ASARCO EL PASO COPPER SMELTER
PHASE III REMEDIAL INVESTIGATION REPORT
EL PASO, TEXAS

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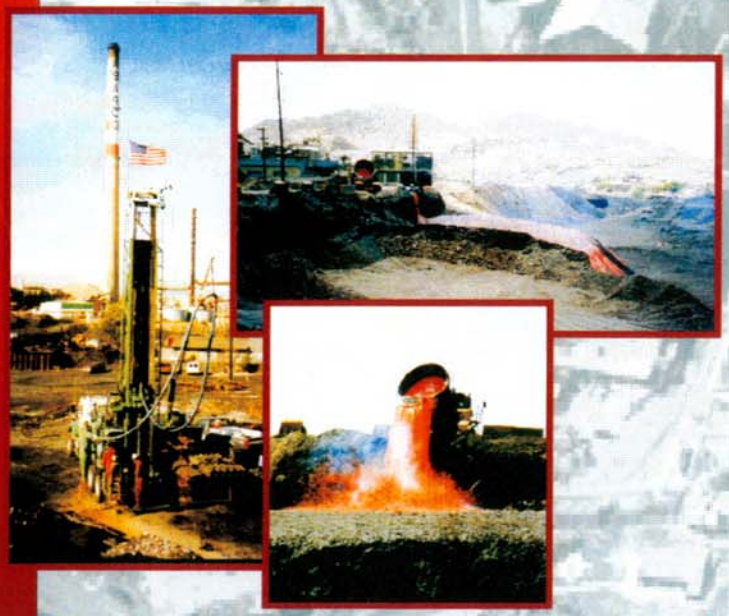

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APPENDIX H

PHASE III SURFACE AND GROUNDWATER DATA VALIDATION REPORTS

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SECTION H-1

REMEDIAL INVESTIGATION WATER SAMPLES, SPRING 2000

DATA VALIDATION REPORT
ASARCO EL PASO COPPER SMELTER
REMEDIAL INVESTIGATION
WATER SAMPLES
SPRING 2000

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GLOSSARY OF TERMS

CCB .....Continuing Calibration Blank

CCV .....Continuing Calibration Verification

CLP .....Contract Laboratory Program

CRDL.....Contract Required Detection Limit

% D .....Percent difference

FAA .....Flame Atomic Absorption

GFAA.....Graphite Furnace Atomic Absorption

HGAA.....Hydride Generation Atomic Absorption

ICB.....Initial Calibration Blank

ICP .....Inductively Coupled Plasma

ICV.....Initial Calibration Verification

IDL.....Instrument Detection Limit

LCS .....Laboratory Control Sample

MSA.....Method of Standard Additions

PB.....Preparation Blank

PRDL .....Project Required Detection Limit

PDLG.....Project Detection Limit Goals

QAPP .....Quality Assurance Project Plan

QC.....Quality Control

RPD.....Relative Percent Difference

RSD.....Relative Standard Deviation

SOW.....Statement of Work

TDS.....Total Dissolved Solids

SUMMARY

This report covers the validation of data for quarterly monitoring water and sediment samples collected during April and May of 2000 for the Asarco El Paso Copper Smelter Remediation Investigation. The validation has been carried out according to requirements spelled out in the work plan (Asarco El Paso Copper Smelter Remedial Investigation Work Plan, November 1996). 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 then sent to Asarco's Technical Services laboratory in Salt Lake City for the following analyses:

Matrix	Laboratory Batches	Physical Parameters	Major Constituents	Metals (Total)
Water	L000620	pH	Calcium	Arsenic
	L000629	Conductivity	Magnesium	Cadmium
	L000648	TDS	Sodium	Chromium
	L000665	TSS	Potassium	Copper
	L000672		Bicarbonate	Iron
	L000706		Carbonate	Lead
			Sulfate	Zinc
			Chloride	
			Fluoride	
			NO_3+NO_2 as N	
Sediment	L000710 (XRF)	Total Metals (same metals as for water)		

Note that as for the Fall 1999 and Winter 2000 monitoring, both groundwater and surface water samples from the Spring 2000 monitoring event were analyzed for total metals only. Turbidity was measured in the field. 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 statistics 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 eleven of the surface water sites, and were analyzed for the metals. The sediment samples were analyzed by XRF using a matrix-specific calibration for arsenic and lead, and using a fundamental parameters calibration for cadmium, chromium, copper, iron, selenium, and zinc. (The matrix-specific calibration, however, was for sandy soils from the Asarco site in Murray, Utah rather than being specific to soils from El Paso.)

Laboratory quality control samples for the sediment XRF analyses were all within control limits:

- For arsenic and lead only, information was provided for calibration verification samples (at a frequency of 1 in 10) and laboratory control samples (1 in 20). Recoveries on these standards were all within control limits.
- Reference standards were not analyzed for the parameters analyzed using the fundamental parameters calibration.
- Information was provided for all analytes for laboratory duplicates, which were performed at a frequency of 1 in 20.

For water, laboratory quality control violations resulted in a total of 71 flags:

- One sulfate and 25 fluoride results were flagged for holding time exceedances. A holding time flag indicates that the result may not be representative of the true sample value.
- Both laboratory control standards for batch L000706 had high recoveries for zinc (123 and 126 percent). All detected zinc values for this batch were flagged to indicate a possible high bias (22 flags).
- One of the laboratory control standards for batch L000648 had a high recovery for zinc (130 percent), resulting in a total of 23 flags.

Field Quality Control Violations resulted in a total of 226 flags:

- One field conductivity result was rejected as a result of historical comparisons and interparameter relationships.
- Detections in all of the eleven field blanks resulted in a total of 143 flags to indicate possible high bias at low concentrations. Flagging for field blanks is summarized in the following table.

Parameter	Number of Flags
Fluoride	92
Nitrogen	5
Arsenic	7

Parameter	Number of Flags
Lead	9
Zinc	30

- Of particular note, fluoride was detected at levels ranging from 0.73 to 0.95 ppm in all of the eleven DI blanks. Of the 119 fluoride results in this data set, 92 results, (77% of the fluoride data) were flagged because of contamination in the field blanks.

- Ten of the 286 field duplicate measurements were out of control limits resulting in a total of 82 flags to indicate a possible lack of reproducibility.

Parameter	Number of Flags
Oxygen (Dis)	15
TSS	5
Carbonate	10
Chloride	19
Sulfate	8
Nitrogen	8
Iron	17

Completeness of field measurements:

- The required frequency for field quality control samples was not met for the Spring 2000 monitoring event. Overall, one field duplicate was submitted for each of the eleven days of sampling. However, the project work plan requires a minimum of one field duplicate per sample matrix per day.
    - On May 9, groundwater, surface water, and sediment samples were collected; but only a surface water field duplicate was submitted on that day.
    - On May 10, surface water samples and sediment samples were collected, but only a surface water duplicate was submitted.
- EP-87 was dry; no sample was taken.

A total of 297 quality control flags were applied to the data, with 46 results receiving 2 flags. In all, 25 results were flagged. Considering both lab and field data, 92.5 percent of the data may be used without qualification (3070 out of 3320 results). Considering laboratory results only, 90.8 percent of the data is unqualified (2472 out of 2706 results -- sixteen of the flags were for field measurements). One field conductivity result was rejected. Otherwise, the data for the Spring 2000 monitoring for the Asarco El Paso Copper Smelter Remedial Investigation 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
Prepared by: **Clare Bridge**
Reviewed by: **Kris Downs**

DATA VALIDATION REPORT

1. INTRODUCTION

- This validation applies to inorganic analytes from 130 samples collected during April and May of 2000 for the Asarco El Paso Copper Smelter Remedial Investigation. The total number of samples included:

11	DI blanks
11	Field duplicates (2 surface water, 9 groundwater)
12	Surface water samples (not counting duplicate)
85	Groundwater samples (not counting duplicates)
11	Sediment samples

  - No sample was collected at EP-87; it was dry.

