.0		11000.0	
LEAD (PB) TOT	5700.0	J4	1300.0	J4	170.0	J4	2500.0	J4	1600.0	J4
SELENIUM (SE) TOT	40.0		<20.0		<20.0		<20.0		<20.0	
ZINC (ZN) TOT	3200.0	J4	740.0	J4	2300.0	J4	1700.0	J4	910.0	J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

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-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-35	RI3BH12-35	RI3BH12-35	RI3BH12-35	RI3BH12-35	RI3BH12-35
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001	07/18/2001	07/18/2001
SAMPLE TIME	15:30	15:30	15:40	15:45	15:46	15:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062041	L011062042	L011062043	L011062044	L011062045	L011062030
REMARKS		DUPLICATE				
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	7-8'	7-8'	10-11'	12-13'	15-16'	17-18'
SAMPLE NUMBER	BH12-35A1	BH12-35A2	BH12-35B	BH12-35C	BH12-35D	BH12-35E

## -- METALS &amp; MINOR CONSTITUENTS --

	110.0	J4	70.0	J4	74.0	J4	29.0	J4	68.0	J4	63.0	J4
ARSENIC (AS) TOT	110.0	J4	70.0	J4	74.0	J4	29.0	J4	68.0	J4	63.0	J4
CADMIUM (CD) TOT	35.0		18.0		21.0		<10.0		24.0		25.0	J2
CHROMIUM (CR) TOT	<80.0		<80.0		<80.0		<80.0		<80.0		<80.0	
COPPER (CU) TOT	710.0		540.0		410.0		43.0		360.0		360.0	
IRON (FE) TOT	24000.0	J4	16000.0	J4	16000.0	J4	15000.0	J4	17000.0	J4	13000.0	J4
LEAD (PB) TOT	930.0		690.0		530.0		51.0		460.0		480.0	
SELENIUM (SE) TOT	<20.0		<20.0		<20.0		<20.0		<20.0		<20.0	
ZINC (ZN) TOT	410.0	J4	320.0	J4	260.0	J4	<10.0	UJ4	270.0	J4	240.0	J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## ANALYSES SUMMARY REPORT

DataMan Program

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-36	RI3BH12-36	RI3BH12-36	RI3BH12-36	RI3BH12-37
SAMPLE DATE	07/18/2001	07/18/2001	07/18/2001	07/18/2001	07/19/2001
SAMPLE TIME	16:25	16:26	16:25	16:37	09:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074040	L011202003	L011074041	L011074042	L011074011
REMARKS		SPLIT	DUPLICATE		
TYPE	EDXRF	6010	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	10-11'	10-11'	12-13'	7-8'
SAMPLE NUMBER	BH12-36A1	BH12-36A1	BH12-36A2 (DUP)	BH12-36B	BH12-37A

## -- METALS &amp; MINOR CONSTITUENTS --

	700.0	J4	569.0	1300.0	J4	100.0	J4	190.0
ARSENIC (AS) TOT	540.0	J4	564.0	1400.0	J4	83.0	J4	19.0
CADMIUM (CD) TOT	98.0		97.0	120.0		<80.0		19.0
CHROMIUM (CR) TOT	3000.0	J4	2895.0	6900.0	J4	1200.0	J4	<80.0
COPPER (CU) TOT	25000.0		28800.0	26000.0		9100.0		1000.0
IRON (FE) TOT	6100.0	J4	5954.0	13000.0	J4	1200.0	J4	22000.0
LEAD (PB) TOT	43.0	J4	44.0	91.0	J4	<20.0	J4	1100.0
SELENIUM (SE) TOT	2700.0	J4	2793.0	5600.0	J4	420.0	J4	<20.0
ZINC (ZN) TOT								750.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## ANALYSES SUMMARY REPORT

DataMan Program

-- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH12-37	RI3BH12-37	RI3BH12-37	RI3BH12-38
SAMPLE DATE	07/19/2001	07/19/2001	07/19/2001	07/19/2001
SAMPLE TIME	09:50	09:55	10:00	10:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074012	L011074013	L011074014	L011074015
TYPE	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	15-16'	18-19'	5-6'
SAMPLE NUMBER	BH12-37B	BH12-37C	BH12-37D	BH12-38A

-- METALS &amp; MINOR CONSTITUENTS --

	RI3BH12-37	RI3BH12-37	RI3BH12-37	RI3BH12-38
ARSENIC (AS) TOT	120.0	19.0 J4	33.0 J4	27.0 J4
CADMIUM (CD) TOT	13.0 J2	<10.0	12.0 J2	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0	<80.0
COPPER (CU) TOT	900.0	40.0	<20.0	58.0
IRON (FE) TOT	16000.0	14000.0	17000.0	14000.0
LEAD (PB) TOT	670.0 J4	41.0 J4	32.0 J4	59.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	280.0 J4	17.0 J4	<10.0 UJ4	<10.0 UJ4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH13-2	RI3BH13-3	RI3BH13-4
SAMPLE DATE	07/20/2001	07/21/2001	07/21/2001
SAMPLE TIME	17:45	08:20	09:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011074045	L011062046	L011062047
TYPE	EDXRF	EDXRF	EDXRF
DEPTH	15-16'	20-21'	22-23'
SAMPLE NUMBER	BH13-2A	BH13-3A	BH13-4A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	470.0	22.0	86.0
CADMIUM (CD) TOT	92.0 J4	35.0	230.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0
COPPER (CU) TOT	1600.0	<20.0	82.0
IRON (FE) TOT	12000.0	4900.0	18000.0
LEAD (PB) TOT	5100.0	74.0	320.0
SELENIUM (SE) TOT	29.0	<20.0	<20.0
ZINC (ZN) TOT	1400.0 J4	14.0 J4	550.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank; parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH13-9	RI3BH13-10	RI3BH13-11
SAMPLE DATE	07/23/2001	07/23/2001	07/23/2001
SAMPLE TIME	11:30	12:15	13:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062048	L011062049	L011062050
TYPE	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	15-16'	25-26'
SAMPLE NUMBER	BH13-9A	BH13-10A	BH13-11A

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	97.0	140.0	26.0
CADMIUM (CD) TOT	210.0 J4	260.0 J4	47.0 J4
CHROMIUM (CR) TOT	<80.0	<80.0	94.0
COPPER (CU) TOT	78.0	<20.0	540.0
IRON (FE) TOT	10000.0 J4	3300.0 J4	28000.0 J4
LEAD (PB) TOT	250.0	190.0	1500.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0
ZINC (ZN) TOT	180.0 J4	170.0 J4	1500.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH13-13	RI3BH13-13	RI3BH14-4	RI3BH14-4	RI3BH14-4
SAMPLE DATE	07/23/2001	07/23/2001	04/10/2001	04/10/2001	04/10/2001
SAMPLE TIME	14:45	14:45	14:55	15:00	15:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011062051	L011062052	L010605001	L010605002	L010605003
REMARKS		DUPLICATE			
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	15-16'	15-16'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH13-13A1	BH13-13A2	BH14-4A	BH14-4B	BH14-4C

-- METALS & MINOR CONSTITUENTS --

	RI3BH13-13	RI3BH13-13	RI3BH14-4	RI3BH14-4	RI3BH14-4
ARSENIC (AS) TOT	880.0	1100.0	670.0	27.0 J4	28.0 J4
CADMIUM (CD) TOT	140.0 J4	330.0 J4	140.0 J4	15.0 J2 J4	11.0 J2 J4
CHROMIUM (CR) TOT	250.0	150.0	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	1900.0	2100.0	24000.0	270.0	870.0
IRON (FE) TOT	130000.0 J4	62000.0 J4	31000.0	8000.0	8500.0
LEAD (PB) TOT	13000.0	11000.0	3800.0	440.0	180.0
SELENIUM (SE) TOT	57.0	58.0	45.0	<20.0	<20.0
ZINC (ZN) TOT	5600.0 J4	3600.0 J4	2200.0	190.0	59.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1,Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH14-4	RI3BH14-4	RI3BH14-4	RI3BH14-5	RI3BH14-5
SAMPLE DATE	04/10/2001	04/10/2001	04/10/2001	04/10/2001	04/10/2001
SAMPLE TIME	15:10	15:15	15:20	15:30	15:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010605004	L010605005	L010605006	L010605007	L010887001
REMARKS					SPLIT
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	6010
DEPTH	3-4'	4-5'	10-11'	0-1'	0-1'
SAMPLE NUMBER	BH14-4D	BH14-4E	BH14-4F	BH14-5A	BH14-5A

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH14-4	RI3BH14-4	RI3BH14-4	RI3BH14-5	RI3BH14-5
ARSENIC (AS) TOT	19.0 J4	<10.0 UJ4	11.0 J4	170.0 J4	105.0 J4
CADMIUM (CD) TOT	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4	110.0 J4	118.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	82.0
COPPER (CU) TOT	160.0	<20.0	<20.0	3400.0	4454.0
IRON (FE) TOT	7300.0	6200.0	8000.0	19000.0	23910.0
LEAD (PB) TOT	70.0	14.0	36.0	3200.0	3037.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	20.0
ZINC (ZN) TOT	12.0	<10.0	<10.0	2100.0	2876.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH14-5	RI3BH14-5	RI3BH14-5	RI3BH14-5	RI3BH14-5
SAMPLE DATE	04/10/2001	04/10/2001	04/10/2001	04/10/2001	04/10/2001
SAMPLE TIME	15:35	15:45	15:50	15:55	15:55
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010605008	L010605009	L010605010	L010605011	L010605012
REMARKS					DUPLICATE
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	1-2'	3-4'	4-5'	10-11'	10-11'
SAMPLE NUMBER	BH14-5B	BH14-5D	BH14-5E	BH14-5F1	BH14-5F2

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	100.0 J4	310.0	280.0	<10.0 UJ4	<10.0 UJ4
CADMIUM (CD) TOT	35.0 J2 J4	88.0 J4	66.0 J4	<10.0 UJ4	<10.0 UJ4
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	2000.0	3000.0	2400.0	<20.0	<20.0
IRON (FE) TOT	15000.0	18000.0	23000.0	3400.0	3300.0
LEAD (PB) TOT	1300.0	3000.0	2800.0	21.0	23.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	550.0	1300.0	1300.0	<10.0	<10.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH14-6	RI3BH14-6	RI3BH14-6	RI3BH14-6	RI3BH14-6	RI3BH14-6
SAMPLE DATE	04/16/2001	04/16/2001	04/16/2001	04/16/2001	04/16/2001	04/16/2001
SAMPLE TIME	16:45	16:48	16:50	16:55	17:00	17:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010605013	L010605014	L010605015	L010605016	L010605017	L010605018
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	0-1'	1-2'	2-3'	3-4'	4-5'	10-11'
SAMPLE NUMBER	BH14-6A	BH14-6B	BH14-6C	BH14-6D	BH14-6E	BH14-6F1

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	130.0	68.0	76.0	21.0	33.0	<10.0
CADMIUM (CD) TOT	28.0 J2	<10.0 UJ4	<10.0 UJ4	<10.0 UJ4	11.0 J2	<10.0 UJ4
	J4				J4	
CHROMIUM (CR) TOT	85.0 J4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	5600.0	560.0	2500.0	120.0	680.0	<20.0
IRON (FE) TOT	15000.0	13000.0	13000.0	13000.0	12000.0	6400.0
LEAD (PB) TOT	950.0	330.0	350.0	46.0	140.0	15.0
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	460.0	66.0	150.0	15.0	48.0	<10.0

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.



## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH14-6	RI3BH15-14	RI3BH15-14	RI3BH15-14	RI3BH15-14
SAMPLE DATE	04/16/2001	06/01/2001	06/01/2001	06/01/2001	06/01/2001
SAMPLE TIME	17:05	16:22	16:34	16:34	16:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010605019	L010833011	L010833012	L010833013	L010833014
REMARKS	DUPLICATE			DUPLICATE	
TYPE	EDXRF	EDXRF	EDXRF	EDXRF	EDXRF
DEPTH	10-11'	50-51'	55-56'	55-56'	60-61'
SAMPLE NUMBER	BH14-6F2	BH15-14A	BH15-14B1	BH15-14B2	BH15-14C

## -- METALS &amp; MINOR CONSTITUENTS --

	RI3BH14-6	RI3BH15-14	RI3BH15-14	RI3BH15-14	RI3BH15-14
ARSENIC (AS) TOT	<10.0	17.0	19.0	19.0	36.0
CADMIUM (CD) TOT	<10.0 UJ4	10.0	<10.0	<10.0	19.0
CHROMIUM (CR) TOT	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4	<80.0 UJ4
COPPER (CU) TOT	28.0	12.0	48.0	<20.0	27.0
IRON (FE) TOT	6200.0	18000.0	14000.0	15000.0	17000.0
LEAD (PB) TOT	31.0	31.0 J4	33.0 J4	43.0 J4	32.0 J4
SELENIUM (SE) TOT	<20.0	<20.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	<10.0	<10.0 J4	<10.0 J4	<10.0 J4	55.0 J4

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested  
 Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;  
 R: Rejected.

## -- SAMPLE TYPE: SOIL --

SITE CODE	RI3BH15-14	RI3BH15-14	RI3EP-119	RI3EP-119	RI3EP-119
SAMPLE DATE	06/01/2001	06/01/2001	04/02/2001	04/02/2001	04/02/2001
SAMPLE TIME	17:28	17:28	16:00	16:05	16:10
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010833016	L011009003	L010467006	L010467007	L010467008
REMARKS		SPLIT			
TYPE	EDXRF	6010	EDXRF	EDXRF	EDXRF
DEPTH	70-71'	70-71'	0-1'	1-2'	2-3'
SAMPLE NUMBER	BH15-14E	BH15-14E	EP-119A	EP-119B	EP-119C

## -- METALS &amp; MINOR CONSTITUENTS --

ARSENIC (AS) TOT	87.0	102.0	160.0	64.0	91.0
CADMIUM (CD) TOT	25.0	29.0	35.0 J2 J4	20.0 J2 J4	21.0 J2 J4
CHROMIUM (CR) TOT	<80.0 UJ4	42.0	<80.0	<80.0	93.0
COPPER (CU) TOT	<20.0	17.0	2000.0	640.0	860.0
IRON (FE) TOT	13000.0	17400.0	14000.0	14000.0	24000.0
LEAD (PB) TOT	28.0 J4	13.0	800.0	550.0	660.0
SELENIUM (SE) TOT	<20.0	<10.0	<20.0	<20.0	<20.0
ZINC (ZN) TOT	360.0 J4	376.0	870.0 J4 J2	450.0 J4 J2	410.0 J4 J2

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)  
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested  
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;  
 R:Rejected.

## **APPENDIX J**

### **PHASE III LITHOLOGIC LOGS AND MONITORING WELL COMPLETION REPORTS**

## **APPENDIX J**

### **PHASE III LITHOLOGIC LOGS AND MONITORING WELL COMPLETION REPORTS**

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-1

Date Hole Started: 4/16/01

Date Hole Finished: 4/16/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 35

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-1A	SS	2.3	0.80	0.0 - 1.0'		0.0 - 2.0' <b>Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded, chert, 60% gravel, 30% sand, 10% fines, loose. [Fill]
	BH9-1-1B	SS	7.7	0.60	1.0 - 2.0'		
5	BH9-1-1C	SS	6.3	0.80	3.0 - 4.0'		3.0 - 16.5' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, coarse to medium grained, moist, no odor, medium dense, rounded to sub-rounded, quartz, chert, andesite. [Alluvium]
	BH9-1-1D	SS	3.6	0.60	4.0 - 5.0'		
10	BH9-1-1E	SS	4.5	1.00	10.0 - 11.0'		
15	BH9-1-1F	SS	4.7	1.00	15.0 - 16.0'		
20	BH9-1-1G	SS	28.39	1.00	20.0 - 21.0'		16.5 - 21.5' <b>Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, dense, rounded to sub-rounded, chert, quartz, andesite, 75% gravel, 5% fines. [Alluvium]
25	BH9-1-1H	SS	50/5.0	1.00	25.0 - 26.0'		21.5 - 25.0' <b>Sandy Gravelly CLAY</b> Pale yellowish brown 10YR6/2, moist, no odor, low density, non-plastic, 70% clay, 20% quartz sand, 10% andesite gravel, stiff. [Alluvium]
30	BH9-1-1I	SS	50/5.0	1.00	30.0 - 31.0'		25.0 - 35.0' <b>Clayey Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, dense, angular to sub-angular, andesite, rhyolite, chert, quartz, 20% clay, 10% sand, 70% gravel. [Alluvium]
35							
40							
45							
50							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-2

Date Hole Started: 4/17/01 Date Hole Finished: 4/17/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1  
  
Recorded By: Matthew Miles  
Drilling Company: Tierra Drilling & Envir. Svcs.  
Driller: John McDuffee & Carlos Guerra  
Drilling Method: Hollow Stem Auger w/ Split Spoons  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 7"  
Total Depth Drilled (ft): 42

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 1.0'	BH9-1-2A	SS	4.6	0.80	0.0 - 1.0'		0.0 - 1.0' <b>Gravelly SAND</b> Grayish orange 10YR7/4, fine grained, dry, no odor, rounded, loose, uniform, quartz.
1.0 - 2.0'	BH9-1-2B	SS	6.7	1.00	1.0 - 2.0'		1.0 - 2.0' <b>Gravelly SAND w/ fines</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded, loose, 60% sand, 30% gravel, 10% fines.
2.0 - 3.0'	BH9-1-2C	SS	3.2	0.60	3.0 - 4.0'		3.0 - 4.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, coarse to medium grained, dry, no odor, medium dense, rounded to sub-rounded, 75% sand, 25% gravel. Gravel is chert and andesite, sand is quartz and andesite.
3.0 - 4.0'	BH9-1-2D	SS	3.5	0.60	4.0 - 5.0'		4.0 - 5.0' <b>Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, dense, quartzite, andesite, 70% gravel, 20% sand, 10% fines.
4.0 - 5.0'	BH9-1-2E	SS	5.10	1.00	7.0 - 8.0'		7.0 - 8.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, medium to coarse grained, dry, no odor, medium dense, rounded to angular, 75% sand, 25% gravel, quartzite, andesite.
5.0 - 6.0'	BH9-1-2F	SS	6.10	1.00	10.0 - 11.0'		10.0 - 11.0'
6.0 - 7.0'	BH9-1-2G	SS	8.9	1.00	15.0 - 16.0'		15.0 - 16.0'
7.0 - 8.0'	BH9-1-2H	SS	50/5.0	0.50	20.0 - 21.0'		20.0 - 21.0'
8.0 - 9.0'	BH9-1-2I	SS	40.50/1	0.60	25.0 - 26.0'		25.0 - 26.0'
9.0 - 10.0'							
10.0 - 11.0'							
11.0 - 12.0'							
12.0 - 13.0'							
13.0 - 14.0'							
14.0 - 15.0'							
15.0 - 16.0'							
16.0 - 17.0'							
17.0 - 18.0'							
18.0 - 19.0'							
19.0 - 20.0'							
20.0 - 21.0'							
21.0 - 22.0'							
22.0 - 23.0'							
23.0 - 24.0'							
24.0 - 25.0'							
25.0 - 26.0'							
26.0 - 27.0'							
27.0 - 28.0'							
28.0 - 29.0'							
29.0 - 30.0'							
30.0 - 31.0'							
31.0 - 32.0'							
32.0 - 33.0'							
33.0 - 34.0'							
34.0 - 35.0'							
35.0 - 36.0'							
36.0 - 37.0'							
37.0 - 38.0'							
38.0 - 39.0'							
39.0 - 40.0'							
40.0 - 41.0'							
41.0 - 42.0'							
42.0 - 43.0'							
43.0 - 44.0'							
44.0 - 45.0'							
45.0 - 46.0'							
46.0 - 47.0'							
47.0 - 48.0'							
48.0 - 49.0'							
49.0 - 50.0'							
50.0 - 51.0'							
51.0 - 52.0'							
52.0 - 53.0'							
53.0 - 54.0'							
54.0 - 55.0'							
55.0 - 56.0'							
56.0 - 57.0'							
57.0 - 58.0'							
58.0 - 59.0'							
59.0 - 60.0'							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-3

Date Hole Started: 4/17/01 Date Hole Finished: 4/17/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 42

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0	BH9-1-3A	SS	4.6	1.00	0.0 - 1.0'		0.0 - 1.0' <b>Gravelly SAND w/ fines</b> Dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, powdery, loose, low density, rounded to sub-rounded, roots, wood chunks, 80% sand, 10% gravel, 10% fines.
1	BH9-1-3B	SS	7.9	1.00	1.0 - 2.0'		1.0 - 4.5' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse, dry, no odor, rounded to sub-rounded, loose, andesite, quartzite, 60% sand, 40% gravel.
2	BH9-1-3C	SS	11.10	1.00	2.0 - 3.0'		[Alluvium] 8.6 - 8.8' <b>CLAY</b> Pale yellowish brown 10YR6/2, moist, no odor, low plasticity, medium dense, stiff, orange discoloration at upper sand/ clay interface.
3	BH9-1-3D	SS	10.9	1.00	3.0 - 4.0'		8.8 - 10.5' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, round to sub-rounded, loose, andesite, quartzite, 70% sand, 30% gravel.
4	BH9-1-3E	SS	5.7	1.00	4.0 - 5.0'		10.5 - 10.8' <b>CLAY</b> Pale yellowish brown 10YR6/2, moist, no odor, low plasticity, medium dense, stiff, orange discoloration at upper sand/ clay interface.
5	BH9-1-3F	SS	5.7	1.00	7.0 - 8.0'		10.8 - 13.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, coarse to medium grained, dry, no odor, round to sub-rounded, medium dense, andesite, quartzite.
10	BH9-1-3G	SS	4.5	1.00	10.0 - 11.0'		13.0 - 20.5' <b>Silty Sandy CLAY</b> Pale yellowish brown 10YR6/2 moist, no odor, low plasticity, firm. Sand is andesite and quartz. 70% clay, 20% silt, 10% sand.
15	BH9-1-3H	SS	10.21	1.00	15.0 - 16.0'		20.5 - 21.0' <b>Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to sub-angular, loose, andesite, quartzite.
20	BH9-1-3I	SS	6.17	1.00	20.0 - 21.0'		21.0 - 28.0' <b>Silty Sandy CLAY</b> Pale yellowish brown 10YR6/2, dry, no odor, some quartzite pieces.
25	BH9-1-3J	SS	8.12	1.00	25.0 - 26.0'		28.0 - 42.0' <b>Gravelly SAND</b>
30	BH9-1-3K	SS	35.50/5	1.00	30.0 - 31.0'		
35	BH9-1-3L	SS	19.50/3	0.80	35.0 - 36.0'		
40	BH9-1-3M	SS	28.50/5	1.00	40.0 - 41.0'		

Continued Next Page

Sheet 1 of 2

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-3

Date Hole Started: 4/17/01 Date Hole Finished: 4/17/01

(Continued)

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
65							Pale yellowish brown 10YR6/2, coarse to medium grained, dry, no odor, medium dense to dense, rounded to angular. 60% sand, 30% gravel, 10% fines. Gravel is andesite and quartz. [Alluvium]
70							
75							
80							
85							
90							
95							
100							
105							
110							
115							
120							
125							
130							
135							
140							
145							
150							
155							

LOGPJ 10/30/01

GEO TECH 1247 III GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-4

Date Hole Started: 4/17/01 Date Hole Finished: 4/17/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 41

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'	BH9-1-4A	SS	25,50/3	Grab			0.0 - 0.6' <b>Gravelly SAND</b> Grayish orange 10YR7/4, fine to coarse, dry, no odor, loose, rounded to sub-angular, quartz. <5% slag, <5% slag. [Fill]
0.6 - 12.0'							<b>SLAG</b> Black, angular, fractured. [Slag Fill]
12.0 - 17.0'							<b>SLAG Fines</b> Black, fine grained (sand sized) slag. Water at 12.5 feet (suspect broken water line). [Slag Fill]
17.0 - 20.0'	BH9-1-4B	SS	29,50/5	0.80	20.0 - 21.0'		<b>Gravelly SAND w/ fines</b> Dark yellowish brown 10YR4/2, coarse, rounded, quartz, medium dense, wet. [Alluvium]
20.0 - 20.5'	BH9-1-4C	SS	10,50/5	0.80	25.0 - 26.0'		<b>CLAY</b> Dark yellowish brown 10YR4/2, medium plastic, soft, uniform, wet. [Alluvium]
20.5 - 31.0'	BH9-1-4D	SS	50/5,0	0.60	30.0 - 31.0'		<b>Gravelly SAND w/ fines</b> Pale yellowish brown 10YR6/2, gap graded, fine to coarse grained, dry, no odor, dense, quartzite, andesite, quartz, 60% sand, 30% gravel, 10% fines. [Alluvium]
31.0 - 36.0'	BH9-1-4E	SS	50/5,0	0.60	35.0 - 36.0'		
36.0 - 41.0'	BH9-1-4F	SS	50/5,0	0.40	40.0 - 41.0'		

IL G.P.I. 1030/01

GEOTECH 1247/01 G.P.

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-5

Date Hole Started: 4/18/01 Date Hole Finished: 4/18/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 37

## WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

## DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-5A	SS	2.2	1.00	0.0 - 1.0'		0.0 - 1.0'
	BH9-1-5B	SS	3.3	1.00	1.0 - 2.0'		<b>Sandy Silty Gravelly CLAY</b> Dark yellowish brown 10YR4/2, dry, no odor, loose, low plasticity, roots and stalks from pond plants. 15% sand, 70% clay, 15% silt and gravel.
	BH9-1-5C	SS	2.3	1.00	2.0 - 3.0'		<b>Silty SAND</b> Pale yellowish brown 10YR6/2, medium grained, dry, no odor, uniform, rounded to sub-rounded, quartz, <10% fines.
	BH9-1-5D	SS	2.2	1.00	3.0 - 4.0'		<b>Sandy CLAY</b> Dark yellowish brown 10YR4/2, moist, low plasticity, stiff, 10-20% quartz sand, no odor.
	BH9-1-5E	SS	1.2	1.00	4.0 - 5.0'		<b>Clayey SAND</b> Pale yellowish brown 10YR6/2, fine to medium grained, dry, no odor, rounded to sub-rounded, loose, <10% clay.
5	BH9-1-5F	SS	5.3	1.00	7.0 - 8.0'		<b>Sandy Clay</b> Pale yellowish brown 10YR6/2, fine to medium grained, moist, no odor, rounded to sub-rounded, loose.
10	BH9-1-5G	SS	2.7	1.00	10.0 - 11.0'		<b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded. Sand in predominantly quartz, 20-30% gravel.
15	BH9-1-5H	SS	34.30	1.00	15.0 - 16.0'		<b>Gravelly Sandy CLAY</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, clay layers are 2-3 inches thick separated by 5 inches of gravelly sand. Clay is dark yellowish brown 10YR4/2, moist low plasticity, sandy, stiff, no odor.
20	BH9-1-5I	SS	38.50/3	0.70	20.0 - 21.0'		<b>Gravelly SAND w/ fines</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to sub-angular, dense, quartzite, quartz. Auger refusal at 37 feet.
25	BH9-1-5J	SS	9.50/5	0.60	25.0 - 26.0'		
30	BH9-1-5K	SS	50/4.0	0.20	30.0 - 31.0'		
35	BH9-1-5L	SS	50/5.0	0.50	35.0 - 36.0'		

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-6

Date Hole Started: 5/16/01 Date Hole Finished: 5/16/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1

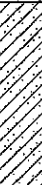




Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 6

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-6A		N/A	1.00	0.0 - 1.0'		0.0 - 2.0' <b>Sandy CLAY</b> Dark yellowish brown 10YR4/2, moderate plasticity, moist, no odor, soft. [Fill]
	BH9-1-6B		N/A	1.00	2.0 - 3.0'		2.0 - 3.0' <b>SAND</b> Pale yellowish brown 10YR6/2, mostly fine grained, some coarse grained, moist, no odor, gap graded. [Alluvium]
	BH9-1-6C		N/A	1.00	3.0 - 4.0'		3.0 - 4.0' <b>Clayey SILT</b> Moderate yellowish brown 10YR5/4, moist, no odor, non-plastic, loose. [Alluvium]
	BH9-1-6D		N/A	1.00	4.0 - 5.0'		4.0 - 5.0' <b>Gravelly SAND</b> Moderate yellowish brown 10YR5/4, medium to coarse grained, with some gravel, moist, no odor, non plastic. [Alluvium]
6	BH9-1-6E		N/A	1.00	5.0 - 6.0'		5.0 - 6.0' <b>Gravelly SAND</b> Moderate yellowish brown 10YR5/4, medium to coarse grained, subrounded to angular, poorly graded, moist, no odor, non plastic. [Alluvium]
10							

GPJ 8/20/01

GEOTECH 124711.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-7

Date Hole Started: 5/16/01 Date Hole Finished: 5/16/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 6

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-7A	GRAB	N/A	1.00	0.0 - 1.0'		0.0 - 0.5' <b>Gravelly Sandy CLAY</b> Grayish brown 5YR3/2, with gypsum crystals, wet, no odor, plastic. [Fill]
	BH9-1-7B		N/A	1.00	1.0 - 2.0'		0.5 - 1.0' <b>CLAY</b> Moderate green 5G5/6 to grayish brown 5YR3/2, wet, no odor, slimy, very soft. [Fill]
	BH9-1-7C		N/A	1.00	2.0 - 3.0'		1.0 - 2.0' <b>CLAY</b> Brownish black 5YR2/1, wet, very plastic, no odor, soft. [Fill]
							2.0 - 6.0' <b>CLAY</b> Brownish black 5YR2/1, wet, plastic, no odor, soft. [Fill]
	BH9-1-7D		N/A	1.00	4.0 - 5.0'		
5	BH9-1-7E		N/A	1.00	5.0 - 6.0'		
							6.0 - 6.1' <b>Clayey SAND</b> Moderate yellowish brown 10YR5/4, medium grain size, rounded to subrounded, wet, no odor. [Alluvium]

GPJ 8/20/01

GEOTECH 12/47/01 GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-9

Date Hole Started: 5/17/01 Date Hole Finished: 5/17/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 8

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-9A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' <b>SAND</b> Pale yellowish brown 10YR6/2, fine to medium grained, dry, no odor, rounded, wood chunks, leaves. [Fill]
	BH9-1-9B		N/A	1.00	1.0 - 2.0'		1.0 - 2.8' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine grained, dry, no odor. [Fill]
	BH9-1-9C		N/A	1.00	2.0 - 3.0'		
	BH9-1-9D		N/A	1.00	3.0 - 4.0'		2.8 - 3.5' <b>CLAY</b> Dark yellowish brown 10YR4/2, moist, no odor, plastic, soft. [Fill]
5	BH9-1-9E		N/A	1.00	5.0 - 6.0'		3.5 - 6.0' <b>SAND</b> Pale yellowish brown 10YR6/2, fine grained, dry, no odor. [Alluvium]
	BH9-1-9F		N/A	1.00	6.0 - 7.0'		6.0 - 6.5' <b>Sandy CLAY</b> Dark yellowish brown 10YR4/2, moist, no odor, very low plasticity. [Alluvium]
	BH9-1-9G		N/A	1.00	7.0 - 8.0'		6.5 - 8.0' <b>SAND</b> Pale yellowish brown 10YR6/2, fine grained, dry, no odor. [Alluvium]
10							

GPJ 8/20/01

GEOTECH 12/17/01 GPJ 1

**HYDROMETRICS INC.**  
Consulting Scientists and Engineers  
El Paso, Texas

## Borehole Log

Hole Name: BH9-1-10

Date Hole Started: 5/17/01      Date Hole Finished: 5/17/01

Client: Asarco Inc.

**Project: Phase III Remediation Investigation**

County: El Paso State: Texas

Property Owner: Asarco Inc.

**Legal Description:** Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

**Drilling Method:** Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 6

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
-----------------	-----	-------------	----------

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

## DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

**MP Description:**

MP Height Above or Below Ground (ft):



Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-10A		N/A	1.00	0.0 - 1.0'		0.0 - 0.2' <b>Sandy CLAY</b> Dark yellowish brown 10YR4/2, dry, with sand, no odor, plastic, very soft. [Fill]
	BH9-1-10B		N/A	1.00	1.0 - 2.0'		0.2 - 4.0' <b>Gravelly CLAY</b> Dark yellowish brown 10YR4/2, moist, no odor, plastic, very soft, very little gravel. [Alluvium]
	BH9-1-10C		N/A	1.00	2.0 - 3.0'		
	BH9-1-10D		N/A	1.00	3.0 - 4.0'		
	BH9-1-10E		N/A	1.00	4.0 - 5.0'		
5	BH9-1-10F		N/A	1.00	5.0 - 6.0'		4.0 - 6.0' <b>Sandy CLAY</b> Dark yellowish brown 10YR4/2, fine to medium grained, moist to dry, no odor, low plasticity, soft. [Alluvium]
10							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-11

Date Hole Started: 5/17/01 Date Hole Finished: 5/17/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 4

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description:	Ground Surface Elevation (ft):
MP Height Above or Below Ground (ft):	MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-11A		N/A	1.00	0.0 - 1.0'		0.0 - 0.3' <b>Sandy CLAY</b> Dark yellowish brown 10YR4/2, dry, no odor, plastic, very soft.
	BH9-1-11B		N/A	1.00	1.0 - 2.0'		0.3 - 2.5' <b>Gravely SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded, mostly silica.
	BH9-1-11C		N/A	1.00	2.0 - 3.0'		2.5 - 3.5' <b>Gravely CLAY</b> Dark yellowish brown 10YR4/2, moist, no odor, plastic, very soft, very little gravel.
	BH9-1-11D		N/A	1.00	3.0 - 4.0'		3.5 - 4.0' <b>SAND</b> Dark yellowish orange 10YR6/6, medium grained, dry, no odor, rounded to subrounded, uniform, mostly silica.

GPJ 9/20/01

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# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-12

Date Hole Started: 5/21/01 Date Hole Finished: 5/21/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-12A		N/A	1.00	0.0 - 1.0'		0.0 - 0.5' <b>Gravely Silty SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, mostly fine grained sand, gravel is angular, no odor, dry, loose. [FIII]
	BH9-1-12B		N/A	1.00	1.0 - 2.0'		0.5 - 3.0' <b>SAND</b> Moderate yellowish brown 10YR5/4, fine grained, clay lenses, moist, loose, no odor. [FIII]
	BH9-1-12C		N/A	1.00	3.0 - 4.0'		3.0 - 4.0' <b>Gravely SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, well graded, angular gravel, no odor, moist, quartz sand. [FIII]

GPJ 8/20/01

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# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-13

Date Hole Started: 5/24/01 Date Hole Finished: 5/24/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1

Recorded By: Matthew Miles, Angel Garcia  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 8

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description:	Ground Surface Elevation (ft):
MP Height Above or Below Ground (ft):	MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-13A	GRAB	N/A	1.00	0.0 - 1.0'		0.0 - 0.5' CLAY Pale yellowish brown 10YR6/2, dry, no odor, high plasticity, very soft. [Fill]
	BH9-1-13B		N/A	1.00	1.0 - 2.0'		0.5 - 1.0' CLAY Pale green 5G7/2 to dark yellowish brown 10YR4/2, wet, high plasticity, very soft, colored by layers. [Fill]
	BH9-1-13C		N/A	1.00	2.0 - 3.0'		1.0 - 8.0' CLAY Brownish black 5YR2/1, wet, no odor, high plasticity, very soft. [Fill]
	BH9-1-13D		N/A	1.00	3.0 - 4.0'		
	BH9-1-13E		N/A	1.00	4.0 - 5.0'		
5	BH9-1-13F		N/A	1.00	5.0 - 6.0'		
	BH9-1-13G		N/A	1.00	6.0 - 7.0'		
	BH9-1-13H		N/A	1.00	7.0 - 8.0'		
							8.0 - 8.1' Gravelly Clayey SAND Dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, angular to subangular, with roots. [Alluvium]

GPJ 9/20/01

GEOTECH 1247III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-14

Date Hole Started: 5/24/01 Date Hole Finished: 5/24/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles, Angel Garcia

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 7

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-14A	GRAB	N/A	1.00	0.0 - 1.0'		0.0 - 1.5' <b>Clayey SAND</b> Dark yellowish orange 10YR6/6, medium to fine grained, subrounded, poorly graded. [Fill]
	BH9-1-14B		N/A	1.00	1.0 - 2.0'		
	BH9-1-14C		N/A	1.00	2.0 - 3.0'		1.5 - 5.0' <b>CLAY</b> Brownish black 5YR2/1, high plasticity, wet, no odor, very soft. [Fill]
	BH9-1-14D		N/A	1.00	3.0 - 4.0'		
	BH9-1-14E		N/A	1.00	4.0 - 5.0'		
5							
	BH9-1-14F		N/A	1.00	6.0 - 7.0'		5.0 - 7.0' <b>Clayey gravelly SAND</b> Brownish black 5YR2/1, fine to coarse grained, moist, no odor, subrounded to subangular. [Alluvium]
10							

LOGPJ 8/20/01

GEOTECH 1247/11/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-15

Date Hole Started: 5/24/01 Date Hole Finished: 5/24/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 1

Recorded By: Matthew Miles, Angel Garcia  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description:	Ground Surface Elevation (ft):
MP Height Above or Below Ground (ft):	MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-15A		N/A	0.70	0.0 - 1.0'		0.0 - 1.0' <b>Gravelly Clayey SAND</b> Dark yellowish brown 10YR4/2, with pale green spots 5G7/2, fine to coarse grained, sub-rounded. (FIII)
	BH9-1-15B		N/A	0.70	1.0 - 2.0'		1.0 - 1.3' <b>SAND</b> Pale yellowish brown 10YR6/2, medium to coarse grained, moist, no odor, rounded to subrounded, clean. (FIII)
	BH9-1-15C		N/A	0.70	2.0 - 3.0'		1.3 - 4.8' <b>CLAY</b> Brownish black 5YR2/1, high plasticity, wet, no odor, very soft. (FIII)
	BH9-1-15D		N/A	0.70	3.0 - 4.0'		
	BH9-1-15E		N/A	0.70	4.0 - 5.0'		
5							4.8 - 5.0' <b>Clayey Gravelly SAND</b> Brownish black 5YR2/1, fine to coarse grained, moist, no odor, subrounded to subangular. (Alluvium)
10							

J.GPJ 8/20/01

GEOTECH 124711.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-16

Date Hole Started: 5/24/01 Date Hole Finished: 5/24/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles, Angel Garcia

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-16A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' <b>Clayey SAND</b> Dark yellowish brown 10YR4/2, fine to medium grained, dry, no odor, rounded to subrounded, roots, sticks. [Fill]
	BH9-1-16B		N/A	1.00	1.0 - 2.0'		1.0 - 4.8' <b>CLAY</b> Medium yellowish brown 10YR5/4, moist, no odor, high plasticity, very soft. [Fill]
	BH9-1-16C		N/A	1.00	2.0 - 3.0'		
	BH9-1-16D		N/A	1.00	3.0 - 4.0'		
	BH9-1-16E		N/A	1.00	4.0 - 5.0'		
5							4.8 - 5.0' <b>Clayey Gravely SAND</b> Brownish black 5YR2/1, fine to coarse grained, moist, no odor, subrounded to subangular. [Alluvium]
10							

JGPJ 8/20/01

GEOTECH 124711.JGPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-17

Date Hole Started: 5/24/01 Date Hole Finished: 5/24/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles, Angel Garcia

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 2

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-17A		N/A	0.80	0.0 - 1.0'		0.0 - 1.0' <b>Gravely Clayey SAND</b> Dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, subrounded to subangular, limestone gravel. [Alluvium]
	BH9-1-17B		N/A	0.70	1.0 - 2.0'		1.0 - 2.0' <b>Gravely Clayey SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded to subangular. [Alluvium]
5							
10							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-1-18

Date Hole Started: 5/24/01 Date Hole Finished: 6/24/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 1

Recorded By: Matthew Miles, Angel Garcia

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 11

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

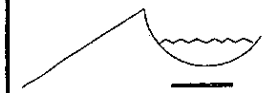
MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-1-18A		N/A	0.90	0.0 - 1.0'		0.0 - 0.4' Clayey SAND Dark yellowish brown 10YR4/2, fine grained, dry, no odor, poorly graded, rounded to subrounded. [Fill]
	BH9-1-18B		N/A	0.80	1.0 - 2.0'		0.4 - 9.0' CLAY Brownish black 5YR2/1, moist, no odor, high plasticity, very soft, lighter color (brownish gray 5YR4/1) @ 4 to 5 ft. [Fill]
	BH9-1-18C		N/A	0.80	2.0 - 3.0'		
	BH9-1-18D		N/A	0.60	4.0 - 5.0'		
5	BH9-1-18E		N/A	0.60	5.0 - 6.0'		
	BH9-1-18F		N/A	0.60	6.0 - 7.0'		
	BH9-1-18G		N/A	0.90	7.0 - 8.0'		
	BH9-1-18H		N/A	0.90	8.0 - 9.0'		
	BH9-1-18I		N/A	0.80	9.0 - 10.0'		9.0 - 11.0' Gravely Clayey SAND Dark yellowish brown 10YR4/2, sand is fine to coarse grained, moist, no odor, subangular to subrounded, quartz. Gravel is fine to coarse grained, angular to rounded. [Alluvium]
10	BH9-1-18J		N/A	0.80	10.0 - 11.0'		
15							

JLGPJ 8/20/01

GEOTECH 1247111.GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Collect Soil Samples

Hole Name: BH9-5-8

Date Hole Started: 4/18/01 Date Hole Finished: 4/18/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond 5