- Validation procedures used are generally consistent with:
  (Check all that apply)

  X EPA CLP National Functional Guidelines for Inorganics Data Review
  X Asarco El Paso Copper Smelter Remedial Investigation Work Plan, El Paso, Texas (November 1996)
  ___ Other

- Overall level of validation:

  ___ Contract Laboratory Program (CLP)
  X Standard
  ___ 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.

  X Yes
  ___ No

- Field measurements and field documentation were complete.

  X Yes
  ___ No

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.
  _X_ Yes
  ___ No

  Reported results on the field blanks are less than the contract required detection limits (CRDL) or the project-required detection limits (PRDL) if project detection limits have been specified.
  ___ Yes
  _X_ No

  Notes: When an analyte is detected in a blank, associated results up to 5 times the blank level are flagged 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, low level contamination was present in all eleven of the field blanks.

  Blank contamination which did not result in flagging was as follows: TDS and SC (in all eleven blanks), bicarbonate (in eight blanks), carbonate (in three blanks), sodium (in six blanks), and TSS (in two of the blanks).

  The following table lists blank detections that resulted in flagging (a total of 143 flags).

Sample Number	Date	Analyte	Result (ppm)	5 times Blank (ppm)	PRDL (ppm)	# of Flags
EPRI-0005-220	04/24/00	Fluoride	0.73	0.365	0.1	8
		Lead	0.006	0.030	0.003	3
EPRI-0005-222	04/25/00	Fluoride	0.73	3.65	0.1	6
EPRI-0005-224	04/26/00	Fluoride	0.75	3.75	0.1	13
EPRI-0005-226	04/28/00	Fluoride	0.75	3.75	0.1	10
EPRI-0005-228	05/01/00	Fluoride	0.76	3.80	0.1	8
		Nitrogen	0.11	0.55	0.05	1
		Lead	0.005	0.025	0.003	6
		Zinc	0.025	0.125	0.02	9
EPRI-0005-230	05/02/00	Fluoride	0.77	3.85	0.1	12
		Nitrogen	0.082	0.410	0.05	1
		Arsenic	0.007	0.035	0.005	7
EPRI-0005-232	05/03/00	Fluoride	0.79	3.95	0.1	8
EPRI-0005-234	05/04/00	Fluoride	0.88	4.40	0.1	7
		Nitrogen	0.063	0.315	0.05	3

Sample Number	Date	Analyte	Result (ppm)	5 times Blank (ppm)	PRDL (ppm)	# of Flags
		Zinc	0.029	0.145	0.02	4
EPRI-0005-236	05/08/00	Fluoride	0.92	4.6	0.1	5
		Zinc	0.021	0.105	0.02	4
EPRI-0005-238	05/09/00	Carbonate	3.6	18	1	1
		Fluoride	0.94	4.7	0.1	7
		Zinc	0.028	0.14	0.02	6
EPRI-0005-240	05/10/00	Fluoride	0.95	4.75	0.1	8
		Zinc	0.041	0.205	0.02	7

Flagging: UJ_1

- **Field duplicates**

  Field duplicates have been collected at the proper frequency.

  ___Yes

  _X_No

  Notes: Overall, one field duplicate was submitted for each of the eleven days of sampling. However, the project work plan requires a minimum of one field duplicate per sample matrix per day.

  - On May 9, one groundwater, five surface water, and four sediment samples were collected; only a surface water field duplicate was submitted on that day.
  - Also, on May 10, seven surface water and seven sediment samples were collected; but only a surface water duplicate was submitted for that day.

The field duplicates are listed in the following table.

Sample/ Duplicate #	Site	Date	Matrix
EPRI-0005-136/ 219	EP-68	04/24/00	Groundwater
EPRI-0005-155/ 221	EP-89	04/25/00	Groundwater
EPRI-0005-197/ 223	EM-4	04/26/00	Groundwater
EPRI-0005-143/ 225	EP-77	04/28/00	Groundwater
EPRI-0005-150/ 227	EP-84	05/01/00	Groundwater
EPRI-0005-151/ 229	EP-85	05/02/00	Groundwater
EPRI-0005-131/ 231	EP-63	05/03/00	Groundwater
EPRI-0005-108/ 233	EP-20	05/04/00	Groundwater
EPRI-0005-126/ 235	EP-58	05/08/00	Groundwater
EPRI-0005-187/ 237	SEP-6	05/09/00	Surface Water
EPRI-0005-190/ 239	SEP-10	05/10/00	Surface Water

Field duplicate relative percent differences (RPDs) were within the required control limits (RPD of 20% or less for water matrix). If the sample or duplicate result is less than 5 times the PRDL, the RPD criteria are not used. In these

cases, the difference between the sample and the duplicate results must be within ± the PRDL for water matrix.

___ Yes
_X_ No

Notes: Ten, or approximately three percent, of the 286 field duplicate measurements were out of control limits. These field duplicate exceedances are listed in the following table. Associated sample results were flagged to indicate a possible lack of reproducibility. Samples collected the same day as the duplicate are generally considered to be associated. A total of 82 results were flagged to indicate a possible lack of reproducibility.

Sample Number/ Duplicate	Site	Sample Date	Analyte	Sample/ Duplicate Result (mg/L)	Exceedance (values in ppm)	# of Flags
EPRI-0005-197/ 223	EM-4	04/26/00	Oxygen (Dis)	0.6/ 3.0	Difference = 2.4	15
EPRI-0005-143/ 225	EP-77	04/28/00	Iron(T)	4.5/ 3.4	28% RPD	12
EPRI-0005-150/ 227	EP-84	05/01/00	Carbonate Chloride	<1.0/ 12 202/ 378	Difference > ± 1 61 % RPD	1 9
EPRI-0005-131/ 231	EP-63	05/03/00	Chloride	726/ 906	22% RPD	10
EPRI-0005-108/ 233	EP-20	05/04/00	TSS Iron(T)	17/ 32 0.46/ 0.96	Difference > ± 10 Difference > ± 0.1	5 5
EPRI-0005-190/ 239	SEP-10	05/10/00	Carbonate Sulfate Nitrogen	<1.0/ 7.0 215/ 277 6.1/ 0.18	Difference > ± 1 25% RPD Difference > ± 0.05	9 8 8

Flagging: J_4/UJ_4

4. LABORATORY PROCEDURES

- **Laboratory procedures followed**

  ___ CLP-SOW
  _X_ SW-846
  _X_ Methods for Chemical Analysis of Water and Wastes
  _X_ XRF Standard Operating Procedures

- **Holding times met**

  ___ Yes
  _X_ No

  Notes: One sulfate and 25 fluoride results were flagged for holding time exceedances. A holding time flag indicates that the result may not be representative of the true sample value. These holding time exceedances are summarized in the following table.

Analyte	Maximum Holding Time	Time Held Before Analysis	# of Flags
Sulfate	28 days	41 days	1
Fluoride	28 days	29 days	11
Fluoride	28 days	30 days	14

Flagging: J_3/ UJ_3

- **Consistency with project requirements**

  Analyses were carried out as requested.

  _X_ Yes

  ___No

  Project specified methods were used.

  _X_ Yes

  ___No

5. DETECTION LIMITS

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

  ___Yes

  _X_ No

Notes:

Water--The PDLG for sulfate has been set at 1 ppm. The laboratory's reporting detection limit for sulfate was 2 ppm.