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ SplitSpoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 35

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-5-8A	SS	1.0.5	1.00	0.0 - 1.0'		0.0 - 0.4'
	BH9-5-8B	SS	1.0.5	1.00	1.0 - 2.0'		GRAVEL w/ fines Medium dark gray N4, to black N1, dry, powdery, no odor, uniform, angular, limestone, ~20% fines.
	BH9-5-8C	SS	1.3	1.00	2.0 - 3.0'		[Fill]
	BH9-5-8D	SS	7.7	1.00	3.0 - 4.0'		0.4 - 0.5'
	BH9-5-8E	SS	5.6	1.00	4.0 - 5.0'		Gravelly SAND Dark yellowish orange 10YR6/6, dry, no odor, fine grained, rounded, uniform, <10% gravel.
5							[Fill]
	BH9-5-8F	SS	5.6	1.00	7.0 - 8.0'		0.5 - 5.0'
							Gravelly SAND Dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, gap graded, some slag, ~25% gravel, 75% silica sand.
10	BH9-5-8G	SS	8.19	1.00	10.0 - 11.0'		[Fill]
							5.0 - 12.0'
15	BH9-5-8H	SS	11.21	1.00	15.0 - 16.0'		Gravelly SAND w/ fines Pale yellowish brown 10YR6/2, moist, no odor, rounded to sub-rounded, medium dense. 25% gravel, 60% sand, 15% fines.
							[Alluvium]
20	BH9-5-8I	SS	12.24	1.00	20.0 - 21.0'		12.0 - 24.5'
							Clayey gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, gap graded, rounded to sub-angular, andesite, quartz, feldspar, rhyolite.
25	BH9-5-8J	SS	30.50/4	0.80	25.0 - 26.0'		40% clay, 50% sand, 10% gravel.
							[Alluvium]
30	BH9-5-8K	SS	33.50/5	0.60	30.0 - 31.0'		24.5 - 35.5'
							Gravelly SAND w/ fines Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to sub-angular, dense, quartzite, quartz, some andesite. 30% gravel, 60% sand, 10% fines.
35	BH9-5-8L	SS	21.50/4.5	0.50	35.0 - 36.0'		[Alluvium]
40							
45							
50							

JIL.GPJ 10/30/01

GEOTECH 1247JIL.GPJ





# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Collect Soil Samples

Hole Name: BH9-5-9

Date Hole Started: 4/18/01 Date Hole Finished: 4/18/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond 5

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ SplitSpoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 42

## WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

## DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-5-9A	SS	8,14	1.00	0.0 - 1.0'		0.0 - 1.0'
	BH9-5-9B	SS	13,12	1.00	1.0 - 2.0'		<b>Silty GRAVEL</b> Medium dark gray N4, dry, powdery, no odor, uniform, angular, limestone, ~20% fines.
5	BH9-5-9C	SS		0.00	2.0 - 3.0' No Recovery		[Fill]
	BH9-5-9D	SS		0.00	3.0 - 4.0' No Recovery		1.0 - 6.0'
	BH9-5-9E	SS		0.00	4.0 - 5.0' No Recovery		<b>Gravelly SAND</b> Dark yellowish brown 10YR4/2, fine to coarse grained, gap graded, dry, no odor, 5-15% slag, 25% gravel, 75% sand.
	BH9-5-9F	SS	8,12	1.00	7.0 - 8.0'		[Fill]
10	BH9-5-9G	SS	11,21	1.00	10.0 - 11.0'		6.0 - 10.0'
							<b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to sub-angular, dense, quartzite, quartz, andesite.
15	BH9-5-9H	SS	5,7	1.00	15.0 - 16.0'		[Alluvium]
							10.0 - 23.0'
20	BH9-5-9I	SS	21,32	1.00	20.0 - 21.0'		<b>Clayey, Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine grained, gap graded, dry, no odor, stiff, gravel is angular, 40% clay, 50% sand, 10% gravel.
25							[Alluvium]
	BH9-5-9J	SS	23,50/3	1.00	25.0 - 26.0'		23.0 - 42.0'
							<b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine grained, gap graded, dry, no odor, stiff, gravel is angular.
30							[Alluvium]
35	BH9-5-9K	SS	40,50/3	1.00	36.0 - 37.0'		
40	BH9-5-9L	SS	7,50	1.00	40.0 - 41.0'		
45							
50							
55							
60							

111.GPJ 10/30/01

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# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Collect Soil Samples

Hole Name: BH9-5-10

Date Hole Started: 4/19/01 Date Hole Finished: 4/19/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: East side of Pond #5

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 36

## WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

## DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-5-10A	SS	3.4	0.80	0.0 - 1.0'		0.0 - 0.2'
	BH9-5-10B	SS	5.5	0.60	1.0 - 2.0'		ASPHALT Cracked, patchy. [Asphalt]
	BH9-5-10C	SS	5.7	0.50	2.0 - 3.0'		0.2 - 1.0'
	BH9-5-10D	SS	10.10	0.50	3.0 - 4.0'		Gravelly Silty SAND Dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, angular to rounded. [Fill]
	BH9-5-10E	SS	8.42	1.00	4.0 - 5.0'		1.0 - 4.5'
	BH9-5-10F	SS	7.9	1.00	7.0 - 8.0'		Gravelly Silty SAND Pale yellowish brown 10YR6/2, medium to coarse grained, dry, no odor, rounded to sub-rounded, gap graded. [Fill]
	BH9-5-10G	SS	7.10	1.50	10.0 - 11.0'		4.5 - 13.0'
	BH9-5-10H	SS	7.18	1.00	15.0 - 16.0'		Gravelly SAND Pale yellowish brown 10YR6/2, medium to coarse grained, dry, no odor, rounded to sub-rounded, gap graded, clean. [Alluvium]
	BH9-5-10I	SS	12.31	1.00	20.0 - 21.0'		13.0 - 19.0'
	BH9-5-10J	SS	50/5.0	0.40	25.0 - 26.0'		Sandy Gravelly SILT Pale yellowish brown 10YR6/2, moist, no odor, low plasticity, stiff. Gravel is andesite, and quartzite; sand is quartz. [Alluvium]
	BH9-5-10K	SS	40.50/2	1.00	30.0 - 31.0'		19.0 - 42.0'
	BH9-5-10L	SS	50/5.5	1.00	35.0 - 36.0'		Silty Gravelly SAND Pale yellowish brown 10YR6/2, moist, no odor, medium dense to dense, angular to sub-angular, gap graded, andesite, quartzite, quartz. [Alluvium]



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Collect Soil Samples

Hole Name: BH9-5-11

Date Hole Started: 4/19/01 Date Hole Finished: 4/19/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond 5

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 31

## WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

## DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-5-11A	SS	3.5	1.00	0.0 - 1.0'		0.0 - 3.2'
	BH9-5-11B	SS	5.7	1.00	1.0 - 2.0'		<b>Silty Gravelly SAND</b>
	BH9-5-11C	SS	6.8	1.00	2.0 - 3.0'		Dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, angular to rounded, loose.
5	BH9-5-11D	SS	9.12	1.00	3.0 - 4.0'		[Fill]
	BH9-5-11E	SS	8.16	1.00	4.0 - 5.0'		3.2 - 7.5'
	BH9-5-11F	SS	18.14	1.00	7.0 - 8.0'		<b>Gravelly Silty SAND</b>
10	BH9-5-11G	SS	15.27	1.00	10.0 - 11.0'		Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded, medium dense.
							[Alluvium]
15	BH9-5-11H	SS	11.19	1.00	15.0 - 16.0'		7.5 - 25.0'
							<b>Sandy CLAY</b>
20	BH9-5-11I	SS	19.20	1.00	20.0 - 21.0'		Pale yellowish brown 10YR6/2, moist, no odor, low plasticity, firm.
							[Alluvium]
25	BH9-5-11J	SS	24.50/4	0.60	25.0 - 26.0'		25.0 - 42.0'
							<b>Clayey Gravelly SAND</b>
30	BH9-5-11K	SS	24.50/4	0.80	30.0 - 31.0'		Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to sub-angular, dense.
							[Alluvium]
35							
40							
45							
50							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-1

Date Hole Started: 4/20/01 Date Hole Finished: 4/20/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 41

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 2.5'	BH9-6-1A	SS	2.4	1.00	0.0 - 1.0'		0.0 - 2.5' <b>Gravelly Silty SAND</b> Moderate yellowish brown 10YR5/4, fine to coarse grained, dry, no odor, angular to rounded, loose, low density, some debris, ~10% slag. [Fill]
2.5 - 5.0'	BH9-6-1B	SS	2.2	1.00	1.0 - 2.0'		2.5 - 5.0' <b>Gravelly Silty SAND</b> Dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, loose, very low density, some debris (brick, metal, wood), ~5-10% slag. [Fill]
5.0 - 7.0'	BH9-6-1C	SS	2.2	0.80	2.0 - 3.0'		5.0 - 7.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded, clean, medium density, quartz, chert, moist at 10 feet. [Alluvium]
7.0 - 8.0'	BH9-6-1D	SS	1.2	0.60	3.0 - 4.0'		7.0 - 8.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, moist, low plasticity, stiff, faint hydrocarbon odor. Sand is quartz (~1-2%). [Alluvium]
8.0 - 10.0'	BH9-6-1E	SS	2.2	0.80	4.0 - 5.0'		8.0 - 10.0' <b>Gravelly Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]
10.0 - 11.0'	BH9-6-1F	SS	8.18	0.80	7.0 - 8.0'		10.0 - 11.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. [Alluvium]
11.0 - 15.0'	BH9-6-1G	SS	6.11	1.00	10.0 - 11.0'		11.0 - 15.0' <b>Gravelly Clay</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]
15.0 - 16.0'	BH9-6-1H	SS	7.9	1.00	15.0 - 16.0'		15.0 - 16.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. [Alluvium]
16.0 - 20.0'	BH9-6-1I	SS	8.12	1.00	20.0 - 21.0'		16.0 - 20.0' <b>Gravelly Clay</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]
20.0 - 21.0'	BH9-6-1J	SS	18.21	1.00	25.0 - 26.0'		20.0 - 21.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. [Alluvium]
21.0 - 25.0'	BH9-6-1K	SS	50.41	0.20	30.0 - 31.0'		21.0 - 25.0' <b>Gravelly Clay</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]
25.0 - 26.0'	BH9-6-1L	SS	15.50	0.80	35.0 - 36.0'		25.0 - 26.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. [Alluvium]
26.0 - 32.0'							26.0 - 32.0' <b>Gravelly Clay</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]
32.0 - 38.0'							32.0 - 38.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. [Alluvium]
38.0 - 41.0'							38.0 - 41.0' <b>Gravelly CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]
41.0 - 45.0'							41.0 - 45.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. [Alluvium]
45.0 - 50.0'							45.0 - 50.0' <b>Gravelly CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]
50.0 - 55.0'							50.0 - 55.0' <b>Sandy CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. [Alluvium]
55.0 - 60.0'							55.0 - 60.0' <b>Gravelly CLAY</b> Pale yellowish brown 10YR6/2, gap graded, moist, low plasticity, stiff, faint hydrocarbon odor. Gravel is angular quartzite and andesite. [Alluvium]

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-2

Date Hole Started: 4/20/01 Date Hole Finished: 4/20/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoors

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 41

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-2A	SS	9,12	1.00	0.0 - 1.0'		0.0 - 1.0' <b>Gravelly Silty SAND</b> Pale yellowish brown 10YR6/2, fine to coarse, dry, no odor, rounded to angular.
	BH9-6-2B	SS	14,14	1.00	1.0 - 2.0'		1.0 - 2.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, medium to coarse grained, moist, no odor, rounded to sub-rounded, clean, quartz, ~5-10% slag.
5	BH9-6-2C	SS	8,13	1.00	2.0 - 3.0'		2.0 - 3.0'
	BH9-6-2D	SS	8,5	1.00	3.0 - 4.0'		3.0 - 4.0'
	BH9-6-2E	SS	4,4	1.00	4.0 - 5.0'		4.0 - 5.0'
10	BH9-6-2F	SS	4,3	0.40	10.0 - 11.0'		10.0 - 11.0'
15	BH9-6-2G	SS	≥1	1.00	15.0 - 16.0'		15.0 - 16.0'
	BH9-6-2H	SS	4,9	1.00	20.0 - 21.0'		20.0 - 21.0'
25	BH9-6-2I	SS	50/4	0.40	25.0 - 26.0'		25.0 - 26.0'
30	BH9-6-2J	SS	50/6	0.50	30.0 - 31.0'		30.0 - 31.0'
35	BH9-6-2K	SS	50/2	0.20	35.0 - 36.0'		35.0 - 36.0'
40							
45							
50							
55							
60							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-3

Date Hole Started: 4/20/01 Date Hole Finished: 4/20/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Matthew Miles  
Drilling Company: Tierra Drilling & Envir. Svcs.  
Driller: John McDuffee & Carlos Guerra  
Drilling Method: Hollow Stem Auger w/ Split Spoons  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 7"  
Total Depth Drilled (ft): 41

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-3A	SS	10,12	1.00	0.0 - 1.0'		0.0 - 0.8'
	BH9-6-3B	SS	27,29	1.00	1.0 - 2.0'		<b>Gravelly Silty SAND</b> Pale brown 5YR5/2, fine to coarse grained, dry, no odor, compacted, angular to rounded, dense.
5	BH9-6-3C	SS	5,21	1.00	2.0 - 3.0'		[Fill]
	BH9-6-3D	SS	23,27	1.00	3.0 - 4.0'		0.8 - 2.0'
	BH9-6-3E	SS	19,25	1.00	4.0 - 5.0'		<b>Gravelly Silty SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, medium dense, angular to rounded.
10	BH9-6-3F	SS	7,12	1.00	7.0 - 8.0'		[Fill]
	BH9-6-3G	SS	7,12	1.00	10.0 - 11.0'		2.0 - 5.5'
15	BH9-6-3H	SS	3,9	1.00	15.0 - 16.0'		<b>Gravelly Silty SAND</b> Medium yellowish brown 10YR5/4, fine to coarse grained, moist, no odor, angular to rounded, medium dense.
20	BH9-6-3I	SS	9,16	1.00	20.0 - 21.0'		[Fill]
	BH9-6-3J	SS	50,3,0	1.00	25.0 - 26.0'		5.5 - 15.0'
25	BH9-6-3J	SS	50,3,0	1.00	25.0 - 26.0'		<b>Gravelly Cobbly SAND</b> Pale yellowish brown 10YR6/2, medium to coarse grained, dry, no odor, rounded to sub-rounded, chert, quartz, clean.
30	BH9-6-3K	SS	50/4,0	0.20	30.0 - 31.0'		[Alluvium]
35							15.0 - 23.0'
40							<b>Silty CLAY</b> Pale yellowish brown 10YR6/2, moist, no odor, low to medium plasticity, stiff.
45							[Alluvium]
50							
55							
60							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-4

Date Hole Started: 4/23/01 Date Hole Finished: 4/23/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 41

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 3.5'	BH9-6-4A	SS	4.3	1.00	0.0 - 1.0'		0.0 - 3.5' <b>Gravelly Silty SAND</b> Dark yellowish brown 10YR4/2, fine to coarse grained, moist at 1 foot, no odor, angular to rounded, <5% slag. [Fill]
1.0 - 2.0'	BH9-6-4B	SS	3.7	1.00	1.0 - 2.0'		
2.0 - 3.0'	BH9-6-4C	SS	10.6	0.80	2.0 - 3.0'		
3.0 - 4.0'	BH9-6-4D	SS	6.5	1.00	3.0 - 4.0'		
4.0 - 5.0'	BH9-6-4E	SS	6.7	1.00	4.0 - 5.0'		
5.0 - 7.0'	BH9-6-4F	SS	10.10	1.00	7.0 - 8.0'		
8.0 - 10.0'	BH9-6-4G	SS	5.10	1.00	10.0 - 11.0'		
11.0 - 15.0'	BH9-6-4H	SS	7.19	1.00	15.0 - 16.0'		
16.0 - 20.0'	BH9-6-4I	SS	33.50/5.5	0.90	20.0 - 21.0'		
21.0 - 25.0'	BH9-6-4J	SS	50/5.0	0.40	25.0 - 26.0'		
26.0 - 30.0'	BH9-6-4K	SS	50/3.0	1.00	30.0 - 31.0'		
31.0 - 35.0'	BH9-6-4L	SS	50/3.0	1.00	35.0 - 36.0'		

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-5

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6, under wooden trestle

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 5.5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-5A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' <b>Silty CLAY</b> Olive gray 5Y3/2, dry to moist, green slimy streaks, no odor. [Pond sediment]
	BH9-6-5B		N/A	1.00	1.0 - 2.0'		1.0 - 4.5' <b>Silty CLAY</b> Olive black 5Y2/1, medium plasticity, moist, no odor, lenses of dry silt colored light olive gray 5Y6/1. [Pond sediment]
	BH9-6-5C		N/A	1.00	2.0 - 3.0'		
	BH9-6-5D		N/A	1.00	3.0 - 4.0'		
	BH9-6-5E		N/A	1.00	4.0 - 5.0'		
5	BH9-6-5F		N/A	0.50	5.0 - 5.5'		4.5 - 5.5' <b>Gravelly SAND</b> Dark yellowish brown 10YR4/2, fine to medium grained, no odor, moist, rounded gravel, sand is subangular to subround. [Shallow Alluvium]
10							

GPJ 8/20/01

GEOTECH 124711.GPJ





# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-6

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 2

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING
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Well Developed?	N
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Water Samples Taken?	N
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Boring Samples Taken?	N
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Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-6A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' CLAY Olive gray 5Y3/2, moist, medium plasticity, no odor, loose to soft; pockets of hard, dry clay nodules colored pale olive 10Y6/2. [Pond Sediment]
	BH9-6-6B		N/A	1.00	1.0 - 2.0'		1.0 - 2.0' Clayed SAND Moderate yellow brown 10YR5/4, moist, no odor, some gravel, subangular to subround, loose. [Shallow Alluvium]
5							
10							

JLGPJ 8/20/01

GEOTECH 1247/III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-7

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 4

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

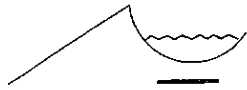
Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-7A		N/A	1.00	0.0 - 1.0'		0.0 - 2.2' <b>CLAY</b> Olive gray 5Y3/2, moist, medium dense, plastic, streaks of light olive 10Y5/4. [Pond Sediment]
	BH9-6-7B		N/A	1.00	1.0 - 2.0'		
	BH9-6-7C		N/A	1.00	2.0 - 3.0'		
	BH9-6-7D		N/A	1.00	3.0 - 4.0'		2.2 - 4.0' <b>Gravelly SAND</b> Dark yellowish brown 10YR4/2, fine to medium grained, moist, no odor, rounded gravel, subround sand. [Shallow Alluvium]
5							
10							

JLGPJ 8/2001

GEOTECH 1247111.GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-8

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 2.5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING
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Well Developed?	N
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Water Samples Taken?	N
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Boring Samples Taken?	N
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Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-8A		N/A	1.00	0.0 - 1.0'		0.0 - 0.8' <b>Gravelly CLAY</b> Olive gray 5Y3/2, loose, dry to moist, color variations in streaks of green and yellow. [Pond Sediment]
	BH9-6-8B		N/A	1.00	1.0 - 2.0'		0.8 - 2.5' <b>Silty SAND</b> Dark yellowish brown 10YR4/2, moist, loose, no odor, <5% slag. [Shallow Alluvium]
	BH9-6-8C		N/A	0.50	2.0 - 2.5'		
5							
10							

JGPJ 8/20/01

GEOTECH 124711.JGPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-9

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 3.5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-9A		N/A	1.00	0.0 - 1.0'		0.0 - 1.8' CLAY Olive gray 5Y3/2, moist, stiff, laminated, color variation to moderate yellow green 5GY7/4. [Pond Sediment]
	BH9-6-9B		N/A	1.00	1.0 - 2.0'		
	BH9-6-9C		N/A	1.00	2.0 - 3.0'		1.8 - 2.8' SAND Dark yellowish brown 10YR4/2, coarse to fine grained, subangular to subround gravel, angular to subangular sand, moist, no odor, chert, quartz. [Shallow Alluvium]
	BH9-6-9D		N/A	0.50	3.0 - 3.5'		2.8 - 3.5' SAND Moderate brown 5YR4/4, cobbles ~2cm, sand is medium to coarse grained, moist, no odor, chert, quartz. [Shallow Alluvium]

1.GPJ 8/20/01

GEOTECH 1247111.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-10

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-10A		N/A	1.00	0.0 - 1.0'		0.0 - 1.5' <b>CLAY</b> Olive gray 5Y3/2, color variations to moderate yellowish green 5GY7/4, dry, loose, no odor, moist at 0.5 ft. [Pond Sediment]
	BH9-6-10B		N/A	1.00	1.0 - 2.0'		
	BH9-6-10C		N/A	1.00	2.0 - 3.0'		1.5 - 4.0' <b>Clayey Gravelly SAND</b> Dark yellowish brown 10YR4/2, fine to coarse grained, loose, moist, subangular sand, subround gravel, no odor, chert, quartz. [Shallow Alluvium]
	BH9-6-10D		N/A	1.00	3.0 - 4.0'		
5							
10							

II.GPJ 8/20/01

GEOTECH 1247III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-11

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-11A		N/A	1.00	0.0 - 1.0'		0.0 - 1.5' <b>CLAY</b> Olive gray 5Y3/2, dry to moist, low plasticity, no odor. Dry pieces of clay, pale olive 10Y6/2, stiff. [Pond Sediment]
	BH9-6-11B		N/A	1.00	1.0 - 2.0'		
	BH9-6-11C		N/A	0.70	2.0 - 3.0'		1.5 - 4.0' <b>Gravelly CLAY</b> Moderate yellowish brown 10YR5/4, firm, moist, medium plasticity, subangular gravel, quartz, no odor. [Shallow Alluvium]
	BH9-6-11D		N/A	1.00	3.0 - 4.0'		
5							
10							

GPJ 8/20/01

GEOTECH 124711.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-12

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 2.5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-12A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' <b>CLAY</b> Olive gray 5Y3/2, stiff, laminated, color changes to light olive 10Y4/2 and pale olive, moist, no odor. [Pond Sediment]
	BH9-6-12B		N/A	1.00	1.0 - 2.0'		1.0 - 2.0' <b>CLAY</b> Grayish black N2 to olive gray 5Y4/1, highly plastic, moist, no odor, soft. [Pond Sediment]
	BH9-6-12C		N/A	0.50	2.0 - 2.5'		2.0 - 2.5' <b>Gravelly Sandy CLAY</b> Dark yellowish brown 10YR4/2, moist, no odor, slightly plastic, firm, angular to subround. [Shallow Alluvium]

GPJ 8/20/01

GEOTECH 1247111.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-13

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 1.2

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description:	Ground Surface Elevation (ft):
MP Height Above or Below Ground (ft):	MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-13A		N/A	1.20	0.0 - 1.0'		0.0 - 1.0' <b>CLAY</b> Grayish black N2, to olive black 5Y2/1, moist, no odor, highly plastic, soft. [Pond Sediment]
							1.0 - 1.2' <b>Clayey SAND</b> Olive gray 5Y3/2, moist, ~20% gravel, angular, no odor. [Shallow Alluvium]
5							
10							

GPJ 8/20/01

GEOTECH 124711.GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-14

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 4

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description:	Ground Surface Elevation (ft):
MP Height Above or Below Ground (ft):	MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-14A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' <b>Clayey SAND</b> Sand w/ clay lenses, black to olive gray 5Y3/2, to dark yellowish brown 10YR4/2, fine grained sand, clay is moderately plastic, moist. [Pond Sediment]
	BH9-6-14B		N/A	1.00	1.0 - 2.0'		1.0 - 3.0' <b>CLAY</b> Grayish olive green 5GY3/2, wet, no odor, highly plastic, color varies to moderate olive brown 5Y4/4, very soft. [Pond Sediment]
	BH9-6-14C		N/A	1.00	2.0 - 3.0'		
	BH9-6-14D		N/A	1.00	3.0 - 4.0'		3.0 - 4.0' <b>CLAY</b> Grayish olive green 5GY3/2, wet, no odor, angular gravel. [Pond Sediment]
5							
10							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-15

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 3

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-15A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' <b>Sandy CLAY</b> Olive gray 5Y3/2, some gravel, damp, compact, moderately plastic, clay lenses that are black, no odor. [Pond Sediment]
	BH9-6-15B		N/A	1.00	1.0 - 2.0'		1.0 - 2.4' <b>Sandy CLAY</b> Light olive gray 5Y5/2, some gravel, damp, compact, moderately plastic, clay lenses that are black, no odor, more sand than above. [Pond Sediment]
	BH9-6-15C		N/A	1.00	2.0 - 3.0'		2.4 - 3.0' <b>Clayey SAND</b> Moderate yellow brown 10YR5/4, sand with gravel, gravel is angular to sub-rounded, damp, medium to coarse grained sand, some clay, loose, no odor. [Alluvium]
5							
10							

GPJ 8/20/01

GEOTECH 1247/III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-16

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-16A		N/A	1.00	0.0 - 1.0'		0.0 - 1.5' <b>CLAY</b> Olive gray 5Y3/2, no odor, damp, moderately plastic, soft. [Pond Sediment]
	BH9-6-16B		N/A	1.00	1.0 - 2.0'		
	BH9-6-16C		N/A	1.00	2.0 - 3.0'		1.5 - 3.0' <b>Slag</b> Black, slag gravel, hydrocarbon odor. [Slag Fill]
	BH9-6-16D		N/A	1.00	3.0 - 4.0'		3.0 - 4.0' <b>CLAY</b> Moderate yellow brown 10YR5/4, loose to firm, damp, no odor. [Alluvium]
5							
10							

LOGPJ 8/20/01

GEOTECH 1247111.GP

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-17

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-17A		N/A	0.90	0.0 - 1.0'		0.0 - 0.5' <b>Sandy CLAY</b> Olive gray 5Y3/2, moist at 0.2 feet, no odor, plastic, soft. [Pond Sediment]
	BH9-6-17B		N/A	0.90	1.0 - 2.0'		0.5 - 2.7' <b>CLAY</b> Dark yellowish brown 10YR4/2, moist, no odor, plastic, soft, lenses of pale yellowish brown 10YR6/2. [Pond Sediment]
	BH9-6-17C		N/A	0.90	2.0 - 3.0'		
	BH9-6-17D		N/A	0.90	3.0 - 4.0'		2.7 - 4.0' <b>Sandy SILT</b> Moderate yellow brown 1YR5/2, to pale yellow brown 10YR6/2, low plasticity, moist, no odor, sand is fine grained quartz. [Shallow Alluvium]
5							
10							

LOGJ 8/20/01

GEOTECH 1247III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-18

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 8

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-18A		N/A	0.80	0.0 - 1.0'		0.0 - 8.0' <b>Silty Clayey SAND</b> Dark yellowish brown 10YR4/2, to pale yellowish brown 10YR6/2, fine to coarse grained, moist at 0.5 feet, no odor, angular to rounded, well graded. Refusal at 8'. [Pond Sediment]
	BH9-6-18B		N/A	0.80	1.0 - 2.0'		
	BH9-6-18C		N/A	0.80	2.0 - 3.0'		
	BH9-6-18D		N/A	0.80	3.0 - 4.0'		
	BH9-6-18E		N/A	0.80	4.0 - 5.0'		
5	BH9-6-18F		N/A	0.80	5.0 - 6.0'		
	BH9-6-18G		N/A	0.80	6.0 - 7.0'		
	BH9-6-18H		N/A	0.80	7.0 - 8.0'		
10							

GPJ 9/20/01

GEOTECH 1247III.GPJ

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso                      State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION    Y/N    DESCRIPTION                      INTERVAL

Well Installed?                      N

Surface Casing Used?                      N

Screen/Perforations?                      N

Sand Pack?                      N

Annular Seal?                      N

Surface Seal?                      N

DEVELOPMENT/SAMPLING

Well Developed?                      N

Water Samples Taken?                      N

Boring Samples Taken?                      N




Static Water Level Below MP:                      Surface Casing Height (ft):

Date:                      Riser Height (ft):

MP Description:                      Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):                      MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-19A		N/A	1.00	0.0 - 1.0'		0.0 - 0.2' <b>Silty Clayey SAND</b> Dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, angular to rounded, well graded. [Pond Sediment]
	BH9-6-19B		N/A	1.00	1.0 - 2.0'		0.2 - 1.0' <b>CLAY</b> Brownish black 5YR2/1, moist, no odor, plastic, soft. [Pond Sediment]
	BH9-6-19C		N/A	1.00	2.0 - 3.0'		1.0 - 4.0' <b>Sandy SILT</b> Pale yellowish brown 10YR6/2, fine grained, moist, no odor, non-plastic, loose, rounded quartz. [Alluvium]
	BH9-6-19D		N/A	1.00	3.0 - 4.0'		
5							
10							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-20

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 8

## WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

## DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-20A		N/A	1.00	0.0 - 1.0'		0.0 - 1.0' CLAY Dark yellowish brown 10YR4/2, with light green 5G7/4 laminations, moist at 0.2 feet, no odor, plastic, soft. [Pond Sediment]
	BH9-6-20B		N/A	0.50	1.0 - 2.0'		1.0 - 7.9' CLAY Brownish black 5YR2/1, moist, no odor, plastic, soft. [Pond Sediment]
5	BH9-6-20C		N/A	0.70	5.0 - 6.0'		
	BH9-6-20D		N/A	0.70	6.0 - 7.0'		
	BH9-6-20E		N/A	0.70	7.0 - 8.0'		
10							7.9 - 8.0' Clayey, Sandy, GRAVEL Dark yellowish brown 10YR4/2, gravel is fine grained, sand is fine to coarse grained, moist, no odor, all angular. [Alluvium]

GPJ 8/20/01

GEOTECH 1247III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-21

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 9  
Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz  
Drilling Company: Pro Sonic  
Driller: Rene Sosa  
Drilling Method: Geoprobe  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 3.5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-21A		N/A	0.80	0.0 - 1.0'		0.0 - 1.0' CLAY Dark yellowish brown 10YR4/2, with light green 5G7/4 laminates, moist at 0.2 feet, no odor, plastic, soft. [Pond Sediment]
	BH9-6-21B		N/A	0.80	1.0 - 2.0'		1.0 - 3.2' CLAY Brownish black 5YR2/1, moist, no odor, plastic, soft. [Pond Sediment]
	BH9-6-21C		N/A	0.80	2.0 - 3.0'		
	BH9-6-21D		N/A	0.50	3.0 - 3.5'		3.2 - 3.5' Clayey SAND Brownish black 5YR2/1, fine to coarse grained, moist, gap graded, subangular to subrounded, no odor, ~40% clay. Refusal at 3.5.
5							
10							

GPJ 8/20/01

GEOTECH 12/47/01 GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-22

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-22A		N/A	1.00	0.0 - 1.0'		0.0 - 1.5' <b>CLAY</b> Olive gray 5Y3/2, dry, no odor, plastic when wet, loose to soft, moist at 1 foot. [Pond Sediment]
	BH9-6-22B		N/A	0.80	1.0 - 2.0'		1.5 - 2.0' <b>Gravelly Sandy CLAY</b> Dark yellowish brown 10YR4/2, gravel is fine grained, sand is fine to coarse grained, moist, no odor, loose, non-plastic, quartz. [Pond Sediment]
	BH9-6-22C		N/A	0.80	2.0 - 3.0'		2.0 - 2.5' <b>Silty Sandy CLAY</b> Pale yellow brown 10YR6/2, moist, non-plastic, loose, sand is fine, faint hydrocarbon odor. [Pond Sediment]
	BH9-6-22D		N/A	0.80	3.0 - 4.0'		2.5 - 4.0' <b>CLAY</b> Brownish black 5YR2/1, moist, no odor, plastic, soft. [Pond Sediment]
5							4.0 - 4.1' <b>Slag</b> Black, angular, fractured. [Slag Fill]
10							

I.G.P.J. 8/20/01

GEOTECH 124711.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH9-6-23

Date Hole Started: 5/25/01 Date Hole Finished: 5/25/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 9

Descriptive Location: Pond # 6

Recorded By: Alfonso Munoz

Drilling Company: Pro Sonic

Driller: Rene Sosa

Drilling Method: Geoprobe

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 2

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH9-6-23A		N/A	1.00	0.0 - 1.0'		0.0 - 1.5' <b>CLAY</b> Olive gray 5Y3/2 from 0' to 0.5'. Brownish black 5YR2/1 from 0.5' to 1.5'. Moist at 0.5', no odor, plastic, loose to soft, laminates of light green 5G7/4.
	BH9-6-23B		N/A	1.00	1.0 - 2.0'		1.5 - 2.0' <b>Sandy Gravelly CLAY</b> Dark yellow brown 10YR4/2, moist, no odor, non-plastic, soft, wood chunks, plastic, debris, some (5-10%) slag. (Pond Sed/ Fill) 2.0 - 2.1' <b>SLAG</b> Black, angular, fractured. (Slag Fill)

LOGJ 8/20/01

GEOTECH 1247/III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-5

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 11  
Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles  
Drilling Company: Hydrometrics Inc.  
Driller: Matthew Miles & Alfonso Munoz  
Drilling Method: Hand Auger  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 2"  
Total Depth Drilled (ft): 4

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description:	Ground Surface Elevation (ft):
MP Height Above or Below Ground (ft):	MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-5A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 2.5' <b>Silty, Sandy CLAY</b> Pale Yellowish brown 10YR6/2, dry, no odor, non plastic, loose, roots, plants, moist at 1 ft, change to med yellowish brown, 10YR5/1. [Alluvium]
	BH11-5B	AUGER	N/A	0.80	1.0 - 2.0'		
	BH11-5C	AUGER	N/A	0.80	2.0 - 3.0'		
	BH11-5D	AUGER	N/A	0.80	3.0 - 4.0'		2.5 - 4.0' <b>Silty SAND</b> Medium yellowish brown 10YR5/1, fine grained, moist, no odor, rounded to subrounded, mostly quartz, wet at 3.5 - 4.0 ft. [Alluvium]
5							
10							

GPJ 8/20/01

GEOTECH 1247III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-6

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 2

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-6A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 2.0'
	BH11-6B	AUGER	N/A	0.80	1.0 - 2.0'		<b>Silty, Sandy CLAY</b> Medium yellowish brown 10YR5/1, moist, no odor, low to medium plastic, soft, w/some organics, wet at 2 ft. [Alluvium]
5							
10							
15							
20							
25							

II.GPJ 8/27/01

GEOTECH 1247III.GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-7

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 3

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
------------	---	--	--

Annular Seal?	N		
---------------	---	--	--

Surface Seal?	N		
---------------	---	--	--

DEVELOPMENT/SAMPLING
----------------------

Well Developed?	N
-----------------	---

Water Samples Taken?	N
----------------------	---

Boring Samples Taken?	N
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Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-7A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 3.0'
	BH11-7B	AUGER	N/A	0.80	1.0 - 2.0'		<b>Silty, Sandy CLAY</b> Medium yellowish brown 10YR5/1, dry at surface, moist at 0.5ft, no odor, low plasticity, loose, some organics-roots, plants. [Alluvium]
	BH11-7C	AUGER	N/A	0.80	2.0 - 3.0'		
5							
10							
15							
20							
25							

LOGJ 8/27/01

GEOTECH 1247111.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-8

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-8A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 3.8' <b>Silty, Sandy CLAY</b> Pale yellowish brown, 10YR6/2, dry, no odor, moist at 1 ft., change to medium yellowish brown 10YR5/1, medium to low plasticity, soft, roots, plants. [Alluvium]
	BH11-8B	AUGER	N/A	0.80	1.0 - 2.0'		
	BH11-8C	AUGER	N/A	0.80	2.0 - 3.0'		
	BH11-8D	AUGER	N/A	0.80	3.0 - 4.0'		3.8 - 4.0' <b>SAND</b> Medium yellowish brown 10YR5/1, fine grained, wet, no odor, rounded to subrounded, mostly quartz. [Alluvium]
5							
10							
15							
20							
25							

GPJ 8/27/01

GEOTECH 1247/III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-9

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 3

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-9A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 2.5' <b>Silty, Sandy CLAY</b> Medium yellowish brown 10YR5/1, dry from 0 to 1', moist thereafter, no odor, medium to low plasticity, soft when moist, roots, plants. [Alluvium]
	BH11-9B	AUGER	N/A	0.80	1.0 - 2.0'		
	BH11-9C	AUGER	N/A	0.80	2.0 - 3.0'		2.5 - 3.0' <b>Silty SAND</b> Medium yellowish brown 10YR5/1, fine grained, wet, no odor, rounded to subrounded, mostly quartz. [Alluvium]
5							
10							
15							
20							
25							

GPJ 8/27/01

GEOTECH 1247/III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-10

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-10A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 2.0' <b>Silty Clayey SAND</b> Medium yellowish brown 10YR5/1, fine to coarse grained, moist, no odor, rounded to subrounded, roots, plants, mostly quartz.
	BH11-10B	AUGER	N/A	0.80	1.0 - 2.0'		[Alluvium]
	BH11-10C	AUGER	N/A	0.80	2.0 - 3.0'		2.0 - 3.0' <b>Silty Sandy CLAY</b> Medium yellowish brown 10YR5/1, moist, no odor, medium to low plasticity, soft, some roots.
	BH11-10D	AUGER	N/A	0.80	3.0 - 4.0'		[Alluvium]
5							3.0 - 4.0' <b>Silty SAND</b> Medium yellowish brown 10YR5/1, fine grained, moist to wet (wet at 3.5'), no odor, rounded to subrounded, quartz.
10							[Alluvium]
15							
20							
25							

J.GPJ 8/27/01

GEOTECH 124711LGP



Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso                      State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION    Y/N    DESCRIPTION                      INTERVAL

Well Installed?                      N

Surface Casing Used?                      N

Screen/Perforations?                      N

Sand Pack?                      N

Annular Seal?                      N

Surface Seal?                      N

DEVELOPMENT/SAMPLING

Well Developed?                      N

Water Samples Taken?                      N

Boring Samples Taken?                      N




Static Water Level Below MP:                      Surface Casing Height (ft):

Date:                      Riser Height (ft):

MP Description:                      Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):                      MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-11A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 1.5' <b>Silty Sandy CLAY</b> Medium yellowish brown 10YR5/1, dry to moist at 1', no odor, medium to low plasticity, soft, some roots, plants. [Alluvium]
	BH11-11B	AUGER	N/A	0.80	1.0 - 2.0'		1.5 - 3.0' <b>Silty SAND</b> Medium yellowish brown 10YR5/1, fine to coarse grained, moist, no odor, rounded to subrounded, quartz. [Alluvium]
	BH11-11C	AUGER	N/A	0.80	2.0 - 3.0'		3.0 - 4.0' <b>Silty Sandy CLAY</b> Medium yellowish brown 10YR5/1, dry to moist at 1', no odor, medium to low plasticity, soft. [Alluvium]
	BH11-11D	AUGER	N/A	0.80	3.0 - 4.0'		
5							
10							
15							
20							
25							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-12

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-12A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 1.0' <b>Silty Sandy CLAY</b> Pale yellowish brown 10YR6/2, dry, no odor, loose, medium to low plasticity when moist, roots, plants. [Alluvium]
	BH11-12B	AUGER	N/A	0.80	1.0 - 2.0'		1.0 - 4.0' <b>SAND</b> Medium yellowish brown 10YR5/1, fine grained, moist, no odor, rounded to subrounded, clean, quartz, wet at 3.5 ft. [Alluvium]
	BH11-12C	AUGER	N/A	0.80	2.0 - 3.0'		
	BH11-12D	AUGER	N/A	0.80	3.0 - 4.0'		
5							
10							
15							
20							
25							

IGPJ 8/27/01

GEOTECH 124711IGPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-13

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 3

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-13A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 1.0' <b>Silty Sandy CLAY</b> Medium yellowish brown 10YR5/1, dry, no odor, non to slightly plastic, loose, roots, plants. [Alluvium]
	BH11-13B	AUGER	N/A	0.80	1.0 - 2.0'		1.0 - 2.0' <b>Silty SAND</b> Medium yellowish brown 10YR5/1, fine grained, moist, no odor, rounded to subrounded, quartz. [Alluvium]
	BH11-13C	AUGER	N/A	0.80	2.0 - 3.0'		2.0 - 3.0' <b>Silty SAND</b> Medium yellowish brown 10YR5/1, medium to fine grained, moist, no odor, angular to subangular, quartz, andesite, wet at 2.8 ft. [Alluvium]
5							
10							
15							
20							
25							

11.GPJ 8/27/01

GEOTECH 124711.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-14

Date Hole Started: 5/9/01

Date Hole Finished: 5/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles

Drilling Company: Hydrometrics Inc.