Sediment: As shown in the following table, the PDLG was not met for chromium, copper, or iron in the XRF analyses. This was not an issue for iron, as all eleven sediment samples contained greater than the reporting level. For copper, however, the sediment collected at Sep12 was reported as less than 20 ppm; and for chromium, six of the eleven sediment samples were reported as less than 80 ppm (samples collected at Sep-4, Sep-9, Sep-10, Sep-11, Sep-12, and Pond 6)

Analyte	Reporting Detection Limit	PDLG
Chromium	80 ppm	20 ppm
Copper	20 ppm	10 ppm
Iron	50 ppm	20 ppm

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 PRDL/PDLG if a project detection limit 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%).
  _X_ Yes
  ___ No

8. LABORATORY DUPLICATES

- Laboratory duplicate samples were analyzed at the proper frequency.
  _X_ 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, 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 the PDLG for water matrix, within plus or minus two times the PDLG for sediment or soil matrix.
  _X_ Yes
  ___ No

9. LABORATORY CONTROL STANDARDS

- LCSs were prepared and analyzed at the proper frequency.
  _X_ Yes
  ___ No

- LCS recoveries were within the required control limits (80-120% for water, 75-125% for arsenic and lead analyzed by XRF).
  ___ Yes
  _X_ No

Notes: Both laboratory control standards for batch L000706 had high recoveries for zinc (123 and 126 percent). All detected zinc values for this batch were flagged to indicate a possible high bias (22 flags).

One of the laboratory control standards for batch L000648 had a high recovery for zinc (130 percent), resulting in a total of 23 flag to indicate a possible high bias.

10. INTERPARAMETER RELATIONSHIPS

- The following relationships have been checked:

  X Lab pH vs. field pH.
  X Lab SC vs. field SC
  X TDS vs. SC

Lab pH vs. field pH: This relationship was generally in order. For samples for which both lab and field pH were measured, all but three had percent differences equal to or less than sixteen percent. All percent differences were less than 25%. Rounded off to the nearest percent, the percent differences were distributed as follows:

equal to or less than 10%.....96
11 to 16%.....9
greater than 16%.....3

Lab SC vs. field SC: This relationship was generally in order. Only one sample had a percent difference greater than sixteen percent. Rounded to the nearest percent, the distribution of the percent differences was as follows:

less than 10%.....106
11 to 16%.....1
greater than 16%.....1

The sample with the SC percent difference greater than 16% (EPRI-0005-178) is listed in the following table, along with previous results obtained at this site (EP-114). The laboratory SC results were consistent with historical values. Therefore, the field SC result was considered unusable, and has been flagged R for rejected.

Site (EP-114)	Sample #	Sample Date	Field SC	Lab SC	% Difference	Ratio of TDS to lab SC
Spring 2000	EPRI-0005-178	05/04/00	2200 R	8000	73%	88%
Winter 2000	EPRI-0002-178	01/31/00	9070	8480	7%	86%
Fall 1999	EPRI-9911-178	11/18/99	10820	9800	9%	83%

TDS vs. SC: The ratio of TDS to 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 SC measurements. (It should be noted that these measurements are less accurate in dilute waters.)

This relationship was generally in order. The TDS to laboratory SC ratios ranged from 46% at SEP-4 to 95% at EP-75. The ratios were distributed as follows:

less than 55%..... 1
55 to 75% 34
75 to 90% 73

11. Historical Comparison

The data for the Spring 2000 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. For groundwater sites, where a total metals result is listed, a summary of the historical results obtained for the dissolved metal is also listed for comparison purposes, since there were generally nine data points for dissolved metals and only three comparison data points for total metals. (For surface water, no results for metals were three or more standard deviations from the mean.)

12. 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 give 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 matrix is evaluated by recoveries on laboratory matrix spikes and laboratory control samples for higher analyte concentrations, and by blanks for analyte concentrations within five times the PDLG.

All laboratory matrix spikes were within control limits.

Three (of a total of nine) of the laboratory control standards had high recoveries for zinc (123, 126, and 130 percent).

There were no detections in the laboratory blanks. However, parameters of interest to the project were detected in all eleven field blanks. Detec-

tions that resulted in flagging which indicated a possible high bias are listed in the following bulleted items.

- Fluoride, detected in all eleven blanks.
- Nitrate+nitrite as N, detected in three blanks.
- Total lead, detected in two blanks.
- Total arsenic, detected in one blank.
- Total zinc, detected in five blanks.

Accuracy for sediment matrix is evaluated by recoveries on laboratory reference standards, which in this case included calibration standards and laboratory control standards for arsenic and lead only since these were analyzed using a matrix-specific calibration. Recoveries on these QC samples were all within control limits. No information was provided for evaluation of accuracy for the other parameters analyzed by XRF (cadmium, chromium, copper, iron, selenium, and zinc).

Precision

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

Precision for water matrix: All of the laboratory duplicate measurements and approximately 97 percent (276 of 286) of the field duplicate measurements were within control limits. Except for the parameters listed below, all of the field duplicates were within control limits.

Analyte	% Field Duplicates within Control Limits	Analyte	% Field Duplicates within Control Limits
Oxygen(Dis)	91%	CO_3	82%
TSS	91%	$NO_3 + NO_2$ as N	91%
Chloride	82%	Iron	82%
Sulfate	91%		

Precision for sediment matrix: All XRF laboratory duplicates were within control limits, indicating good laboratory precision for the XRF analyses. No field duplicate was submitted for the sediment matrix; consequently, a precision evaluation as was intended by the work plan is not possible.

Completeness

One measure of completeness is the percentage of results qualified as a result of the data validation. For the Spring 2000 El Paso RI monitoring:

⇒ Approximately ninety-three percent of the data may be used without qualification (3070 out of 3320 results).

⇒ Approximately one percent (1 out of 108) of the field SC results was considered to be unusable, and was rejected (flagged R).

A summary of the completeness calculated by parameter is listed in the following table.

Parameter	Number Analyzed	Number Valid	Percent Valid	Number Not Flagged	Percent Not Flagged
DTWL	85	85	100%	85	100%
Oxygen	108	108	100%	93	86%
pH(field)	108	108	100%	108	100%
SC(field)	108	107	99%	107	99%
Turbidity	97	97	100%	97	100%
Water Temp.	108	108	100%	108	100%
pH(lab)	119	119	100%	119	100%
SC(lab)	119	119	100%	119	100%
TDS	119	119	100%	119	100%
TSS	119	119	100%	114	96%
Calcium	119	119	100%	119	100%
Magnesium	119	119	100%	119	100%
Sodium	119	119	100%	119	100%
Potassium	119	119	100%	119	100%
Bicarbonate	119	119	100%	119	100%
Carbonate	119	119	100%	109	92%
Sulfate	119	119	100%	111	93%
Chloride	119	119	100%	100	84%
Fluoride	119	119	100%	22	19%
NO_3+NO_2 as N	119	119	100%	106	89%
Arsenic	130	130	100%	123	95%
Cadmium	130	130	100%	130	100%
Chromium	130	130	100%	130	100%
Copper	130	130	100%	130	100%
Iron	130	130	100%	113	87%
Lead	130	130	100%	121	93%
Selenium	130	130	100%	130	100%
Zinc	130	130	100%	80	62%

Completeness is also evaluated by how well the sampling event met the requirements of the project work plan. Completeness is achieved when the number of valid measurements is sufficient to address all important issues about a site.

- Field measurements were complete for this sampling event.
- No sample was collected at EP-87; it was dry.