Driller: Matthew Miles & Alfonso Munoz

Drilling Method: Hand Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 2"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-14A	AUGER	N/A	0.80	0.0 - 1.0'		0.0 - 2.0' <b>Silty, Sandy CLAY</b> Medium yellowish brown 10YR5/1, moist, no odor, low plasticity, loose, roots, plants. [Alluvium]
	BH11-14B	AUGER	N/A	0.80	1.0 - 2.0'		
	BH11-14C	AUGER	N/A	0.80	2.0 - 3.0'		2.0 - 4.0' <b>Silty SAND</b> Medium yellowish brown 10YR5/1, fine grained, moist, no odor, rounded to subrounded, quartz, wet at 3.5 ft. [Alluvium]
	BH11-14D	AUGER	N/A	0.80	3.0 - 4.0'		
5							
10							
15							
20							
25							

11.GPJ 8/27/01

GEOTECH 1247111.GF

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-15

Date Hole Started: 4/30/01 Date Hole Finished: 4/30/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 11  
Descriptive Location: East of I-10, in S. arroyo

Recorded By: Matthew Miles  
Drilling Company: Tierra Drilling & Envir. Svcs.  
Driller: John McDuffee & Carlos Guerra  
Drilling Method: Hollow Stem Auger  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 8"  
Total Depth Drilled (ft): 29

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH11-15A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 0.5' <b>Cobbly, Sandy GRAVEL</b> Medium gray N5 to light brownish gray 5YR6/1, fine to coarse grained, dry, no odor, rounded, loose, calcareous, some boulders. [Alluvium]
	BH11-15B	SS	N/A	1.00	1.0 - 2.0'		0.5 - 8.0' <b>Gravelly, Silty SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, rounded to subrounded, loose, calcareous, with some andesite. [Alluvium]
	BH11-15C	SS	N/A	1.00	2.0 - 3.0'		
	BH11-15D	SS	N/A	1.00	3.0 - 4.0'		
5	BH11-15E	SS	N/A	1.00	4.0 - 5.0'		
10	BH11-15F	SS	N/A	1.00	10.0 - 11.0'		8.0 - 12.5' <b>Silty CLAY</b> Medium yellowish brown 10YR5/1, dry, no odor, low to no plasticity, stiff. [Alluvium]
15	BH11-15G	SS	N/A	1.00	15.0 - 16.0'		12.5 - 18.0' <b>Gravelly, Silty CLAY</b> Pale yellowish brown 10YR6/2, dry, no odor, dense, non plastic, stiff. [Alluvium]
20							18.0 - 29.0' <b>Gravelly, Clayey SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to rounded, dense, andesite, limestone, moist at 20 ft. Wet at 28 ft. [Alluvium]
25	BH11-15H	SS	N/A	1.00	25.0 - 26.0'		
30							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-16

Date Hole Started: 7/19/01 Date Hole Finished: 7/19/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 16

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 2.0'							Gravelly CLAY Pale yellowish brown 10YR6/2 to moderate reddish brown 10R4/6, dry, no odor, with some gravel (limestone and slag). [Recent Alluvium]
2.0 - 13.0'							Gravelly SALG Black, fine, dry, with some gravel (limestone and slag) [Slag Fill]
13.0 - 16.0'							Gravelly Sandy CLAY Pale yellowish brown 10YR6/2, dry, no odor, limestone gravel, some sand, and low plasticity clay. [Shallow Alluvium]
15.0 - 16.0'	BH11-16A	SS	N/A	0.90	15.0 - 16.0' BH11-16A		

GPJ 8/27/01

GEOTECH 124711LGP

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-17

Date Hole Started: 7/19/01 Date Hole Finished: 7/19/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ SplitSpoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 26

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 1.0'							Gravelly CLAY Pale yellowish brown 10YR6/2, dry, no odor, with some gravel (limestone and slag). [Recent Alluvium]
1.0 - 22.0'							Gravelly SLAG with Debris Black, fine, with some gravel (limestone and Slag). with steel, wires, wood, bricks and plastic. [Smelter Debris]
22.0 - 26.0'							Gravelly Sandy CLAY Pale yellowish brown 10YR6/2, dry, no odor, limestone gravel, some sand, low plasticity clay. [Shallow Alluvium]
BH11-17A	SS	N/A	0.90	25.0 - 26.0' BH11-17A			

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-18

Date Hole Started: 7/19/01 Date Hole Finished: 7/19/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: East of I-10, in S. arroyo

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 41

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 2.0'							Gravelly CLAY Pale yellowish brown 10YR6/2, dry, no odor, with some gravel (limestone and slag). [Recent Alluvium]
2.0 - 30.0'							Gravelly SLAG with Debris Black, fine, with some gravel (limestone and slag), with steel, wires, wood, bricks and plastic. [Smelter Debris]
30.0 - 40.0'							Gravelly SLAG with Debris Black, rounded, with limestone gravel, moist, earthy odor, with wood, bricks and plastic. [Smelter Debris]
40.0 - 41.0'	BH11-18A	SS	N/A	1.00	40.0 - 41.0' BH11-18A		Clayey SAND Pale yellowish brown 10YR6/2, dry, no odor, very fine gravel, some sand, low plasticity clay. [Shallow Alluvium]





# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH2-8

Date Hole Started: 3/28/01 Date Hole Finished: 3/28/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 2

Descriptive Location: Boneyard/ Slag Area

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 71

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0							0.0 - 2.0' Slag GRAVEL Black, Angular, fractured, with gravel (Limestone & Quarzite), <5% brick fragments, scrap metal. [Slag Fill]
5							2.0 - 46.0' Slag GRAVEL Black, angular, fractured. [Slag Fill]
10							
15							
20							
25							
30							
35							
40							
45							
50							46.0 - 63.0' Consolidated SLAG Black, angular, fractured, white pasty material in Split Spoon. [Slag Fill]
55							
60							
65	BH2-8A	SS	N/A	1.00	65.0 - 66.0'		63.0 - 71.0' Gravelly, Silty SAND Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, angular to subangular, andesite, quartz, granite. [Alluvium]
70	BH2-8B	SS	N/A	1.00	70.0 - 71.0'		
75							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH2-9

Date Hole Started: 3/28/01

Date Hole Finished: 3/28/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 2

Descriptive Location: Boneyard/ Slag Area

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 67

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5							0.0 - 62.0'
10							Slag
15							Black, angular, fractured. Debris at surface; metal, bricks, wood.
20							[Slag Fill]
25							
30							
35							
40							
45							
50							
55							
60							
62.0	BH2-9A	SS	N/A	1.00	62.0 - 63.0'		62.0 - 62.5'
65							Gravelly SAND w/Silt
66.0	BH2-9B1	SS	N/A	1.00	66.0 - 67.0' Duplicate		Dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, andesite, quartz, some orange streaks.
70							[Deep Alluvium]
75							62.5 - 67.0'
80							Gravelly SAND
							Pale yellowish brown 10YR6/2, coarse grained, moist, no odor, andesite, quartz, clean. Water at 65 ft.
							[Deep Alluvium]

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH2-10

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 2

Descriptive Location: Boneyard/ Slag Area

Recorded By:

Drilling Company:

Driller:

Drilling Method:

Drilling Fluids Used:

Purpose of Hole:

Target Aquifer:

Hole Diameter (in):

Total Depth Drilled (ft): 52

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0							0.0 - 44.0'
5							Slag
10							Black, angular, fractured.
15							[Slag Fill]
20							
25							
30							
35							
40							
45							44.0 - 46.0'
50	BH2-10A	SS	N/A	1.00	47.0 - 48.0'		Gravelly SAND
55							Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, andesite, quartzite.
60	BH2-10B	SS	N/A	1.00	51.0 - 52.0'		[Alluvium]
65							46.0 - 51.0'
70							SAND
							Grayish orange 10YR7/4, fine grained, dry, no odor, poorly graded, rounded to subrounded, quartz sand, feldspar.
							[Alluvium]
							51.0 - 52.0'
							Gravelly SAND
							Pale yellowish brown 10YR6/2, dry, no odor. Sand (~80%) fine to coarse grained, rounded to subrounded. Gravel (~20%) angular to subangular, fine to medium grained, andesite, quartz.
							[Alluvium]

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH2-11

Date Hole Started: 3/29/01 Date Hole Finished: 3/29/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 2

Descriptive Location: Boneyard/ Slag Area

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 27

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 20.0'							Slag Black, angular, fractured. [Slag Fill]
20.0 - 22.0'	BH2-11A	SS	N/A	1.00	21.0 - 22.0'		Gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, ~60% sand, rounded to subrounded, 40% gravel, angular to subangular, quartzite. [Alluvium]
22.0 - 27.0'	BH2-11B	SS	N/A	1.00	26.0 - 27.0'		SAND Grayish orange 10YR7/2, fine grained, moist, no odor, poorly graded, rounded to subrounded, quartz, feldspar. [Alluvium]

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH2-12

Date Hole Started: 3/30/01 Date Hole Finished: 3/30/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 2

Descriptive Location: Boneyard/ Slag Area

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 24

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0							0.0 - 17.0'
5							Slag Black, angular, fractured. [Slag Fill]
10							
15							
18.0	BH2-12A	SS	N/A	1.00	18.0 - 19.0'		17.0 - 24.0'
20							Gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, angular to subangular, ~60% sand, 40% gravel, andesite, quartz, quartzite. [Alluvium]
23.0	BH2-12B	SS	N/A	1.00	23.0 - 24.0'		
25							
30							

1.GPJ 8/20/01

GEOTECH 124711.GPJ



Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso                      State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 8

Descriptive Location: South of B&U Building

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 21

WELL COMPLETION    Y/N    DESCRIPTION                      INTERVAL

Well Installed?            N

Surface Casing Used?    N

Screen/Perforations?    N

Sand Pack?                N

Annular Seal?            N

Surface Seal?            N

DEVELOPMENT/SAMPLING

Well Developed?        N

Water Samples Taken?   N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH8-5A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 3.5' <b>Silty SAND w/gravel</b> Dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, powdery, loose, <5% gravel, some slag. [Fill]
	BH8-5B	SS	N/A	1.00	1.0 - 2.0'		
	BH8-5C	SS	N/A	1.00	2.0 - 3.0'		
5							3.5 - 14.0' <b>SLAG</b> Black, angular, fractured. [Slag Fill]
10							
15	BH8-5D	SS	N/A	1.00	15.0 - 16.0'		14.0 - 21.0' <b>Gravely SAND w/fines</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, rounded to subrounded, 20% gravel, 70% sand, 10% fines, quartz, chert, feldspar. [Alluvium]
20	BH8-5E	SS	N/A	1.00	20.0 - 21.0'		
25							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH8-6

Date Hole Started: 4/11/01 Date Hole Finished: 4/11/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 8

Descriptive Location: South of B&U Building

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 21

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH8-6A	SS	N/A	1.00	1.0 - 2.0'		0.0 - 0.3' <b>ASPHALT</b> Cracked. [Surface cap]
	BH8-6B	SS	N/A	1.00	2.0 - 3.0'		0.3 - 4.6' <b>Gravelly SAND w/fines</b> Pale yellowish brown 10YR6/2 to dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, medium dense, 60% sand, 35% gravel, <5% fines, 5-20% slag.
	BH8-6C	SS	N/A	1.00	3.0 - 4.0'		(Fill)
	BH8-6D	SS	N/A	1.00	4.0 - 5.0'		4.5 - 14.5' <b>SLAG</b> Black, angular, fractured. [Slag Fill]
	BH8-6E	SS	N/A	1.00	15.0 - 16.0'		14.5 - 21.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to subrounded, 75% sand, 25% gravel, chert, quartz, feldspar. [Alluvium]
	BH8-6F	SS	N/A	1.00	20.0 - 21.0' DUPLICATE		



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH8-7

Date Hole Started: 4/11/01 Date Hole Finished: 4/11/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 8

Descriptive Location: South of B&U Building

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 21

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH8-7A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 0.3' <b>Sandy, Clayey SILT</b> Olive gray 5Y3/2, fine to coarse grained, powdery, dry, no odor, loose, 80% silt, 10% sand, 10% clay. [Fill]
	BH8-7B	SS	N/A	1.00	1.0 - 2.0'		0.3 - 0.5' <b>Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular, 10% slag. [Fill]
	BH8-7C	SS	N/A	1.00	2.0 - 3.0'		0.5 - 1.5' <b>SLAG</b> Black, angular, fractured, dry, no odor, 90% slag, 10% fines. [Slag Fill]
	BH8-7D	SS	N/A	1.00	3.0 - 4.0'		2.0 - 6.0' <b>Gravelly SAND w/fines</b> Pale yellowish brown 10YR6/2 to dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, rounded to angular, green and red stains, 70% sand, 20% gravel, 10% fines, <5% slag. [Fill]
	BH8-7E	SS	N/A	1.00	4.0 - 5.0'		6.0 - 14.5' <b>SLAG</b> Black, angular, fractured. [Slag Fill]
	BH8-7F	SS	N/A	1.00	15.0 - 16.0'		14.5 - 21.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, rounded to subrounded, quartz, chert. [Alluvium]
	BH8-7G	SS	N/A	1.00	20.0 - 21.0'		

JL GPJ 8/20/01

GEOTECH 1247III.GPJ

<b>HYDROMETRICS INC.</b> Consulting Scientists and Engineers El Paso, Texas					Borehole Log																																													
					Hole Name: BH8-8																																													
					Date Hole Started: 4/11/01    Date Hole Finished: 4/11/01																																													
<b>Client:</b> Asarco Inc. <b>Project:</b> Phase III Remediation Investigation <b>County:</b> El Paso <b>State:</b> Texas <b>Property Owner:</b> Asarco Inc. <b>Legal Description:</b> Investigation Area 8 <b>Descriptive Location:</b> East of Retaining Pond  <b>Recorded By:</b> Matthew Miles <b>Drilling Company:</b> Tierra Drilling & Envir. Svcs. <b>Driller:</b> John McDuffee & Carlos Guerra <b>Drilling Method:</b> Hollow Stem Auger <b>Drilling Fluids Used:</b> None <b>Purpose of Hole:</b> Collect Soil Samples <b>Target Aquifer:</b> None <b>Hole Diameter (in):</b> 7" <b>Total Depth Drilled (ft):</b> 19					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">WELL COMPLETION</th> <th style="text-align: left;">Y/N</th> <th style="text-align: left;">DESCRIPTION</th> <th style="text-align: left;">INTERVAL</th> </tr> <tr><td>Well Installed?</td><td>N</td><td></td><td></td></tr> <tr><td>Surface Casing Used?</td><td>N</td><td></td><td></td></tr> <tr><td>Screen/Perforations?</td><td>N</td><td></td><td></td></tr> <tr><td>Sand Pack?</td><td>N</td><td></td><td></td></tr> <tr><td>Annular Seal?</td><td>N</td><td></td><td></td></tr> <tr><td>Surface Seal?</td><td>N</td><td></td><td></td></tr> <tr><td colspan="4"><b>DEVELOPMENT/SAMPLING</b></td></tr> <tr><td>Well Developed?</td><td>N</td><td></td><td></td></tr> <tr><td>Water Samples Taken?</td><td>N</td><td></td><td></td></tr> <tr><td>Boring Samples Taken?</td><td>N</td><td></td><td></td></tr> </table>		WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL	Well Installed?	N			Surface Casing Used?	N			Screen/Perforations?	N			Sand Pack?	N			Annular Seal?	N			Surface Seal?	N			<b>DEVELOPMENT/SAMPLING</b>				Well Developed?	N			Water Samples Taken?	N			Boring Samples Taken?	N		
WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL																																															
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					Static Water Level Below MP: _____ Date: _____ MP Description: _____ MP Height Above or Below Ground (ft): _____																																													
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<b>Remarks:</b> All soil descriptions and size fraction distributions based on field observations and tests;																																																		
DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION																																											
	BH8-8A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 2.0' <b>Gravelly, Silty SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to subrounded, <5% slag, limestone, chert. [Fill]																																											
	BH8-8B	SS	N/A	1.00	1.0 - 2.0'		2.0 - 10.0' <b>SLAG</b> Black, angular, fractured. [Slag Fill]																																											
5																																																		
10																																																		
	BH8-8C	SS	N/A	1.00	12.0 - 13.0' DUPLICATE		10.0 - 19.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to subrounded, dense, 70% sand, 30% gravel - chert, quartz. [Alluvium]																																											
	BH8-8D	SS	N/A	1.00	18.0 - 19.0'																																													
15																																																		
20																																																		

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH8-9

Date Hole Started: 4/11/01 Date Hole Finished: 4/11/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 8

Descriptive Location: Southwest of B&U Building

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 13

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH8-9A	SS	N/A	0.50	0.0 - 0.5'		0.0 - 0.3' <b>Sandy, Clayey SILT</b> Olive gray 5Y4/1, fine to coarse grained, powdery, dry, no odor, non plastic, some salg <5%. [Fill]
							0.3 - 0.5' <b>Silty SAND</b> Dark yellowish orange 10YR6/6 to dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, angular to rounded, stained. [Fill]
							0.5 - 7.0' <b>SLAG</b> Black, angular, fractured. [Slag Fill]
5						5	
	BH8-9B	SS	N/A	1.00	7.0 - 8.0'		7.0 - 13.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, rounded to subrounded, 70% sand, 30% gravel, quartz, chert. [Shallow Alluvium]
10						10	
	BH8-9C	SS	N/A	1.00	12.0 - 13.0'		
15						15	

JGFJ 8/20/01

GEOTECH 1247/III.GP

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH8-10

Date Hole Started: 4/11/01 Date Hole Finished: 4/11/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 8

Descriptive Location: Southeast of B&U Buildings

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 16

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 9.5'							<b>SLAG</b> Black, angular, fractured. [Slag Fill]
9.5 - 11.0'	BH8-10A	SS	N/A	1.00	10.0 - 11.0' DUPLICATE		<b>SAND</b> Dark yellowish orange 10YR6/6, fine to coarse grained, dry, no odor, rounded to subrounded, quartz. [Alluvium]
11.0 - 16.0'	BH8-10B	SS	N/A	1.00	15.0 - 16.0'		<b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to subrounded, 70% sand, 30% gravel, quartz, chert, feldspar. [Alluvium]

JGPJ 8/20/01

GEOTECH 1247/III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH8-11

Date Hole Started: 4/12/01 Date Hole Finished: 4/12/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 8

Descriptive Location: Southeast of B&U Buildings

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 11

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH8-11A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 0.5' <b>Silty SAND w/gravel</b> Olive gray 5Y4/1, fine to coarse grained, dry, no odor, powdery, 30% silt, 60% sand, 10% gravel. [Fill]
	BH8-11B	SS	N/A	1.00	1.0 - 2.0'		0.5 - 4.0' <b>Gravelly SAND w/fines</b> Pale yellowish brown 10YR6/2 to dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, angular to rounded, 30% gravel, 60% sand, 10% fines, 5-20% slag. [Fill]
	BH8-11C	SS	N/A	1.00	2.0 - 3.0'		
	BH8-11D	SS	N/A	1.00	3.0 - 4.0'		
	BH8-11E	SS	N/A	1.00	4.0 - 5.0'		4.0 - 6.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR 6/2, fine to coarse grained, moist, no odor, rounded to subrounded, quartz, chert, 30% gravel, 70% sand. [Alluvium]
5							
							6.0 - 11.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine grained, moist, no odor, rounded to subrounded, quartz, 95% sand, <5% gravel. [Alluvium]
10	BH8-11F	SS	N/A	1.00	10.0 - 11.0'		
15							

GPJ 8/20/01

GEOTECH 1247111.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH8-12

Date Hole Started: 4/12/01 Date Hole Finished: 4/12/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 8  
Descriptive Location: Tracks Southeast of B&U Buildings  
Recorded By: Matthew Miles  
Drilling Company: Tierra Drilling & Envir. Svcs.  
Driller: John McDuffee & Carlos Guerra  
Drilling Method: Hollow Stem Auger  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 7"  
Total Depth Drilled (ft): 10

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH8-12A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 2.0' <b>Gravelly SAND w/fines</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded to subangular, loose, quartz, green oxidation. [Fill]
	BH8-12B	SS	N/A	1.00	1.0 - 2.0'		
	BH8-12C	SS	N/A	1.00	2.0 - 3.0'		2.0 - 10.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, medium to fine grained, moist, no odor, rounded to subrounded, quartz, chert, 10% gravel, 90% sand. [Alluvium]
	BH8-12D	SS	N/A	1.00	3.0 - 4.0'		
5							
	BH8-12E	SS	N/A	1.00	9.0 - 10.0'		
10							
15							

LOGJ 8/20/01

GEOTECH 12/4/01 LOGJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH11-19

Date Hole Started: 7/19/01 Date Hole Finished: 7/19/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 11  
Descriptive Location: East of I-10, in S. arroyo

Recorded By: Angel Garcia  
Drilling Company: Enviro-drill  
Driller: David Stearns and Sam Mustache  
Drilling Method: Hollow Stem Auger w/ Split Spoons  
Drilling Fluids Used: None  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 7"  
Total Depth Drilled (ft): 11

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP:	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description:	Ground Surface Elevation (ft):
MP Height Above or Below Ground (ft):	MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0							0.0 - 3.0' <b>Gravelly SLAG</b> Black, fine with limestone and slag gravel. [Slag Fill]
3.0							3.0 - 8.0' <b>Clayey GRAVEL</b> Pale yellowish brown 10YR6/2, dry, no odor, low plasticity, with limestone cobbles and gravel. [Shallow Alluvium]
8.0							8.0 - 11.0' <b>Sandy CLAY</b> Moderate yellowish brown 10YR4/2, moist, no odor, low plasticity clay. [Shallow Alluvium]
11.0							
15.0							
20.0							
25.0							

GPJ 8/27/01

GEOTECH 1247/III GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Soil Boring Log