Since the quality of sample analyses is assessed indirectly through the analysis of associated quality control samples, the submission of quality control samples at the correct frequency also affects the completeness of the data. As discussed above in

the sections pertaining to field quality control, the required frequency for field quality control samples was not met for the Spring 2000 monitoring event.

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APPENDIX 1

TABLES

TABLE 1.

DATA VALIDATION CODES AND DEFINITIONS

CODE		DEFINITION
J	-	The associated numerical value is an estimated quantity because quality control criteria were not met. Subscripts for the "J" qualifier: 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
UJ	-	The material was analyzed for, but was not detected above the associated value. Subscripts for the "UJ" qualifier: 1 - Blank contamination. Indicates possible high bias and/or false positive. 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
R	-	Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis is necessary for verification.
E	-	Estimated. (Not an EPA code.)
A	-	Anomalous data.. No apparent explanation for discrepancy in data. (Not an EPA code.)

APPENDIX 2

DATABASE

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
DI	EPRI-0005-228	L000648024	05/01/00	ZINC (ZN)	TOT	0.025	J2	+30	LCS recovery 130%
DI	EPRI-0005-230	L000665014	05/02/00	FLUORIDE (F)		0.77	J3		Holding time 30 days
DI	EPRI-0005-232	L000665025	05/03/00	FLUORIDE (F)		0.79	J3		Holding time 29 days
DI	EPRI-0005-236	L000706009	05/08/00	ZINC (ZN)	TOT	0.021	J2	+26	LCS recoveries 123 and 126%
DI	EPRI-0005-238	L000706017	05/09/00	ZINC (ZN)	TOT	0.028	J2	+26	LCS recoveries 123 and 126%
DI	EPRI-0005-240	L000706026	05/10/00	CARBONATE AS CO3		0.6	J4		Field duplicate difference > ± 1 ppm
				ZINC (ZN)	TOT	0.041	J2	+26	LCS recoveries 123 and 126%
EM-1	EPRI-0005-195	L000672012	05/04/00	TOTAL SUSPENDED SOLIDS		26.0	J4		Field duplicate difference > ± 10 ppm
				FLUORIDE (F)		0.82	UJ1		Field blank (0.88 ppm)
				NITRATE + NITRITE AS N		0.12	UJ1		Field blank (0.063 ppm)
				IRON (FE)	TOT	3.1	J4		Field duplicate difference > ± 0.1 ppm
				ZINC (ZN)	TOT	0.023	UJ1		Field blank (0.029 ppm)
EM-2	EPRI-0005-196	L000629003	04/26/00	DISSOLVED OXYGEN (O)		1.4	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.3	UJ1		Field blank (0.75 ppm)
EM-4	EPRI-0005-197	L000629001	04/26/00	DISSOLVED OXYGEN (O)		0.6	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.2	UJ1		Field blank (0.75 ppm)
EM-4 (Dup)	EPRI-0005-223	L000629002	04/26/00	DISSOLVED OXYGEN (O)		3.0	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.1	UJ1		Field blank (0.75 ppm)
EM-5	EPRI-0005-198	L000629014	04/26/00	DISSOLVED OXYGEN (O)		0.5	J4		Field duplicate difference = 2.4 ppm
EM-6	EPRI-0005-199	L000629015	04/26/00	DISSOLVED OXYGEN (O)		0.7	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.8	UJ1		Field blank (0.75 ppm)
EP-4	EPRI-0005-100	L000620006	04/24/00	FLUORIDE (F)		0.98	UJ1		Field blank (0.73 ppm)
EP-5	EPRI-0005-101	L000620007	04/24/00	FLUORIDE (F)		2.2	UJ1		Field blank (0.73 ppm)
				LEAD (PB)	TOT	0.009	UJ1		Field blank (0.006 ppm)
EP-6	EPRI-0005-102	L000620008	04/24/00	FLUORIDE (F)		1.4	UJ1		Field blank (0.73 ppm)
				LEAD (PB)	TOT	0.004	UJ1		Field blank (0.006 ppm)
EP-7	EPRI-0005-103	L000620009	04/24/00	FLUORIDE (F)		2.1	UJ1		Field blank (0.73 ppm)
EP-12	EPRI-0005-104	L000706010	05/09/00	FLUORIDE (F)		0.87	UJ1		Field blank (0.94 ppm)
				ZINC (ZN)	TOT	0.032	UJ1		Field blank (0.028 ppm)
				ZINC (ZN)	TOT	0.032	J2	+26	LCS recoveries 123 and 126%
EP-13	EPRI-0005-105	L000629005	04/26/00	DISSOLVED OXYGEN (O)		3.1	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.3	UJ1		Field blank (0.75 ppm)
EP-14	EPRI-0005-106	L000629004	04/26/00	DISSOLVED OXYGEN (O)		0.4	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.6	UJ1		Field blank (0.75 ppm)
EP-15	EPRI-0005-107	L000629010	04/26/00	DISSOLVED OXYGEN (O)		2.1	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		0.75	UJ1		Field blank (0.75 ppm)
EP-20	EPRI-0005-108	L000672002	05/04/00	TOTAL SUSPENDED SOLIDS		17.0	J4		Field duplicate difference > ± 10 ppm
				FLUORIDE (F)		1.8	UJ1		Field blank (0.88 ppm)

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
				IRON (FE)	TOT	0.46	J4		Field duplicate difference > ± 0.1 ppm
				ZINC (ZN)	TOT	0.042	UJ1		Field blank (0.029 ppm)
EP-20 (Dup)	EPRI-0005-233	L000672003	05/04/00	TOTAL SUSPENDED SOLIDS		32.0	J4		Field duplicate difference > ± 10 ppm
				FLUORIDE (F)		2.0	UJ1		Field blank (0.88 ppm)
				IRON (FE)	TOT	0.96	J4		Field duplicate difference > ± 0.1 ppm
				ZINC (ZN)	TOT	0.037	UJ1		Field blank (0.029 ppm)
EP-21	EPRI-0005-109	L000706006	05/08/00	ZINC (ZN)	TOT	0.28	J2	+26	LCS recoveries 123 and 126%
EP-22	EPRI-0005-110	L000648005	04/28/00	FLUORIDE (F)		2.4	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	3.7	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.36	J2	+30	LCS recovery 130%
EP-23	EPRI-0005-111	L000665023	05/03/00	CHLORIDE (CL)		488	J4		Field duplicate RPD 22%
				FLUORIDE (F)		2.9	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		2.9	J3		Holding time 29 days
EP-24	EPRI-0005-112	L000706007	05/08/00	FLUORIDE (F)		2.4	UJ1		Field blank (0.92 ppm)
EP-25	EPRI-0005-113	L000706008	05/08/00	FLUORIDE (F)		2.2	UJ1		Field blank (0.92 ppm)
				ZINC (ZN)	TOT	0.024	UJ1		Field blank (0.0.021 ppm)
				ZINC (ZN)	TOT	0.024	J2	+26	LCS recoveries 123 and 126%
EP-26	EPRI-0005-114	L000648001	04/28/00	FLUORIDE (F)		2.0	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	1.6	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.87	J2	+30	LCS recovery 130%
EP-29	EPRI-0005-115	L000672005	05/04/00	FLUORIDE (F)		2.9	UJ1		Field blank (0.88 ppm)
				ZINC (ZN)	TOT	0.099	UJ1		Field blank (0.029 ppm)
EP-35	EPRI-0005-116	L000672004	05/04/00	TOTAL SUSPENDED SOLIDS		75.0	J4		Field duplicate difference > ± 10 ppm
				FLUORIDE (F)		0.99	UJ1		Field blank (0.88 ppm)
				IRON (FE)	TOT	1.5	J4		Field duplicate difference > ± 0.1 ppm
EP-49	EPRI-0005-118	L000648011	04/28/00	ZINC (ZN)	TOT	35.0	J2	+30	LCS recovery 130%
EP-51	EPRI-0005-119	L000648009	04/28/00	FLUORIDE (F)		0.97	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	2.3	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.46	J2	+30	LCS recovery 130%
EP-52	EPRI-0005-120	L000648008	04/28/00	IRON (FE)	TOT	2.8	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	2.5	J2	+30	LCS recovery 130%
EP-53	EPRI-0005-121	L000665022	05/03/00	CHLORIDE (CL)		483	J4		Field duplicate RPD 22%
				FLUORIDE (F)		6.1	J3		Holding time 29 days
EP-54	EPRI-0005-122	L000648012	04/28/00	IRON (FE)	TOT	6.9	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	10.0	J2	+30	LCS recovery 130%
EP-55	EPRI-0005-123	L000672001	05/04/00	NITRATE + NITRITE AS N		0.054	UJ1		Field blank (0.063 ppm)
EP-56	EPRI-0005-124	L000665024	05/03/00	CHLORIDE (CL)		506	J4		Field duplicate RPD 22%
				FLUORIDE (F)		2.5	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		2.5	J3		Holding time 29 days
EP-57	EPRI-0005-125	L000706005	05/08/00	FLUORIDE (F)		0.84	UJ1		Field blank (0.92 ppm)