Hole Name: BH12-1

Date Hole Started: 11/3/99 Date Hole Finished: 11/3/99

Client: ASARCO, Inc.  
Project: Remedial Investigation Phase II  
County: El Paso State: Texas  
Property Owner: ASARCO, Inc.  
Legal Description: ASARCO El Paso Plant  
Descriptive Location: 150 Northeast of EP-109

Recorded By: H Kutz  
Drilling Company: Alliance Environmental  
Driller: Oscar Medrano  
Drilling Method: Sonic  
Drilling Fluids Used: Water  
Purpose of Hole: Collect Soil Samples  
Target Aquifer: Alluvial  
Hole Diameter (in): 6  
Total Depth Drilled (ft): 17

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: 16	Surface Casing Height (ft):
Date:	Riser Height (ft):
MP Description: Ground Surface	Ground Surface Elevation (ft): 3770.4
MP Height Above or Below Ground (ft): 0	MP Elevation (ft): 3770.40

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Sampled from 0 feet to 16 feet BGS.  
Static water level 16 feet BGS.  
Boring abandoned with Bentonite Chips.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH12-1-A	CONT		1.00	0.0 - 1.0'		0.0 - 2.0' <b>SAND, Silty</b> Fine grained, moderate yellowish brown, 10 YR 5/4, dry, no odor, poorly graded, loose.
							2.0 - 3.0' <b>SLAG</b> Black, angular, fractured.
	BH12-1-B			1.00	3.0 - 4.0'		3.0 - 9.0' <b>SAND</b> Fine to medium grained, moderate yellowish brown, 10 YR 5/4, dry, no odor, poorly graded, medium dense.
	BH12-1-C			1.00	4.0 - 5.0'		
5							
10	BH12-1-D			2.00	10.0 - 12.0'		9.0 - 17.0' <b>GRAVEL, Sandy, Clayey</b> Fine to coarse grained, grayish orange, 10 YR 7/4, dry to wet, no odor, dense.
15	BH12-1-E			1.00	15.0 - 16.0' E2 Sample Duplicate		
20							

GPJ 9/29/01  
GEOTECH 1085.GPJ



**Client:** Asarco Inc.

**Project:** Phase III Remediation Investigation

**County:** El Paso      **State:** Texas

**Property Owner:** Asarco Inc.

**Legal Description:** Investigation Area 12

**Descriptive Location:** Slag pile NE of ephemeral pond

**Recorded By:** Matthew Miles

**Drilling Company:** Tierra Drilling & Envir. Svcs.

**Driller:** John McDuffee & Carlos Guerra

**Drilling Method:** Hollow Stem Auger

**Drilling Fluids Used:** None

**Purpose of Hole:** Collect Soil Samples

**Target Aquifer:** None

**Hole Diameter (in):** 7"

**Total Depth Drilled (ft):** 55

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
<b>DEVELOPMENT/SAMPLING</b>			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

**Static Water Level Below MP:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**MP Description:** \_\_\_\_\_

**MP Height Above or Below Ground (ft):** \_\_\_\_\_

**Surface Casing Height (ft):** \_\_\_\_\_

**Riser Height (ft):** \_\_\_\_\_

**Ground Surface Elevation (ft):** \_\_\_\_\_

**MP Elevation (ft):** \_\_\_\_\_

**Remarks:** All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0							0.0 - 0.5'
5							<b>Crushed SLAG w/fines</b> Black, angular, fractured, gap graded, 60% slag, 40% fines, dry, no odor. [Slag Fill]
10							0.5 - 35.0'
15							<b>SAND w/slag</b> Black, fine grained, angular, dry, no odor, loose, <5% slag gravel. [Slag Fill]
20							
25							
30							
35							35.0 - 49.0'
40							<b>SLAG</b> Black, angular, fractured. [Slag Fill]
45							
50							49.0 - 55.0'
55	BH12-10A	SS	N/A	0.40	52.0 - 53.0'		<b>Sandy GRAVEL</b> Pale Yellowish brown 10YR6/2, dry, no odor, angular, fractured, crystalline, 70% gravel (Quartzite), 30% sand (Qtz). [Alluvium]
60							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-11

Date Hole Started: 4/3/01

Date Hole Finished: 4/3/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 43

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'							<b>Crushed SALG w/fines</b> Black, angular, fractured, gap graded, 60% slag, 40% fines, dry, no odor. [Slag Fill]
0.5 - 27.0'							<b>SAND w/slag</b> Black, fine grained, angular, dry, no odor, loose, <5% slag gravel. [Slag Fill]
27.0 - 30.0'							<b>SLAG</b> Black, angular, fractured. [Slag Fill]
30.0 - 31.0'							<b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, 80% sand, 20% slag gravel. [Fill]
31.0 - 43.0'							<b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, sub-rounded to sub-angular, dense, andesite, quartz, quartzite, feldspar, <10% gravel. [Alluvium]
37.0 - 38.0'	BH12-11A	SS	N/A	1.00			
42.0 - 43.0'	BH12-11B	SS	N/A	1.00			



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-12

Date Hole Started: 4/3/01

Date Hole Finished: 4/3/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 52

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING			
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Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	N		
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Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5							0.0 - 0.5' Crushed SALG w/fines Black, angular, fractured, gap graded, 70% slag, 40% fines. [Slag Fill]
10							0.5 - 40.0' SAND w/slag Black, fine grained, angular, dry, no odor, loose, <5% slag gravel. [Slag Fill]
15							
20							
25							
30							
35							
40							40.0 - 45.0' SLAG Black, angular, fractured. [Slag Fill]
45							45.0 - 53.0' Gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to subangular, 60% sand, 40% gravel, andesite, quartzite, quartz. [Alluvium]
50	BH12-12A	SS	N/A	1.00	47.0 - 48.0'		
55							
60	BH12-12B	SS	N/A	1.00	52.0 - 53.0'		
65							
70							

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# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-13

Date Hole Started: 4/4/01

Date Hole Finished: 4/4/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 53

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'							Crushed SALG w/fines Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
0.5 - 45.0'							SAND w/slag Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
45.0 - 50.0'							SAND Pale yellowish brown 10YR6/2, medium grained, moist, no odor, well sorted, rounded to subrounded, quartz, some feldspar. [Alluvium]
50.0 - 52.0'							Gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to subrounded, quartz, 60% sand, 40% gravel (andesite - quartzite). [Alluvium]
52.0 - 53.0'							
53.0 - 54.0'							
54.0 - 55.0'							
55.0 - 56.0'							
56.0 - 57.0'							
57.0 - 58.0'							
58.0 - 59.0'							
59.0 - 60.0'							
60.0 - 61.0'							
61.0 - 62.0'							
62.0 - 63.0'							
63.0 - 64.0'							
64.0 - 65.0'							
65.0 - 66.0'							
66.0 - 67.0'							
67.0 - 68.0'							
68.0 - 69.0'							
69.0 - 70.0'							
70.0 - 71.0'							
71.0 - 72.0'							
72.0 - 73.0'							
73.0 - 74.0'							
74.0 - 75.0'							
75.0 - 76.0'							
76.0 - 77.0'							
77.0 - 78.0'							
78.0 - 79.0'							
79.0 - 80.0'							
80.0 - 81.0'							
81.0 - 82.0'							
82.0 - 83.0'							
83.0 - 84.0'							
84.0 - 85.0'							
85.0 - 86.0'							
86.0 - 87.0'							
87.0 - 88.0'							
88.0 - 89.0'							
89.0 - 90.0'							
90.0 - 91.0'							
91.0 - 92.0'							
92.0 - 93.0'							
93.0 - 94.0'							
94.0 - 95.0'							
95.0 - 96.0'							
96.0 - 97.0'							
97.0 - 98.0'							
98.0 - 99.0'							
99.0 - 100.0'							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-14

Date Hole Started: 4/4/01

Date Hole Finished: 4/4/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 52

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0							0.0 - 0.5' Crushed SALG w/fines Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
5							0.5 - 41.0' SAND w/slag Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
10							
15							
20							
25							
30							
35							
40							
43.0	BH12-14A	SS	N/A	1.00	43.0 - 44.0'		41.0 - 47.0' Clayey SAND w/clay lenses Pale yellowish brown 10YR6/2, medium grained, moist, no odor, rounded to subrounded, quartz, w/clay lenses, 0.1 - 1" in thickness, medium plastic. [Alluvium]
45							
50	BH12-14B	SS	N/A	1.00	50.0 - 51.0'		47.0 - 52.0' Gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, 60% sand, rounded, 30% gravel medium grained, angular, gap graded, 10% clay, medium plastic. [Alluvium]
55							
60							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-15

Date Hole Started: 4/4/01

Date Hole Finished: 4/4/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 52

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'							<b>Crushed SALG w/fines</b> Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
0.5 - 47.0'							<b>SAND w/slag</b> Black, fine grained, angular, dry, no odor, <5% slag gravel, debris (plastic) at 8 ft. [Slag Fill]
47.0 - 50.0'							<b>Clayey SAND</b> Pale yellowish brown 10YR6/2, to dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, rounded to angular, green oxidation spots, fibrous material, greenish clay. [Alluvium]
50.0 - 51.5'							<b>Clayey SAND</b> Pale yellowish brown 10YR6/2, moist, no odor, rounded to subrounded, quartz, w/clay lenses, 1" apart, 1" thick medium plastic. [Alluvium]
51.5 - 52.0'							<b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to subangular, quartz, quartzite, 60% sand, 40% gravel. [Alluvium]
50.0 - 50.0'	BH12-15A	SS	N/A	1.00	49.0 - 50.0'		
51.0 - 52.0'	BH12-15B	SS	N/A	1.00	51.0 - 52.0'		



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-16

Date Hole Started: 4/4/01

Date Hole Finished: 4/4/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 54

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0							0.0 - 0.5' <b>Crushed SALG</b> Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
5							0.5 - 47.0' <b>SAND w/slag</b> Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
10							
15							
20							
25							
30							
35							
40							
45							
48.0	BH12-16A	SS	N/A	1.00	48.0 - 49.0'		47.0 - 51.0' <b>Clayey SAND</b> Pale yellowish brown 10YR6/2, medium grained, moist, no odor, rounded to subrounded, medium dense, wet, quartz, 1" thick clay lenses at 47' & 48.5'. [Alluvium]
53.0	BH12-16B	SS	N/A	1.00	53.0 - 54.0'		51.0 - 54.0' <b>Gravelly Clayey SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, 60% rounded quartz sand, 20% gravel (quartzite), 20% clay lenses, 1" thick -2-4" spacing, medium plastic. [Alluvium]
54							
55							
60							
65							

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso                      State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 56

WELL COMPLETION    Y/N    DESCRIPTION                      INTERVAL

Well Installed?                      N

Surface Casing Used?                      N

Screen/Perforations?                      N

Sand Pack?                      N

Annular Seal?                      N

Surface Seal?                      N

DEVELOPMENT/SAMPLING

Well Developed?                      N

Water Samples Taken?                      N

Boring Samples Taken?                      N

Static Water Level Below MP:                      Surface Casing Height (ft):

Date:                      Riser Height (ft):

MP Description:                      Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):                      MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0							0.0 - 0.5' Crushed SALG w/fines Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
5							0.5 - 47.0' SAND w/slag Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
10							
15							
20							
25							
30							
35							
40							
45							
47.0	BH12-17A	SS	N/A	1.00	48.0 - 49.0'		47.0 - 50.0' Clayey SAND Dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, angular to rounded, 10% silt and clay, broken glass, few wood chunks, 30% gravel, 60% sand. [Fill]
50	BH12-17B	SS	N/A	1.00	51.0 - 52.0'		
55	BH12-17C	SS	N/A	1.00	55.0 - 56.0'		50.0 - 56.0' Gravelly, Clayey SAND Pale yellowish brown 10YR6/2, medium grained, moist, no odor, rounded to subrounded, medium dense, quartz, <10% fines, <10% gravel. [Fill]
60							
65							



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-18

Date Hole Started: 4/5/01

Date Hole Finished: 4/5/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 49

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0							0.0 - 0.5'
5							Crushed SALG w/fines Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
10							0.5 - 42.0'
15							SAND w/slag Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
20							
25							
30							
35							
40							
43.0	BH12-18A	SS	N/A	1.00	43.0 - 44.0'		42.0 - 48.0'
45							Gravelly SAND w/fines Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, angular to subangular, quartzite, quartz, feldspar, andesite, 30% gravel, 60% sand. [Alluvium]
48.0	BH12-18B	SS	N/A	1.00	48.0 - 49.0'		
50							
55							
60							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-19

Date Hole Started: 4/5/01

Date Hole Finished: 4/5/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 46

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'							Crushed SALG w/fines Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
0.5 - 39.0'							SAND w/slag Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
39.0 - 46.0'							Gravelly SAND w/fines Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded to subangular, dense, 10% fines, 30% gravel, 60% sand. [Alluvium]
40.0 - 41.0'	BH12-19A	SS	N/A	1.00	40.0 - 41.0' Duplicate		
45.0 - 46.0'	BH12-19B	SS	N/A	1.00	45.0 - 46.0'		

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# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-20

Date Hole Started: 4/5/01

Date Hole Finished: 4/5/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 37

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'							Crushed SALG w/fines Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
0.5 - 29.0'							SAND w/slag Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
29.0 - 37.0'							Clayey, Gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded to subangular, dense, quartz, feldspar, 20% fines, 10% andesite gravel, 70% sand. [Alluvium]
BH12-20A	SS	N/A	1.00	31.0 - 32.0'			
BH12-20B	SS	N/A	1.00	36.0 - 37.0'			

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-21

Date Hole Started: 4/5/01 Date Hole Finished: 4/5/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 26

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0							0.0 - 0.5' <b>Crushed SALG w/fines</b> Black, angular, fractured, 70% slag, 30% fines. [Slag Fill]
0.5							0.5 - 19.0' <b>SAND w/slag</b> Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
19.0							19.0 - 26.0' <b>Clayey, Gravely SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded to subangular, quartzite, quartz, feldspar, 5% fines, 15% gravel, 80% sand. [Alluvium]
20.0	BH12-21A	SS	N/A	1.00	20.0 - 21.0'		
25.0	BH12-21B	SS	N/A	1.00	25.0 - 26.0'		

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# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH12-22

Date Hole Started: 4/6/01

Date Hole Finished: 4/6/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 12

Descriptive Location: Slag pile NE of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 32

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'							Crushed SALG w/fines Black, angular, fractured, dry, 70% slag, 30% fines. [Slag Fill]
0.5 - 19.0'							SAND w/slag Black, fine grained, angular, dry, no odor, <5% slag gravel. [Slag Fill]
19.0 - 26.0'							Clayey, Gravely SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded to subangular, quartzite, quartz, feldspar, 5% fines, 25% gravel, 70% sand. [Alluvium]
25.0 - 26.0'	BH12-22A	SS	N/A	1.00			
31.0 - 32.0'	BH12-22B	SS	N/A	1.00			

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-2

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ SplitSpoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 16

## WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

## DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):





Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.4'							<b>Asphalt</b> Black, with cracks. [Road Pavement]
0.4 - 0.8'							<b>Clayey Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, dry, no odor, low plasticity, sub-rounded sand, sub-rounded gravel. [Fill]
0.8 - 10.0'							<b>SLAG</b> Black, angular, fractured. [Slag Fill]
10.0 - 16.0'							<b>Clayey Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, dry, no odor, low plasticity, sub-rounded sand, sub-rounded gravel. [Fill]
15.0 - 16.0'	BH13-2A	SS	N/A	1.00			

GPJ 8/20/01

GEOTECH 12/7/01 GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-3

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoors

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 21

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.3'							ASPHALT Black, with cracks. [Road Pavement]
0.3 - 0.9'							Clayey Sandy GRAVEL Pale yellowish brown 10YR6/2, dry, no odor, low plasticity, sub-rounded fine sand, sub-rounded to sub-angular gravel. [Fill]
0.9 - 18.0'							SLAG Black, angular, fractured. [Slag Fill]
18.0 - 21.0'							Clayey Sandy GRAVEL Pale yellowish brown 10YR6/2, dry, no odor, low plasticity, sub-rounded fine sand, sub-rounded to sub-angular gravel. [Fill]
20.0 - 21.0'	BH13-3A	SS	N/A	0.50			

1.GPJ 8/2001

GEOTECH 1247/III.GPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-4

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 23

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

DESCRIPTION

INTERVAL

Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft):

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 1.0'							<b>Clayey Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, dry, no odor, low plasticity, sub-rounded fine sand, sub-rounded to sub-angular gravel. [Fill]
1.0 - 19.0'							<b>SLAG</b> Black, angular, fractured. [Slag Fill]
19.0 - 23.0'							<b>Clayey Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, dry, no odor, low plasticity, sub-rounded fine sand, sub-rounded to sub-angular gravel. [Fill]
BH13-4A	SS	N/A	0.50	22.0 - 23.0'			



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-5

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):



Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
							0.0 - 3.5' <b>Clayey GRAVEL</b> Moderate yellowish brown 10YR4/2, fine to medium grained, moist, no odor, low plasticity, sub-rounded gravel. [Fill]
							3.5 - 4.0' <b>SLAG</b> Black, angular, fractured. Auger refusal at 4 ft. [Slag Fill]

II.GPJ 8/20/01

GEOTECH 1247111.GPJ

<b>HYDROMETRICS INC.</b> Consulting Scientists and Engineers El Paso, Texas		Borehole Log	
		<b>Hole Name: BH13-8</b> Date Hole Started:      Date Hole Finished:	

Client: Asarco Inc. Project: Phase III Remediation Investigation County: El Paso      State: Texas Property Owner: Asarco Inc. Legal Description: Investigation Area 13 Descriptive Location: West of Sample Mill Area  Recorded By: Angel Garcia Drilling Company: Enviro-drill Driller: David Stearns and Sam Mustache Drilling Method: Hollow Stem Auger w/ Split Spoons Drilling Fluids Used: None Purpose of Hole: Collect Soil Samples Target Aquifer: None Hole Diameter (in): 7" Total Depth Drilled (ft): 5.8	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">WELL COMPLETION</th> <th style="text-align: left;">Y/N</th> <th style="text-align: left;">DESCRIPTION</th> <th style="text-align: left;">INTERVAL</th> </tr> <tr> <td>Well Installed?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Surface Casing Used?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Screen/Perforations?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Sand Pack?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Annular Seal?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Surface Seal?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td colspan="4"><b>DEVELOPMENT/SAMPLING</b></td> </tr> <tr> <td>Well Developed?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Water Samples Taken?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Boring Samples Taken?</td> <td>N</td> <td></td> <td></td> </tr> </table> <table style="width: 100%;"> <tr> <td>Static Water Level Below MP:</td> <td>Surface Casing Height (ft):</td> </tr> <tr> <td>Date:</td> <td>Riser Height (ft):</td> </tr> <tr> <td>MP Description:</td> <td>Ground Surface Elevation (ft):</td> </tr> <tr> <td>MP Height Above or Below Ground (ft):</td> <td>MP Elevation (ft):</td> </tr> </table>	WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL	Well Installed?	N			Surface Casing Used?	N			Screen/Perforations?	N			Sand Pack?	N			Annular Seal?	N			Surface Seal?	N			<b>DEVELOPMENT/SAMPLING</b>				Well Developed?	N			Water Samples Taken?	N			Boring Samples Taken?	N			Static Water Level Below MP:	Surface Casing Height (ft):	Date:	Riser Height (ft):	MP Description:	Ground Surface Elevation (ft):	MP Height Above or Below Ground (ft):	MP Elevation (ft):
WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL																																																		
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Surface Casing Used?	N																																																				
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Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
<div style="position: relative; height: 100px;"> <div style="position: absolute; left: -20px; top: 0; bottom: 0; transform: rotate(-90deg); transform-origin: left top;">           GEOTECH 124711.GPJ            10            5         </div> </div>							0.0 - 5.0' <b>Clayey GRAVEL</b> Moderate yellowish brown 10YR4/2, fine to medium grained, dry, no odor, low plasticity, sub-rounded gravel. [Fill]
							5.0 - 5.8' <b>SLAG</b> Black, angular, fractured. Rig broke. [Slag Fill]

Sheet 1 of 1

<b>HYDROMETRICS INC.</b> Consulting Scientists and Engineers El Paso, Texas		Borehole Log	
		<b>Hole Name: BH13-9</b> Date Hole Started:      Date Hole Finished:	