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
EP-58	EPRI-0005-126	L000706001	05/08/00	ZINC (ZN)	TOT	0.033	UJ1		Field blank (0.0.021 ppm)
				ZINC (ZN)	TOT	0.033	J2	+26	LCS recoveries 123 and 126%
EP-58 (Dup)	EPRI-0005-235	L000706002	05/08/00	ZINC (ZN)	TOT	0.034	UJ1		Field blank (0.0.021 ppm)
				ZINC (ZN)	TOT	0.034	J2	+26	LCS recoveries 123 and 126%
EP-59	EPRI-0005-127	L000665015	05/03/00	CHLORIDE (CL)		492	J4		Field duplicate RPD 22%
				FLUORIDE (F)		5.3	J3		Holding time 29 days
EP-60	EPRI-0005-128	L000665020	05/03/00	CHLORIDE (CL)		1127	J4		Field duplicate RPD 22%
				FLUORIDE (F)		1.6	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		1.6	J3		Holding time 29 days
EP-61	EPRI-0005-129	L000706003	05/08/00	FLUORIDE (F)		1.9	UJ1		Field blank (0.92 ppm)
				ZINC (ZN)	TOT	0.021	UJ1		Field blank (0.0.021 ppm)
				ZINC (ZN)	TOT	0.021	J2	+26	LCS recoveries 123 and 126%
EP-62	EPRI-0005-130	L000665017	05/03/00	CHLORIDE (CL)		408	J4		Field duplicate RPD 22%
				FLUORIDE (F)		2.9	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		2.9	J3		Holding time 29 days
EP-63	EPRI-0005-131	L000665018	05/03/00	CHLORIDE (CL)		726	J4		Field duplicate RPD 22%
				FLUORIDE (F)		2.0	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		2.0	J3		Holding time 29 days
EP-63 (Dup)	EPRI-0005-231	L000665019	05/03/00	CHLORIDE (CL)		906	J4		Field duplicate RPD 22%
				FLUORIDE (F)		1.9	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		1.9	J3		Holding time 29 days
EP-64	EPRI-0005-132	L000665016	05/03/00	CHLORIDE (CL)		737	J4		Field duplicate RPD 22%
				FLUORIDE (F)		1.8	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		1.8	J3		Holding time 29 days
EP-65	EPRI-0005-133	L000706004	05/08/00	FLUORIDE (F)		2.2	UJ1		Field blank (0.92 ppm)
EP-66	EPRI-0005-134	L000665021	05/03/00	CHLORIDE (CL)		595	J4		Field duplicate RPD 22%
				FLUORIDE (F)		3.0	UJ1		Field blank (0.79 ppm)
				FLUORIDE (F)		3.0	J3		Holding time 29 days
EP-67	EPRI-0005-135	L000620002	04/24/00	FLUORIDE (F)		0.75	UJ1		Field blank (0.73 ppm)
				LEAD (PB)	TOT	0.009	UJ1		Field blank (0.006 ppm)
EP-68	EPRI-0005-136	L000620004	04/24/00	FLUORIDE (F)		0.72	UJ1		Field blank (0.73 ppm)
EP-68 (Dup)	EPRI-0005-219	L000620005	04/24/00	FLUORIDE (F)		0.73	UJ1		Field blank (0.73 ppm)
EP-70	EPRI-0005-137	L000620015	04/25/00	FLUORIDE (F)		1.0	UJ1		Field blank (0.73 ppm)
EP-71	EPRI-0005-138	L000620003	04/24/00	FLUORIDE (F)		0.86	UJ1		Field blank (0.73 ppm)
EP-72	EPRI-0005-139	L000620014	04/25/00	FLUORIDE (F)		1.2	UJ1		Field blank (0.73 ppm)
EP-73	EPRI-0005-140	L000648013	04/28/00	FLUORIDE (F)		2.6	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	0.1	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.14	J2	+30	LCS recovery 130%
EP-75	EPRI-0005-141	L000648006	04/28/00	FLUORIDE (F)		1.6	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	0.87	J4		Field duplicate RPD 28%

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
				ZINC (ZN)	TOT	0.15	J2	+30	LCS recovery 130%
EP-76	EPRI-0005-142	L000648007	04/28/00	FLUORIDE (F)		1.9	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	<0.1	UJ4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.077	J2	+30	LCS recovery 130%
EP-77	EPRI-0005-143	L000648002	04/28/00	FLUORIDE (F)		3.2	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	4.5	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.11	J2	+30	LCS recovery 130%
EP-77 (Dup)	EPRI-0005-225	L000648003	04/28/00	FLUORIDE (F)		3.0	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	3.4	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.081	J2	+30	LCS recovery 130%
EP-78	EPRI-0005-144	L000665006	05/02/00	FLUORIDE (F)		3.4	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		3.4	J3		Holding time 30 days
EP-79	EPRI-0005-145	L000665005	05/02/00	FLUORIDE (F)		4.7	J3		Holding time 30 days
				ARSENIC (AS)	TOT	0.008	UJ1		Field blank (0.007 ppm)
EP-80	EPRI-0005-146	L000665010	05/02/00	FLUORIDE (F)		1.3	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		1.3	J3		Holding time 30 days
				ARSENIC (AS)	TOT	0.017	UJ1		Field blank (0.007 ppm)
EP-81	EPRI-0005-147	L000665001	05/02/00	FLUORIDE (F)		2.2	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		2.2	J3		Holding time 30 days
EP-82	EPRI-0005-148	L000665008	05/02/00	FLUORIDE (F)		2.7	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		2.7	J3		Holding time 30 days
				ARSENIC (AS)	TOT	0.009	UJ1		Field blank (0.007 ppm)
EP-83	EPRI-0005-149	L000648023	05/01/00	CHLORIDE (CL)		356.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		3.1	UJ1		Field blank (0.76 ppm)
				LEAD (PB)	TOT	0.003	UJ1		Field blank (0.005 ppm)
				ZINC (ZN)	TOT	0.02	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.02	J2	+30	LCS recovery 130%
EP-84	EPRI-0005-150	L000648015	05/01/00	CHLORIDE (CL)		202.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		0.66	UJ1		Field blank (0.76 ppm)
				LEAD (PB)	TOT	0.017	UJ1		Field blank (0.005 ppm)
				ZINC (ZN)	TOT	0.066	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.066	J2	+30	LCS recovery 130%
EP-84 (Dup)	EPRI-0005-227	L000648016	05/01/00	CARBONATE AS CO3		12.0	J4		Field duplicate difference > ± 1 ppm
				CHLORIDE (CL)		378.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		0.66	UJ1		Field blank (0.76 ppm)
				LEAD (PB)	TOT	0.02	UJ1		Field blank (0.005 ppm)
				ZINC (ZN)	TOT	0.07	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.07	J2	+30	LCS recovery 130%
EP-85	EPRI-0005-151	L000665002	05/02/00	FLUORIDE (F)		3.1	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		3.1	J3		Holding time 30 days
EP-85	EPRI-0005-229	L000665003	05/02/00	FLUORIDE (F)		3.2	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		3.2	J3		Holding time 30 days
EP-86	EPRI-0005-152	L000665004	05/02/00	FLUORIDE (F)		2.8	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		2.8	J3		Holding time 30 days

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
				ARSENIC (AS)	TOT	0.008	UJ1		Field blank (0.007 ppm)
EP-88	EPRI-0005-154	L000648004	04/28/00	FLUORIDE (F)		2.0	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	1.8	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.066	J2	+30	LCS recovery 130%
EP-89	EPRI-0005-155	L000620011	04/25/00	FLUORIDE (F)		0.75	UJ1		Field blank (0.73 ppm)
EP-89 (Dup)	EPRI-0005-221	L000620012	04/25/00	FLUORIDE (F)		0.74	UJ1		Field blank (0.73 ppm)
EP-90	EPRI-0005-156	L000629008	04/26/00	DISSOLVED OXYGEN (O)		0.6	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		0.49	UJ1		Field blank (0.75 ppm)
EP-93	EPRI-0005-157	L000648020	05/01/00	CHLORIDE (CL)		399.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		1.4	UJ1		Field blank (0.76 ppm)
				LEAD (PB)	TOT	0.006	UJ1		Field blank (0.005 ppm)
				ZINC (ZN)	TOT	0.048	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.048	J2	+30	LCS recovery 130%
EP-94	EPRI-0005-158	L000648018	05/01/00	CHLORIDE (CL)		560.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		1.2	UJ1		Field blank (0.76 ppm)
				ZINC (ZN)	TOT	0.034	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.034	J2	+30	LCS recovery 130%
EP-95	EPRI-0005-159	L000648017	05/01/00	CHLORIDE (CL)		380.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		3.5	UJ1		Field blank (0.76 ppm)
				ZINC (ZN)	TOT	0.03	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.03	J2	+30	LCS recovery 130%
EP-96	EPRI-0005-160	L000648019	05/01/00	CHLORIDE (CL)		465.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		1.1	UJ1		Field blank (0.76 ppm)
				LEAD (PB)	TOT	0.014	UJ1		Field blank (0.005 ppm)
				ZINC (ZN)	TOT	0.056	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.056	J2	+30	LCS recovery 130%
EP-97	EPRI-0005-161	L000648021	05/01/00	CHLORIDE (CL)		530.0	J4		Field duplicate RPD 61%
				FLUORIDE (F)		1.3	UJ1		Field blank (0.76 ppm)
				NITRATE + NITRITE AS N		0.28	UJ1		Field blank (0.11 ppm)
				ZINC (ZN)	TOT	0.11	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.11	J2	+30	LCS recovery 130%
EP-98	EPRI-0005-162	L000648022	05/01/00	CHLORIDE (CL)		550.0	J4		Field duplicate RPD 61%
				LEAD (PB)	TOT	0.003	UJ1		Field blank (0.005 ppm)
				ZINC (ZN)	TOT	0.041	UJ1		Field blank (0.025 ppm)
				ZINC (ZN)	TOT	0.041	J2	+30	LCS recovery 130%
EP-100	EPRI-0005-164	L000648010	04/28/00	FLUORIDE (F)		1.0	UJ1		Field blank (0.75 ppm)
				IRON (FE)	TOT	2.1	J4		Field duplicate RPD 28%
				ZINC (ZN)	TOT	0.22	J2	+30	LCS recovery 130%
EP-101	EPRI-0005-165	L000629006	04/26/00	DISSOLVED OXYGEN (O)		5.1	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.5	UJ1		Field blank (0.75 ppm)
EP-102	EPRI-0005-166	L000629007	04/26/00	DISSOLVED OXYGEN (O)		2.2	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		1.4	UJ1		Field blank (0.75 ppm)
EP-103	EPRI-0005-167	L000629009	04/26/00	DISSOLVED OXYGEN (O)		3.8	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		0.61	UJ1		Field blank (0.75 ppm)

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
EP-104	EPRI-0005-168	L000629013	04/26/00	DISSOLVED OXYGEN (O)		2.2	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		2.0	UJ1		Field blank (0.75 ppm)
EP-105	EPRI-0005-169	L000629011	04/26/00	DISSOLVED OXYGEN (O)		2.1	J4		Field duplicate difference = 2.4 ppm
EP-106	EPRI-0005-170	L000629012	04/26/00	DISSOLVED OXYGEN (O)		1.6	J4		Field duplicate difference = 2.4 ppm
				FLUORIDE (F)		0.89	UJ1		Field blank (0.75 ppm)
EP-107	EPRI-0005-171	L000620016	04/25/00	FLUORIDE (F)		1.1	UJ1		Field blank (0.73 ppm)
EP-108	EPRI-0005-172	L000665009	05/02/00	FLUORIDE (F)		2.4	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		2.4	J3		Holding time 30 days
EP-109	EPRI-0005-173	L000665007	05/02/00	FLUORIDE (F)		2.4	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		2.4	J3		Holding time 30 days
				ARSENIC (AS)	TOT	0.016	UJ1		Field blank (0.007 ppm)
EP-110	EPRI-0005-174	L000620013	04/25/00	FLUORIDE (F)		0.79	UJ1		Field blank (0.73 ppm)
EP-111	EPRI-0005-175	L000665011	05/02/00	FLUORIDE (F)		2.6	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		2.6	J3		Holding time 30 days
				NITRATE + NITRITE AS N		0.066	UJ1		Field blank (0.082 ppm)
EP-112	EPRI-0005-176	L000665012	05/02/00	FLUORIDE (F)		1.5	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		1.5	J3		Holding time 30 days
				ARSENIC (AS)	TOT	0.013	UJ1		Field blank (0.007 ppm)
EP-113	EPRI-0005-177	L000665013	05/02/00	FLUORIDE (F)		3.0	UJ1		Field blank (0.77 ppm)
				FLUORIDE (F)		3.0	J3		Holding time 30 days
				ARSENIC (AS)	TOT	0.006	UJ1		Field blank (0.007 ppm)
EP-114	EPRI-0005-178	L000672008	05/04/00	SC (UMHOS/CM AT 25 C) (FLD)		2200	R		Historical and interparameter relationship
				NITRATE + NITRITE AS N		0.076	UJ1		Field blank (0.063 ppm)
EP-115	EPRI-0005-179	L000672009	05/04/00	TOTAL SUSPENDED SOLIDS		44.0	J4		Field duplicate difference > ± 10 ppm
				FLUORIDE (F)		3.2	UJ1		Field blank (0.88 ppm)
				IRON (FE)	TOT	1.5	J4		Field duplicate difference > ± 0.1 ppm
EP-118	EPRI-0005-182	L000672006	05/04/00	FLUORIDE (F)		1.5	UJ1		Field blank (0.88 ppm)
POND 6	EPRI-0005-203	L000706011	05/09/00	FLUORIDE (F)		2.4	UJ1		Field blank (0.94 ppm)
				ZINC (ZN)	TOT	0.15	J2	+26	LCS recoveries 123 and 126%
SEP-1	EPRI-0005-183	L000706013	05/09/00	FLUORIDE (F)		0.73	UJ1		Field blank (0.94 ppm)
				ZINC (ZN)	TOT	0.03	UJ1		Field blank (0.028 ppm)
				ZINC (ZN)	TOT	0.03	J2	+26	LCS recoveries 123 and 126%
SEP-2	EPRI-0005-184	L000706022	05/10/00	CARBONATE AS CO3		<1.0	UJ4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		211.0	J4		Field duplicate RPD 25%
SEP-2	EPRI-0005-184	L000706022	05/10/00	FLUORIDE (F)		0.72	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		0.33	J4		Field duplicate difference > ± 0.05 ppm
				ZINC (ZN)	TOT	0.028	UJ1		Field blank (0.041 ppm)
				ZINC (ZN)	TOT	0.028	J2	+26	LCS recoveries 123 and 126%
SEP-3	EPRI-0005-185	L000706014	05/09/00	FLUORIDE (F)		0.73	UJ1		Field blank (0.94 ppm)
				ZINC (ZN)	TOT	0.029	UJ1		Field blank (0.028 ppm)
				ZINC (ZN)	TOT	0.029	J2	+26	LCS recoveries 123 and 126%