Client: Asarco Inc. Project: Phase III Remediation Investigation County: El Paso      State: Texas Property Owner: Asarco Inc. Legal Description: Investigation Area 13 Descriptive Location: West of Sample Mill Area  Recorded By: Angel Garcia Drilling Company: Enviro-drill Driller: David Stearns and Sam Mustache Drilling Method: Hollow Stem Auger w/ Split Spoors Drilling Fluids Used: None Purpose of Hole: Collect Soil Samples Target Aquifer: None Hole Diameter (in): 7" Total Depth Drilled (ft): 11	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 20%;">WELL COMPLETION</th> <th style="width: 10%;">Y/N</th> <th style="width: 40%;">DESCRIPTION</th> <th style="width: 30%;">INTERVAL</th> </tr> <tr> <td>Well Installed?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Surface Casing Used?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Screen/Perforations?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Sand Pack?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Annular Seal?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Surface Seal?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td colspan="4"><b>DEVELOPMENT/SAMPLING</b></td> </tr> <tr> <td>Well Developed?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Water Samples Taken?</td> <td>N</td> <td></td> <td></td> </tr> <tr> <td>Boring Samples Taken?</td> <td>N</td> <td></td> <td></td> </tr> </table> <table style="width: 100%;"> <tr> <td style="width: 33%;">Static Water Level Below MP:</td> <td style="width: 33%;">Surface Casing Height (ft):</td> <td style="width: 34%;"></td> </tr> <tr> <td>Date:</td> <td>Riser Height (ft):</td> <td></td> </tr> <tr> <td>MP Description:</td> <td>Ground Surface Elevation (ft):</td> <td></td> </tr> <tr> <td>MP Height Above or Below Ground (ft):</td> <td>MP Elevation (ft):</td> <td></td> </tr> </table>	WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL	Well Installed?	N			Surface Casing Used?	N			Screen/Perforations?	N			Sand Pack?	N			Annular Seal?	N			Surface Seal?	N			<b>DEVELOPMENT/SAMPLING</b>				Well Developed?	N			Water Samples Taken?	N			Boring Samples Taken?	N			Static Water Level Below MP:	Surface Casing Height (ft):		Date:	Riser Height (ft):		MP Description:	Ground Surface Elevation (ft):		MP Height Above or Below Ground (ft):	MP Elevation (ft):	
WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL																																																						
Well Installed?	N																																																								
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MP Height Above or Below Ground (ft):	MP Elevation (ft):																																																								

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
							0.0 - 0.3' <b>ASPHALT</b> Black, cracked. (Road Pavement)
							0.3 - 11.0' <b>Clayey GRAVEL</b> Moderate yellowish brown 10YR4/2, fine to medium grained, dry, no odor, low plasticity, sub-rounded. [Fill]
5						5	
10	BH13-9A	SS	N/A	0.80	10.0 - 11.0'	10	
15						15	

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Sheet 1 of 1

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-10

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 16

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 0.5'							SLAG Black, angular, fractured. [Slag Fill]
0.5 - 4.0'							Clayey GRAVEL Moderate yellowish brown 10YR4/2, fine to medium grained, dry, no odor, low plasticity clay, sub-rounded, wood chunks. [Fill]
4.0 - 9.0'							SLAG Black, angular, fractured. [Slag Fill]
9.0 - 10.0'							Gravelly SLAG Black, fine slag with sub-rounded to sub-angular gravel. [Slag Fill]
10.0 - 16.0'							Clayey GRAVEL Moderate yellowish brown 10YR4/2, fine to medium grained, dry, no odor, low plasticity clay, sub-rounded, wood chunks. [Fill]
15	BH13-10A	SS	N/A	0.70	15.0 - 16.0'		
20							

LGPI 8/20/01

GEOTECH 1247/ILGPI



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-11

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 26

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
-----------------	-----	-------------	----------

Well Installed?	N		
-----------------	---	--	--

Surface Casing Used?	N		
----------------------	---	--	--

Screen/Perforations?	N		
----------------------	---	--	--

Sand Pack?	N		
------------	---	--	--

Annular Seal?	N		
---------------	---	--	--

Surface Seal?	N		
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DEVELOPMENT/SAMPLING	
----------------------	--

Well Developed?	N
-----------------	---

Water Samples Taken?	N
----------------------	---

Boring Samples Taken?	N
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Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0							0.0 - 3.0' <b>Gravelly SLAG</b> Black, fine slag with sub-rounded to sub-angular gravel and slag gravel. Wood chunks, dry, no odor. {Slag Fill}
3.0							3.0 - 5.0' <b>SLAG</b> Black, angular, fractured. {Slag Fill}
5.0							5.0 - 5.9' <b>Clayey GRAVEL</b> Moderate yellowish brown 10YR4/2, fine to medium grained, dry, no odor, low plasticity clay, sub-rounded, wood chunks. {Fill}
5.9							5.9 - 20.0' <b>SLAG</b> Black, angular, fractured. {Slag Fill}
20.0							20.0 - 26.0' <b>Clayey GRAVEL</b> Moderate yellowish brown 10YR4/2, fine to medium grained, dry, no odor, low plasticity clay, sub-rounded. {Fill}
25.0	BH13-11A	SS	N/A	0.30	25.0 - 26.0'		
30.0							

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-12

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 7.5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
							0.0 - 0.9' <b>SLAG</b> Black, fine with gravel and slag gravel. [Slag Fill]
							0.9 - 4.0' <b>Gravelly Sandy CLAY</b> Moderate yellowish brown 10YR4/2; quartz sand, low plasticity clay, gravel starts at 3 feet, sub-rounded. [Fill]
							4.0 - 7.5' <b>SLAG</b> Black, angular, fractured. Auger and head broke, still in hole. [Slag Fill]

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# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH13-13

Date Hole Started:

Date Hole Finished:

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 13

Descriptive Location: West of Sample Mill Area

Recorded By: Angel Garcia

Drilling Company: Enviro-drill

Driller: David Stearns and Sam Mustache

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 16

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
-----------------	-----	-------------	----------

Well Installed?	N		
-----------------	---	--	--

Surface Casing Used?	N		
----------------------	---	--	--

Screen/Perforations?	N		
----------------------	---	--	--

Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING			
----------------------	--	--	--

Well Developed?	N		
-----------------	---	--	--

Water Samples Taken?	N		
----------------------	---	--	--

Boring Samples Taken?	N		
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Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0							0.0 - 5.0' <b>Clayey GRAVEL</b> Moderate yellowish brown, fine to medium grained, dry, no odor, low plasticity clay, sub-rounded gravel. [Fill]
5.0							5.0 - 13.0' Gap
13.0							13.0 - 16.0' <b>Gravelly CLAY</b> Pale yellowish brown 10YR6/2, fine to medium grained gravel, sub-rounded, dry, no odor, low plasticity clay. [Fill]
15.0	BH13-13A	SS	N/A	0.60	15.0 - 16.0'		
20.0							

JUL GPJ 8/20/01

GEOTECH 124711 GP

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH14-4

Date Hole Started: 4/10/01 Date Hole Finished: 4/10/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 14

Descriptive Location: SW of pond 1

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 11

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH14-4A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 1.5' <b>Gravelly, Silty SAND</b> Dark yellowish brown 10YR4/2, fine to coarse grained, dry, no odor, rounded to angular, some slag, mixed compositions. [Fill]
	BH14-4B	SS	N/A	1.00	1.0 - 2.0'		
	BH14-4C	SS	N/A	1.00	2.0 - 3.0'		1.5 - 11.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, medium to fine grained, dry, no odor, rounded to subrounded, clean, quartz, chert. [Alluvium]
	BH14-4D	SS	N/A	1.00	3.0 - 4.0'		
	BH14-4E	SS	N/A	1.00	4.0 - 5.0'		
5							
10	BH14-4F	SS	N/A	1.00	10.0 - 11.0'		
15							

III, GPJ, 8/20/01

GEOTECH 1247III, GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH14-5

Date Hole Started: 4/10/01 Date Hole Finished: 4/10/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 14

Descriptive Location: SW of pond 1

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples

Target Aquifer: None

Hole Diameter (in): 7"

Total Depth Drilled (ft): 11

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? N

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH14-5A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 5.0' <b>Gravelly, Silty SAND</b> Dark yellowish brown 10YR4/2, coarse to fine grained, dry, no odor, rounded to angular, some slag at surface, wood chunks and other debris. [Fill]
	BH14-5B	SS	N/A	1.00	1.0 - 2.0'		
	BH14-5D	SS	N/A	1.00	3.0 - 4.0'		
	BH14-5E	SS	N/A	1.00	4.0 - 5.0'		
5							5.0 - 11.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to medium grained, dry, no odor, rounded to subrounded, clean, quartz, chert. [Alluvium]
10	BH14-5F	SS	N/A	1.00	10.0 - 11.0' DUPLICATE.		
15							

J.GPJ 8/20/01

GEOTECH 124711LGPJ

# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Borehole Log

Hole Name: BH14-6

Date Hole Started: 4/16/01 Date Hole Finished: 4/16/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 14  
Descriptive Location: SW of pond 1

Recorded By: Matthew Miles  
Drilling Company: Tierra Drilling & Envir. Svcs.  
Driller: John McDuffee & Carlos Guerra  
Drilling Method: Hollow Stem Auger  
Drilling Fluids Used: None

Purpose of Hole: Collect Soil Samples  
Target Aquifer: None  
Hole Diameter (in): 7"  
Total Depth Drilled (ft): 11

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	N		
Annular Seal?	N		
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	N		

Static Water Level Below MP: \_\_\_\_\_ Surface Casing Height (ft): \_\_\_\_\_  
Date: \_\_\_\_\_ Riser Height (ft): \_\_\_\_\_  
MP Description: \_\_\_\_\_ Ground Surface Elevation (ft): \_\_\_\_\_  
MP Height Above or Below Ground (ft): \_\_\_\_\_ MP Elevation (ft): \_\_\_\_\_

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	BH14-6A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 4.2' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to subangular, quartz, feldspar, chert. [Fill]
	BH14-6B	SS	N/A	1.00	1.0 - 2.0'		
	BH14-6C	SS	N/A	1.00	2.0 - 3.0'		
	BH14-6D	SS	N/A	1.00	3.0 - 4.0'		
	BH14-6E	SS	N/A	1.00	4.0 - 5.0'		4.2 - 11.0' <b>SAND w/gravel</b> Pale yellowish brown 10YR6/2, medium to coarse grained, dry, no odor, rounded to subrounded. [Alluvium]
5							
10	BH14-6F	SS	N/A	1.00	10.0 - 11.0' DUPLICATE.		
15							

GPJ 8/20/01

GEOTECH 1247/III.GPJ



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-119

Date Hole Started: 4/2/01

Date Hole Finished: 4/2/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 5  
Descriptive Location: NW corner of Smeltertown

Recorded By: Matthew Miles  
Drilling Company: Tierra Drilling & Envir. Svcs.  
Driller: John McDuffee & Carlos Guerra  
Drilling Method: Hollow Stem Auger w/ Split Spoons  
Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well  
Target Aquifer: Shallow Alluvial  
Hole Diameter (in): 11"  
Total Depth Drilled (ft): 20

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-5 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	5-20 ft bgs
Sand Pack?	Y	10/20 Silica sand	3-20 ft bgs
Annular Seal?	Y	Med bentonite chips	1-3 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 150 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-5' continuous

Static Water Level Below MP: 10.23 Surface Casing Height (ft): 3  
Date: 4/2/01 Riser Height (ft): 3  
MP Description: Top of PVC Ground Surface Elevation (ft): 3723.09  
MP Height Above or Below Ground (ft): +3 MP Elevation (ft): 3726.09

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	EP-119A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 2.0' <b>Silty Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded, 60% sand, quartz. [Fill]
	EP-119B	SS	N/A	1.00	1.0 - 2.0'		2.0 - 3.0' <b>Silty Clayey SAND</b> Dark yellowish brown 10YR4/2, fine grained, moist, no odor, rounded to sub-rounded, dense, 60% sand. [Fill]
	EP-119C	SS	N/A	1.00	2.0 - 3.0'		3.0 - 5.0' <b>SAND</b> Pale yellowish brown 10YR6/2, medium to coarse grained, moist, no odor, sub-angular to sub-rounded, loose, quartz and some feldspar. [Alluvium]
5	EP-119D	SS	N/A	1.00	3.0 - 4.0'		5.0 - 20.0' <b>Silty clayey SAND</b> Pale yellowish brown 10YR6/2, fine grained, no odor, saturated at 10 ft, rounded to sub-rounded, quartz, feldspar. [Alluvium]
	EP-119E	SS	N/A	1.00	4.0 - 5.0'		
10	EP-119F	SS	N/A	1.00	10.0 - 11.0'		
15							
20							
25							

GEOTECH 1247III.GPJ 1247III.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-120

Date Hole Started: 4/6/01

Date Hole Finished: 4/9/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: Arroyo W of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 34

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-13 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	13-33 ft bgs
Sand Pack?	Y	10/20 Silica sand	10-23 ft bgs
Annular Seal?	Y	Bentonite chips/grout	1-8/8-10 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 150 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-15' @ 5' interval

Static Water Level Below MP: 19.99

Date: 4/9/01

MP Description: Top of PVC

MP Height Above or Below Ground (ft): +3

Surface Casing Height (ft): 3

Riser Height (ft): 3

Ground Surface Elevation (ft): 3776.46

MP Elevation (ft): 3779.46

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
							0.0 - 1.0' <b>SLAG</b> Black, angular, fractured. [Slag Fill]
5	EP-120A	SS	N/A	1.00	5.0 - 6.0'		1.0 - 5.6' <b>Sandy GRAVEL w/fines</b> Pale yellowish brown 10YR6/2, to dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, 60% gravel, 30% sand, 10% fines, 10-20% slag. [Fill]
10	EP-120B	SS	N/A	1.00	10.0 - 11.0'		5.5 - 25.0' <b>Sandy GRAVEL</b> Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, angular to rounded, quartzite, quartz, 70% gravel, 30% sand. [Alluvium]
15	EP-120C	SS	N/A	1.00	15.0 - 16.0'		
20							
25							
30							25.0 - 34.0' <b>Sandy Gravelly CLAY</b> Pale yellowish brown 10YR6/2, fine to coarse grained, wet, no odor, low plasticity, dense, 60% clay, 20% gravel, angular, 20% sand, angular to sub-angular. [Alluvium]
35							

GEOTECH 1247/III.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers

El Paso, Texas

Monitor Well Log

Hole Name: EP-121

Date Hole Started: 4/10/01

Date Hole Finished: 4/12/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso

State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: Arroyo W of ephemeral pond

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 27

## WELL COMPLETION

Well Installed? Y

Surface Casing Used? N

Screen/Perforations? Y

Sand Pack? Y

Annular Seal? Y

Surface Seal? Y

## DEVELOPMENT/SAMPLING

Well Developed? Y

Water Samples Taken? N

Boring Samples Taken? Y

## DESCRIPTION

4-inch, flush threaded, Sch 40, PVC

Med bentonite chips

Concrete

Pumped 125 gals

Split Spoon

## INTERVAL

7-12 ft bgs

12-27 ft bgs

3-5 ft bgs

0-3 ft bgs

0-10' @ 5' interval

Static Water Level Below MP: 13.99

Date: 4/16/01

MP Description: Top of PVC

MP Height Above or Below Ground (ft): +3

Surface Casing Height (ft): 3

Riser Height (ft): 3

Ground Surface Elevation (ft): 3776.14

MP Elevation (ft): 3779.14

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0							0.0 - 7.0' <b>SLAG</b> Black, angular, fractured, dry, no odor. [Slag Fill]
5							
10	EP-121A	SS	N/A	1.00	10.0 - 11.0'		7.0 - 27.0' <b>Gravelly SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, sub-angular to sub-rounded, dense, 60% sand, 35% gravel, 5% fines, pink rhyolite, yellow feldspar. [Alluvium]
15							
20							
25							
30							

GEOTECH 1247IILGPJ 1247IILGPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-122

Date Hole Started: 4/12/01 Date Hole Finished: 4/12/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: West of Paisano, N of  
IBWC

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 20

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
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Surface Casing Used?	N		0-5 ft bgs
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Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	5-20 ft bgs
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Sand Pack?	Y	20/20 Silica sand	3-20 ft bgs
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Annular Seal?	Y	Med bentonite chips	1-3 ft bgs
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Surface Seal?	Y	Concrete	0-1 ft bgs
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DEVELOPMENT/SAMPLING

Well Developed?	Y	Pumped 125 gals	
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	Split Spoon	0-5' continuous
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Static Water Level Below MP: 12.9

Surface Casing Height (ft): 3

Date: 5/4/01

Riser Height (ft): 3

MP Description: Top of PVC

Ground Surface Elevation (ft): 3724.59

MP Height Above or Below Ground (ft): +3

MP Elevation (ft): 3727.59

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	EP-122A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 5.0' Gravelly SAND w/fines Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded, quartz, feldspar, wood chunks, glass, bricks. [Fill]
	EP-122B	SS	N/A	1.00	1.0 - 2.0'		
	EP-122C	SS	N/A	1.00	2.0 - 3.0'		
	EP-122D	SS	N/A	1.00	3.0 - 4.0'		
5	EP-122E	SS	N/A	1.00	4.0 - 5.0'		
							5.0 - 8.0' Gravelly SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to sub-rounded, quartz, chert, 20% gravel, 80% sand. [Alluvium]
10							8.0 - 20.0' SAND w/fines Pale yellowish brown 10YR6/2, fine grained, moist, no odor, rounded to sub-rounded, feldspar, quartz, coarser w/ depth, saturated at 10 ft, 85% sand, 15% fines. [Alluvium]
15							
20							
25							

GEOTECH 1247III.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-123

Date Hole Started: 4/12/01 Date Hole Finished: 4/18/01

Client: Asarco Inc.  
Project: Phase III Remediation Investigation  
County: El Paso State: Texas  
Property Owner: Asarco Inc.  
Legal Description: Investigation Area 5  
Descriptive Location: North of ephemeral pond

Recorded By: Matthew Miles  
Drilling Company: Tierra Drilling & Envir. Svcs.  
Driller: John McDuffee & Carlos Guerra  
Drilling Method: Hollow Stem Auger w/ Split Spoons  
Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well  
Target Aquifer: Shallow Alluvial  
Hole Diameter (in): 11"  
Total Depth Drilled (ft): 51

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-30.5 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	30.5-50.5 ft bgs
Sand Pack?	Y	Silica sand	28.5-50.5 ft bgs
Annular Seal?	Y	Bentonite chips/grout	1-26.5/26.5-28.5 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 150 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-35' @ 5' interval

Static Water Level Below MP: 43.17  
Date: 4/18/01  
MP Description: Top of PVC  
MP Height Above or Below Ground (ft): +3  
Surface Casing Height (ft): 3  
Riser Height (ft): 3  
Ground Surface Elevation (ft): 3784.93  
MP Elevation (ft): 3787.93

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5							0.0 - 0.5' Crushed SLAG w/ fines Black, angular, fractured, 85% Slag, 15% fines. [Slag Fill]
10							0.5 - 21.0' Gravelly SAND w/fines Black fine grained, angular, dry, <5% slag gravel, <5% fines. [Slag Fill]
20	EP-123A	SS	N/A	1.00	21.0 - 22.0' EP-123A		
25	EP-123B	SS	N/A	1.00	23.0 - 24.0' EP-123B		
30	EP-123C	SS	N/A	1.00	25.0 - 26.0' EP-123C1 & EP-123C2 is a duplicate.		21.0 - 22.0' CLAY w/sand Olive gray, Moist, no odor, low to med plastic, med dense, <5% slag, roots, organics. [Fill]
35							22.0 - 24.0' CLAY Pale yellowish brown 10YR6/2, moist, no odor, dense, med plastic. [Fill]
40	EP-123D	SS	N/A	1.00	30.0 - 31.0' EP-123D		
45							24.0 - 31.0' SAND w/ fines Pale yellowish brown 10YR6/2, moist, no odor, fine grained, Qtz, feldspar, 95% sand, <5% fines, 1" thick clay lense at 26.5'. [Alluvium]
50	EP-123E	SS	N/A	1.00	35.0 - 36.0' EP-123E		
55							31.0 - 35.0' Gravelly SAND Pale yellowish brown 10YR6/2, moist, no odor, fine to coarse grained, rounded to sub-rounded, med dense, 75% sand (Qtz), 25% gravel (limestone-chert). [Alluvium]
60	EP-123F	SS	N/A	1.00	40.0 - 41.0' EP-123F		
							35.0 - 51.0' Sandy GRAVEL w/fines Pale Yellowish brown 10YR6/2, dry, no odor, calcareous, 75% gravel, 20% sand, 5% fines. [Alluvium]

GEOTECH 1247111.GPJ 1247111.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-124

Date Hole Started: 4/20/01 Date Hole Finished: 4/21/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: SE of pond 6

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ SplitSpoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 41

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	2-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-31 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	31-41 ft bgs
Sand Pack?	Y	Silica sand	29-41 ft bgs
Annular Seal?	Y	Bentonite chips/grout	1-29 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 50-52 gals, added 40 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-30' @ 5' interval

Static Water Level Below MP: 34.4

Surface Casing Height (ft): N/A

Date: 5/8/01

Riser Height (ft): Flush

MP Description: Top of PVC

Ground Surface Elevation (ft): 3774.56

MP Height Above or Below Ground (ft): 0

MP Elevation (ft): 3774.56

Remarks: All soil descriptions and size fraction distributions based on field observations and tests;