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
SEP-4	EPRI-0005-186	L000706019	05/10/00	CARBONATE AS CO3		<1.0	UJ4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		223.0	J4		Field duplicate RPD 25%
				FLUORIDE (F)		0.72	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		0.24	J4		Field duplicate difference > ± 0.05 ppm
SEP-6	EPRI-0005-187	L000706015	05/09/00	FLUORIDE (F)		0.72	UJ1		Field blank (0.94 ppm)
				ZINC (ZN)	TOT	0.027	UJ1		Field blank (0.028 ppm)
				ZINC (ZN)	TOT	0.027	J2	+26	LCS recoveries 123 and 126%
SEP-6 (Dup)	EPRI-0005-237	L000706016	05/09/00	FLUORIDE (F)		0.72	UJ1		Field blank (0.94 ppm)
				ZINC (ZN)	TOT	0.022	J2	+26	LCS recoveries 123 and 126%
SEP-7	EPRI-0005-188	L000706012	05/09/00	CARBONATE AS CO3		7	UJ1		Field blank (3.6 ppm)
				FLUORIDE (F)		0.71	UJ1		Field blank (0.94 ppm)
				ZINC (ZN)	TOT	0.03	UJ1		Field blank (0.028 ppm)
				ZINC (ZN)	TOT	0.03	J2	+26	LCS recoveries 123 and 126%
SEP-9	EPRI-0005-189	L000706018	05/10/00	CARBONATE AS CO3		<1.0	UJ4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		237.0	J4		Field duplicate RPD 25%
				FLUORIDE (F)		0.79	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		3.5	J4		Field duplicate difference > ± 0.05 ppm
				ZINC (ZN)	TOT	0.036	UJ1		Field blank (0.041 ppm)
				ZINC (ZN)	TOT	0.036	J2	+26	LCS recoveries 123 and 126%
SEP-10	EPRI-0005-190	L000706024	05/10/00	CARBONATE AS CO3		<1.0	UJ4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		215.0	J4		Field duplicate RPD 25%
				FLUORIDE (F)		0.72	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		6.1	J4		Field duplicate difference > ± 0.05 ppm
				ZINC (ZN)	TOT	0.026	UJ1		Field blank (0.041 ppm)
				ZINC (ZN)	TOT	0.026	J2	+26	LCS recoveries 123 and 126%
SEP-10 (Dup)	EPRI-0005-239	L000706025	05/10/00	CARBONATE AS CO3		7.0	J4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		277.0	J3		Holding time 41 days
				SULFATE (SO4)		277.0	J4		Field duplicate RPD 25%
				FLUORIDE (F)		0.72	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		0.18	J4		Field duplicate difference > ± 0.05 ppm
				ZINC (ZN)	TOT	0.03	UJ1		Field blank (0.041 ppm)
				ZINC (ZN)	TOT	0.03	J2	+26	LCS recoveries 123 and 126%
SEP-11	EPRI-0005-191	L000706023	05/10/00	CARBONATE AS CO3		<1.0	UJ4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		217.0	J4		Field duplicate RPD 25%
				FLUORIDE (F)		0.72	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		0.32	J4		Field duplicate difference > ± 0.05 ppm
				ZINC (ZN)	TOT	0.024	UJ1		Field blank (0.041 ppm)
				ZINC (ZN)	TOT	0.024	J2	+26	LCS recoveries 123 and 126%
SEP-12	EPRI-0005-192	L000706021	05/10/00	CARBONATE AS CO3		<1.0	UJ4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		223.0	J4		Field duplicate RPD 25%
				FLUORIDE (F)		0.71	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		0.27	J4		Field duplicate difference > ± 0.05 ppm
				ZINC (ZN)	TOT	0.027	UJ1		Field blank (0.041 ppm)
				ZINC (ZN)	TOT	0.027	J2	+26	LCS recoveries 123 and 126%
SEP-13	EPRI-0005-193	L000706020	05/10/00	CARBONATE AS CO3		4.8	J4		Field duplicate difference > ± 1 ppm
				SULFATE (SO4)		211.0	J4		Field duplicate RPD 25%
				FLUORIDE (F)		0.72	UJ1		Field blank (0.95 ppm)
				NITRATE + NITRITE AS N		0.23	J4		Field duplicate difference > ± 0.05 ppm

Table 2. Summary of Flagged Data
El Paso, EPRI Quarterly Monitoring -- Spring 2000

Site	Sample No	Lab No	Date	Description		Result	Flag	Bias	Reason for Flag
				ZINC (ZN)	TOT	0.023	UJ1		Field blank (0.041 ppm)
				ZINC (ZN)	TOT	0.023	J2	+26	LCS recoveries 123 and 126%

Table 3. Summary of Historical Comparisons

Summary of the Comparison of the Spring 2000 Data to the Existing Data,
Showing Results that are:

***Highest or Lowest over the Database Period**
***3 or More Standard Deviations from the Mean**
(All values are in ppm.)

Note: For groundwater, where statistics were calculated for Total metals, the historical results for dissolved metals are also shown.
(No surface water metal results were 3 or more standard deviations from the mean.)