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5	EP-124A	SS	4,12	1.00	0.0 - 1.0'		0.0 - 1.0' Gravelly silty SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to angular. [Fill]
	EP-124B	SS	14,14	1.00	1.0 - 2.0'		
	EP-124C	SS	8,13	1.00	2.0 - 3.0'		
	EP-124D	SS	8,5	1.00	3.0 - 4.0'		
	EP-124E	SS	4,4	1.00	4.0 - 5.0'		
10	EP-124F	SS	4,3	1.00	10.0 - 11.0'		1.0 - 4.0' Gravelly SAND Pale yellowish brown 10YR6/2, medium to coarse grained, moist, no odor, rounded to sub-rounded, clean, quartz, 5-10% slag. [Fill]
15	EP-124G	SS	<1	1.00	15.0 - 16.0'		4.0 - 13.0' Gravelly silty SAND Dark yellowish brown 10YR4/2, fine to coarse grained, moist, no odor, angular to rounded, very loose, 10-15% slag (few cobbles). [Fill]
20	EP-124H	SS	4,9	1.00	20.0 - 21.0'		13.0 - 16.0' CLAY Dark gray N2, moist, no odor, soft, moderate plasticity, pockets of pale yellowish brown clay. [Fill]
25	EP-124I	SS	50,4	1.00	25.0 - 26.0'		16.0 - 23.0' Gravelly SAND Pale yellowish brown 10YR6/2, medium to coarse grained, moist, no odor, rounded to sub-rounded, clean, quartz, chert. [Alluvium]
30	EP-124J	SS	50,6	1.00	30.0 - 31.0'		23.0 - 41.0' Gravelly silty SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, gap graded, angular to rounded, water at 38 ft. [Alluvium]
35	EP-124K	SS	50,2	1.00	35.0 - 36.0'		
40							
45							
50							
55							
60							

GEOTECH 1247III.GPJ 11/15/01





# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-125

Date Hole Started: 4/24/01 Date Hole Finished: 4/24/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: North of Bulk Acid Storage Area

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 56

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-35 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	35-55 ft bgs
Sand Pack?	Y	Silica sand	33-55 ft bgs
Annular Seal?	Y	Med bentonite chips	1-33 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 100 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-35' @ 5' interval

Static Water Level Below MP: 34.12

Surface Casing Height (ft): 3

Date: 4/25/01

Riser Height (ft): 3

MP Description: Top of PVC

Ground Surface Elevation (ft): 3779.45

MP Height Above or Below Ground (ft): +3

MP Elevation (ft): 3782.45

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5	EP-125A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 2.0' Gravelly silty SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, rounded to angular, calcareous. [Fill]
	EP-125B	SS	N/A	1.00	1.0 - 2.0'		2.0 - 5.0' SLAG Black, angular, fractured. [Slag Fill]
10	EP-125C	SS	N/A	1.00	6.0 - 7.0'		5.0 - 14.0' Gravelly SAND Pale yellowish brown 10YR6/2, medium to coarse grained, dry, no odor, rounded to sub-rounded. [Alluvium]
	EP-125D	SS	N/A	1.00	10.0 - 11.0'		14.0 - 18.0' Sandy gravelly SILT Medium yellowish brown 10YR5/4, moist, no odor, non plastic, dense, stiff. [Alluvium]
15	EP-125E	SS	N/A	1.00	15.0 - 16.0'		18.0 - 56.0' Gravelly silty SAND Medium yellowish brown 10YR5/4, fine to coarse grained, moist, no odor, angular, dense. [Alluvium]
20	EP-125F	SS	N/A	1.00	20.0 - 21.0'		
25	EP-125G	SS	N/A	1.00	25.0 - 26.0'		
30	EP-125H	SS	N/A	1.00	30.0 - 31.0'		
35	EP-125I	SS	N/A	1.00	35.0 - 36.0'		
40	EP-125J	SS	N/A	1.00	40.0 - 41.0'		
45	EP-125K	SS	N/A	1.00	45.0 - 46.0'		
50		SS	N/A		50.0 - 51.0'		
55		SS	N/A		55.0 - 56.0'		
60							
65							
70							
75							

GEOTECH 1247IIL.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-126

Date Hole Started: 4/26/01 Date Hole Finished: 4/26/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: North of Bulk Acid Storage Area

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ SplitSpoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 44

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-28 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	28-43 ft bgs
Sand Pack?	Y	Silica sand	26-43 ft bgs
Annular Seal?	Y	Bentonite chips/grout	1-26 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 80 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-30' @ 5' interval

Static Water Level Below MP: 31.68

Date: 5/8/01

MP Description: Top of PVC

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft): 0

Riser Height (ft): 0

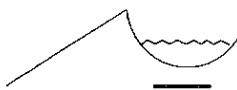
Ground Surface Elevation (ft): 3779.90

MP Elevation (ft): 3779.90

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5	EP-126A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 0.3'
	EP-126B	SS	N/A	1.00	1.0 - 2.0'		ASPHALT
	EP-126C	SS	N/A	1.00	2.0 - 3.0'		Solid
	EP-126D	SS	N/A	1.00	3.0 - 4.0'		(Road Pavement)
10							0.3 - 4.0'
	EP-126E	SS	N/A	1.00	10.0 - 11.0'		gravelly clayey SAND
							Dark yellowish brown 10YR4/2, to black, fine to coarse grained, moist, no odor, angular to rounded, 30-50% slag.
15							(Fill)
	EP-126F	SS	N/A	1.00	15.0 - 16.0'		4.0 - 8.0'
							SLAG
							Black, angular, fractured.
20							(Slag Fill)
	EP-126G	SS	N/A	1.00	20.0 - 21.0'		8.0 - 16.0'
							Silty Clayey SAND
							Pale yellowish brown 10YR6/2, medium to fine grained, moist, no odor, rounded to sub-rounded.
25							(Alluvium)
	EP-126H	SS	N/A	1.00	25.0 - 26.0'		16.0 - 23.0'
							Sandy Silty CLAY
							Pale yellowish brown 10YR6/2, moist, no odor, non plastic, stiff.
30							(Alluvium)
	EP-126I	SS	N/A	1.00	30.0 - 31.0'		23.0 - 44.0'
							gravelly clayey SAND
							Pale yellowish brown 10YR6/2, fine to coarse grained, moist, no odor, rounded to angular, dense, quartz, andesite, wet at 32 feet.
35							(Alluvium)
	EP-126J	SS	N/A	1.00	35.0 - 36.0'		
40							
45							
50							
55							
60							

GEOTECH 1247III.GPJ 1247III.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-127

Date Hole Started: 4/27/01 Date Hole Finished: 4/27/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: Bank of Rio Grande

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 20

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-3 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	3-18 ft bgs
Sand Pack?	Y	Silica sand	2-18 ft bgs
Annular Seal?	Y	Bentonite plug	1-2 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 120 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-5' continuous

Static Water Level Below MP: 6.67

Surface Casing Height (ft): 3.2

Date: 4/27/01

Riser Height (ft): 3

MP Description: Top of PVC

Ground Surface Elevation (ft): 3715.83

MP Height Above or Below Ground (ft): +3

MP Elevation (ft): 3718.83

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	EP-127A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 1.0' <b>Silty SAND</b> Pale yellowish brown 10YR6/2, fine grained, dry, no odor, rounded, roots, plants. [Alluvium]
	EP-127B	SS	N/A	1.00	1.0 - 2.0'		1.0 - 2.5' <b>Silty Clayey SAND</b> Medium yellowish brown 10YR5/4, medium to fine grained, moist, no odor, rounded, medium dense, some roots. [Alluvium]
	EP-127C	SS	N/A	1.00	2.0 - 3.0'		2.5 - 3.8' <b>SAND</b> Pale yellowish brown 10YR6/2, medium to fine grained, moist, no odor, clean, rounded. [Alluvium]
	EP-127D	SS	N/A	1.00	3.0 - 4.0'		3.8 - 5.0' <b>Sandy CLAY</b> Brownish black 5YR2/1, moist, no odor, medium plastic, soft, wet at 4.5 ft. [Alluvium]
5	EP-127E	SS	N/A	1.00	4.0 - 5.0'		5.0 - 20.0' <b>SAND</b> Brownish gray 5YR4/1, medium to fine grained, wet, no odor, clean, rounded, medium dense, quartz, igneous. [Alluvium]
10							
15							
20							
25							



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-128

Date Hole Started: 4/27/01 Date Hole Finished: 4/27/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 5

Descriptive Location: North of IBWC pump house

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 20

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-5 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	5-20 ft bgs
Sand Pack?	Y	Silica sand	3-20 ft bgs
Annular Seal?	Y	Bentonite plug	1-3 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 120 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-5' continuous

Static Water Level Below MP: 5.8

Surface Casing Height (ft): 3

Date: 4/27/01

Riser Height (ft): 3

MP Description: Top of PVC

Ground Surface Elevation (ft): 3714.16

MP Height Above or Below Ground (ft): +3

MP Elevation (ft): 3717.16

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	EP-128A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 1.0' Silty SAND Pale yellowish brown 10YR6/2, dry, no odor, fine grained, rounded, roots, plants. [Alluvium]
	EP-128B	SS	N/A	1.00	1.0 - 2.0'		1.0 - 3.0' Silty Clayey SAND Med yellowish brown 10YR5/4, moist, no odor, med to fine grained, rounded, med dense, roots. [Alluvium]
	EP-128C	SS	N/A	1.00	2.0 - 3.0'		3.0 - 3.5' Sandy CLAY Brownish black 5YR2/1, moist, no odor, med plastic, soft, wet at 3.5 ft. [Alluvium]
	EP-128D	SS	N/A	1.00	3.0 - 4.0'		3.5 - 20.0' SAND Brownish gray 5YR4/1, wet, no odor, med to fine grained, clean, rounded, med dense, Qtz, some igneous. [Alluvium]
5							
10							
15							
20							
25							

GEOTECH 1247111.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-129

Date Hole Started: 5/2/01

Date Hole Finished: 5/3/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 11

Descriptive Location: South arroyo East of I-10

Recorded By: Matthew Miles

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 11"

Total Depth Drilled (ft): 40

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-15 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	15-35 ft bgs
Sand Pack?	Y	Silica sand	13-35 ft bgs
Annular Seal?	Y	Bentonite chips/grout	1-13 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 175 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-35' @ 5' interval

Static Water Level Below MP: 20.5

Date: 5/3/01

MP Description: Top of PVC

MP Height Above or Below Ground (ft): +3

Surface Casing Height (ft): 3

Riser Height (ft): 3

Ground Surface Elevation (ft): 3810.99

MP Elevation (ft): 3813.99

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5	EP-129A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 0.2'
	EP-129B	SS	N/A	1.00	1.0 - 2.0'		Gravelly Cobbly SAND
	EP-129C	SS	N/A	1.00	2.0 - 3.0'		Med yellowish brown 10YR5/4, dry, no odor, fine to coarse grained, angular to rounded, roots, plants.
	EP-129D	SS	N/A	1.00	3.0 - 4.0'		[Alluvium]
	EP-129E	SS	N/A	1.00	4.0 - 5.0'		0.2 - 8.0'
10							Silty clayey SAND
	EP-129F	SS	N/A	1.00	10.0 - 11.0'		Pale yellowish brown 10YR6/2, dry, no odor, fine to coarse grained, gap graded, mostly andesite hash, some limestone, loose, some cobbles.
							[Alluvium]
15							8.0 - 13.0'
	EP-129G	SS	N/A	1.00	15.0 - 16.0'		Sandy gravelly CLAY
							Med yellowish brown 10YR5/4, moist, no odor, low plasticity, stiff.
							[Alluvium]
20							13.0 - 40.0'
							SHALE
							Med bluish gray 5B5/1, dry, no odor, fissile, fractured, laminated, 70 degree dip, calcareous.
							[Bedrock]
25							
30							
35							
40							
45							
50							
55							
60							

GEOTECH 1247III.GPJ 1247III.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-130

Date Hole Started: 5/29/01 Date Hole Finished: 5/29/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 15

Descriptive Location: Copper plant area, close to fence line.

Recorded By: Matthew Miles, Alfonso Munoz

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 10"

Total Depth Drilled (ft): 82

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
Surface Casing Used?	N		0-15 ft bgs
Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	15-35 ft bgs
Sand Pack?	Y	Silica sand	13-35 ft bgs
Annular Seal?	Y	Bentonite chips/grout	1-13 ft bgs
Surface Seal?	Y	Concrete	0-1 ft bgs
DEVELOPMENT/SAMPLING			
Well Developed?	Y	Pumped 150 gals	
Water Samples Taken?	N		
Boring Samples Taken?	Y	Split Spoon	0-5' @ 5' interval

Static Water Level Below MP: 64

Date: 5/29/01

MP Description: Top of PVC

MP Height Above or Below Ground (ft): +3

Surface Casing Height (ft): 3

Riser Height (ft): 3

Ground Surface Elevation (ft): 3769.34

MP Elevation (ft): 3772.34

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5							0.0 - 0.3' ASPHALT Cracked, small surface area. [Road Pavement]
10							0.3 - 48.0' SLAG Black, angular, fractured. [Slag Fill]
15							
20							
25							
30							
35							
40							
45							

Continued Next Page

Sheet 1 of 2

GEOTECH 1247III.GPJ 11/15/01



**HYDROMETRICS INC.**  
Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

**Hole Name: EP-130**

Date Hole Started: 5/29/01 Date Hole Finished: 5/29/01

(Continued)

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
50	EP-130A	SS	N/A	1.00	50.0 - 51.0'		48.0 - 51.0' <b>Gravely Clayey SAND</b> Medium yellowish brown 10YR5/4, fine to coarse grained, moist, no odor, gap graded, angular to rounded, quartz, some andesite <5% slag. [FIII]
55	EP-130B	SS	N/A	1.00	55.0 - 56.0'		51.0 - 60.0' <b>Gravely SAND</b> Medium yellowish brown 10YR5/4, fine to coarse grained, moist, no odor, angular to rounded, quartz, andesite, chert. [Alluvium]
60	EP-130C	SS	N/A	1.00	60.0 - 61.0'		60.0 - 62.0' <b>Gravely SAND w/fines</b> Medium yellowish brown 10YR5/4, fine to coarse grained, moist, no odor, angular to rounded, quartz and chert. [Alluvium]
65	EP-130D	SS	N/A	1.00	65.0 - 66.0'		62.0 - 66.0' <b>Sandy Gravely CLAY</b> Pale yellowish brown 10YR6/2, wet at 64 ft, no odor, soft, low plasticity, sand is fine to coarse grained, rounded, gravel is fine grained. [Alluvium]
70	EP-130E	SS	N/A	1.00	70.0 - 71.0'		66.0 - 73.0' <b>Clayey Gravely SAND</b> Pale yellowish brown 10YR6/2, fine to coarse grained, wet, no odor, angular to rounded, gravel is fine grained, clay is moderated plastic. [Alluvium]
75	EP-130F	SS	N/A	1.00	75.0 - 76.0'		73.0 - 81.0' <b>SHALE</b> Medium bluish gray 5B5/1, dry, wet at 78 ft, no odor, fissile, fractured, laminated, 70 degree dip, calcareous. [Bedrock]
80	EP-130G	SS	N/A	1.00	80.0 - 81.0'		
85							
90							
95							
100							
105							
110							
115							

GEOTECH 1247III.GPJ 1247III.GPJ 11/15/01



# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-131

Date Hole Started: 5/30/01

Date Hole Finished: 5/30/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 15

Descriptive Location: South of Converter Bldg.

Recorded By: Alfonso Munoz, Angel Garcia

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoon

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 10"

Total Depth Drilled (ft): 72

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
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Surface Casing Used?	N		0-15 ft bgs
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Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	50-70 ft bgs
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Sand Pack?	Y	Silica sand	33-70 ft bgs
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Annular Seal?	Y	Bentonite chips/grout	1-33 ft bgs
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Surface Seal?	Y	Concrete	0-1 ft bgs
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DEVELOPMENT/SAMPLING

Well Developed?	Y	Pumped 120 gals	
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	Split Spoon	0-5' @ 5' interval
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Static Water Level Below MP: 54.3

Surface Casing Height (ft): 3

Date: 5/30/01

Riser Height (ft): 3

MP Description: Top of PVC

Ground Surface Elevation (ft): 3775.98

MP Height Above or Below Ground (ft): +3

MP Elevation (ft): 3778.98

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 6" OD augers then overdrilled with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
5	EP-131A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 0.6' Silty SAND Dark yellowish brown 10YR4/2, fine, dry, loose, silty, no odor, <10% slag. [Fill]
10							0.6 - 38.0' SLAG Black, angular, fractured. [Slag Fill]
40	EP-131B	SS	N/A	1.00	40.0 - 41.0'		38.0 - 44.0' Silty Gravely SAND Moderate yellowish brown 10YR5/4, fine grained, moist, no odor, sub-rounded, some gravel. [Alluvium]
45	EP-131C	SS	N/A	1.00	45.0 - 46.0'		44.0 - 65.0' Gravely Silty SAND Pale yellowish brown 10YR6/2, sub-angular gravel, andesite, moist, no odor, quartz, some volcanics (65%), water @ 54.3 ft. [Alluvium]
50	EP-131D	SS	N/A	1.00	50.0 - 51.0'		
55	EP-131E	SS	N/A	1.00	55.0 - 56.0'		
60	EP-131F	SS	N/A	1.00	60.0 - 61.0'		
65	EP-131G	SS	N/A	1.00	65.0 - 66.0'		65.0 - 70.0' SAND Pale yellowish brown 10YR6/2, more coarse grained sand than above, less silt and gravel than above, gravel 10 - 20%. [Alluvium]
70	EP-131H	SS	N/A	1.00	70.0 - 71.0'		70.0 - 72.0' SAND Pale yellowish brown 10YR6/2, more silt than above. [Alluvium]

GEOTECH 1247III.GPJ 11/15/01





# HYDROMETRICS INC.

Consulting Scientists and Engineers  
El Paso, Texas

Monitor Well Log

Hole Name: EP-132

Date Hole Started: 6/04/01 Date Hole Finished: 6/04/01

Client: Asarco Inc.

Project: Phase III Remediation Investigation

County: El Paso State: Texas

Property Owner: Asarco Inc.

Legal Description: Investigation Area 15

Descriptive Location: SE corner of Smeltertown.

Recorded By: Angel Garcia

Drilling Company: Tierra Drilling & Envir. Svcs.

Driller: John McDuffee & Carlos Guerra

Drilling Method: Hollow Stem Auger w/ Split Spoons

Drilling Fluids Used: None

Purpose of Hole: Install Monitor Well

Target Aquifer: Shallow Alluvial

Hole Diameter (in): 10"

Total Depth Drilled (ft): 25

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	Y	4-inch, flush threaded, Sch 40, PVC	
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Surface Casing Used?	N		0-5 ft bgs
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Screen/Perforations?	Y	0.020-inch slot, Sch 40 PVC	5-25 ft bgs
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Sand Pack?	Y	Silica sand	5-25 ft bgs
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Annular Seal?	Y	Med bentonite chips	1-5 ft bgs
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Surface Seal?	Y	Concrete	0-1 ft bgs
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### DEVELOPMENT/SAMPLING

Well Developed?	Y	Pumped 100 gals
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Water Samples Taken?	N	
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Boring Samples Taken?	Y	Split Spoon	0-5' @ 5' interval
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Static Water Level Below MP: 7

Date: 6/04/01

MP Description: Top of PVC

MP Height Above or Below Ground (ft): +3

Surface Casing Height (ft): 3

Riser Height (ft): 3

Ground Surface Elevation (ft): 3721.69

MP Elevation (ft): 3724.69

Remarks: All soil descriptions and size fraction distributions based on field observations and tests; Drilled to depth with 10" OD augers.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	EP-132A	SS	N/A	1.00	0.0 - 1.0'		0.0 - 1.0'
	EP-132B	SS	N/A	0.50	1.0 - 2.0'		Gravely SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded, wood chunks, debris.
	EP-132C	SS	N/A	0.80	2.0 - 3.0'		[Alluvium]
5	EP-132D	SS	N/A	0.70	3.0 - 4.0'		1.0 - 3.0'
	EP-132E	SS	N/A	1.00	4.0 - 5.0'		Gravely SAND Pale yellowish brown 10YR6/2, fine to coarse grained, dry, no odor, subrounded.
10	EP-132F	SS	N/A	0.40	10.0 - 11.0'		[Alluvium]
15	EP-132G	SS	N/A	1.00	15.0 - 16.0'		3.0 - 7.0'
20							Gravely SAND Medium yellowish brown 10YR5/4, fine to coarse grained, moist, no odor, subrounded.
25							[Alluvium]
30							7.0 - 16.5'
35							Gravely SAND Medium yellowish brown 10YR5/4, fine to coarse grained, wet, water @ 7 ft, no odor, subrounded.
40							[Alluvium]
45							15.5 - 25.0'
50							Sandy CLAY Medium yellowish brown 10YR5/4, wet, no odor, high plasticity, soft.
55							[Alluvium]
60							

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