Site	Date	Result	Parameter	Comparison Date Range	N	Number of Detections	Min	Mean	Max	# StDev from Mean	Comparison to Data Set
EM-1	5/4/00	7.9	PH (FLD)	08/13/97-01/31/00	11		6.94	7.289	7.52	3.37	Highest
		3.1	IRON (FE) TOT	08/11/99-01/31/00	3	3	0.23	0.553	0.84	8.3	Highest
			IRON (FE) DIS	08/13/97-08/11/99	9	3	<0.1		0.27		
		0.011	LEAD (PB) TOT	08/11/99-01/31/00	3	3	0.003	0.0047	0.007		Highest
			LEAD (PB) DIS	08/13/97-08/11/99	9	0	<0.003				
EM-4	4/26/00	7	PH	08/26/97-01/25/00	11		7.4	7.68	7.9	3.72	Lowest
EM-4 (Dup)	4/26/00	7.1	PH	08/26/97-01/25/00	11		7.4	7.68	7.9	3.17	Lowest
		1.1	FLUORIDE (F)	08/26/97-01/25/00	11		1.2	1.26	1.3	3.24	Lowest
EM-5	4/26/00	15.14	Depth to Water Level (Feet)	08/11/97-01/25/00	12		14.34	14.438	14.62	8.12	Highest
EM-6	4/26/00	0.9	TURBIDITY (NTU)	08/06/99-01/25/00	3		1.37	1.460	1.60	4.56	Lowest
EP-6	4/24/00	5	OXYGEN (O) (FLD) DIS	08/06/97-01/29/00	10		1.03	1.994	3.10	3.61	Highest
EP-13	4/26/00	0.25	IRON (FE) TOT	08/03/99-01/25/00	3	3	0.40	0.447	0.47	4.87	Lowest
			IRON (FE) DIS	08/07.97'-08/03/99	9	1	<0.1		0.15		
EP-14	4/26/00	509	CHLORIDE (CL)	11/05/97-01/25/00	10		222	326	405	3.71	Highest
EP-20	5/4/00	7.9	PH	08/07/97-01/31/00	11		7.1	7.36	7.6	3.57	Highest
EP-24	5/8/00	0.028	ARSENIC (AS) TOT	08/10/99-02/01/00	3	3	0.006	0.0087	0.013	5.11	Highest
			ARSENIC (AS) DIS	08/05/97-08/10/99	9	9	0.006	0.15	0.47		
EP-25	5/8/00	15	ARSENIC (AS) TOT	08/11/99-02/08/00	3	3	1.1	4.3	7.8	3.18	Highest
			ARSENIC (AS) DIS	08/15/97-08/11/99	8	8	0.82	2.29	5.1		
		2.2	IRON (FE) TOT	08/11/99-02/08/00	3	3	6.7	7.47	8.2	7.02	Lowest
			IRON (FE) DIS	08/15/97-08/11/99	8	8	1.3	7.78	26		
EP-26	4/28/00	50	POTASSIUM (K) DIS	08/11/97-01/26/00	10		<5.0	14.02	42	3.1	Highest
		20	NITRATE + NITRITE AS N	08/11/97-01/26/00	10		1.4	3.86	14	4.3	Highest
EP-29	5/4/00	5093	TOTAL SUSPENDED SOLIDS	08/07/97-01/31/00	11		1.10	260.0	1160	> 10	Highest
		169	CALCIUM (CA) DIS	08/07/97-01/31/00	11		39	56.9	79	8.16	Highest
		33	MAGNESIUM (MG) DIS	08/07/97-01/31/00	11		18	22.2	27	4.22	Highest
		1186	BICARBONATE (HCO3)	08/07/97-01/31/00	11		177	331.5	464	9.98	Highest
		0.057	CHROMIUM (CR) TOT	08/02/99-01/31/00	3		0.014	0.0247	0.030	3.5	Highest
		52	IRON (FE) TOT	08/02/99-01/31/00	3	3	7.2	10.4	14	> 10	Highest
			IRON (FE) DIS	08/07/97-08/02/99	9	2	<0.1		1.8		
		0.034	LEAD (PB) TOT	08/02/99-01/31/00	3	3	0.008	0.0103	0.013	9.4	Highest
			LEAD (PB) DIS	08/07/97-08/02/99	9	0	<0.003				
		0.099	ZINC (ZN) TOT	08/02/99-01/31/00	3	3	0.025	0.028	0.03	> 10	Highest
			ZINC (ZN) DIS	08/07/97-08/02/99	9	5	<0.02	0.024	0.03		
EP-52	4/28/00	0.64	COPPER (CU) TOT	08/05/99-01/26/00	3	3	0.39	0.443	0.50	3.57	Highest
			COPPER (CU) DIS	11/06/97-08/05/99	7	7	0.35	0.483	0.69		
EP-53	5/3/00	498	BICARBONATE (HCO3)	08/11/97-02/01/00	10		157	295	354	3.46	Highest
EP-54	4/28/00	<0.01	CHROMIUM (CR) TOT	08/04/99-01/26/00	3	3	0.013	0.0147	0.016	3.06	Lowest
			CHROMIUM (CR) DIS	08/27/97-08/04/99	10	0	<0.01				
EP-55	5/4/00	5379	TOTAL SUSPENDED SOLIDS	08/15/97-02/07/00	11		234	746.9	2141	7.23	Highest
		1403	BICARBONATE (HCO3)	08/15/97-02/07/00	11		561	811.5	1098	4.16	Highest
		1.3	CADMIUM (CD) TOT	08/10/99-02/07/00	3	3	0.16	0.31	0.58	4.23	Highest
			CADMIUM (CD) DIS	08/15/97-08/10/99	9	5	<0.005	0.0284	0.13		

Table 3. Summary of Historical Comparisons

Summary of the Comparison of the Spring 2000 Data to the Existing Data,
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***Highest or Lowest over the Database Period**
***3 or More Standard Deviations from the Mean**
(All values are in ppm.)

Note: For groundwater, where statistics were calculated for Total metals, the historical results for dissolved metals are also shown.
(No surface water metal results were 3 or more standard deviations from the mean.)

Site	Date	Result	Parameter	Comparison Date Range	N	Number of Detections	Min	Mean	Max	# StDev from Mean	Comparison to Data Set
		0.28	COPPER (CU) TOT	08/10/99-02/07/00	3	3	0.031	0.058	0.11	4.93	Highest
			COPPER (CU) DIS	08/15/97-08/10/99	9	1	<0.025		0.025		
		0.6	LEAD (PB) TOT	08/10/99-02/07/00	3	3	0.028	0.063	0.13	9.25	Highest
			LEAD (PB) DIS	08/15/97-08/10/99	9	1	<0.003		0.02		
		102	ZINC (ZN) TOT	08/10/99-02/07/00	3	3	27	35.7	51	4.98	Highest
			ZINC (ZN) DIS	08/15/97-08/10/99	9	9	12	59	200		
EP-56	5/3/00	4800	SC (UMHOS/CM AT 25 C)	08/26/97-02/01/00	11		5120	5476.4	5600	4.44	Lowest
		0.026	LEAD (PB) TOT	08/04/99-02/01/00	3	3	0.01	0.0143	0.017	3.08	Highest
			LEAD (PB) DIS	08/26/97-08/04/99	9	6	<0.003	0.0034	0.005		
EP-59	5/3/00	77	POTASSIUM (K) DIS	08/09/97-01/28/00	11		91	96.91	107	3.67	Lowest
EP-61	5/8/00	1.9	FLUORIDE (F)	08/16/97-02/07/00	11		1.6	1.66	1.8	3.51	Highest
EP-63	5/3/00	726	CHLORIDE (CL)	08/09/97-01/28/00	11		879	994	1163	3.05	Lowest
EP-63 (Dup)	5/3/00	1.9	FLUORIDE (F)	08/09/97-01/28/00	11		2	2.17	2.3	3.02	Lowest
EP-64	5/3/00	2.75	TURBIDITY (NTU)	08/03/99-01/28/00	3		5.8	7.44	8.51	3.25	Lowest
EP-72	4/25/00	7180	SC (UMHOS/CM AT 25 C)	08/12/97-01/24/00	7		5700	6023	6220	7.35	Highest
		6065	TDS (MEASURED AT 180 C)	08/12/97-01/24/00	7		4539	4958	5403	3.7	Highest
		27.3	WATER TEMPERATURE (C) (F	08/12/97-01/24/00	7		24.5	25.2	25.7	5.31	Highest
		215	MAGNESIUM (MG) DIS	08/12/97-01/24/00	7		148	159	167	7.32	Highest
		349	BICARBONATE (HCO3)	08/12/97-01/24/00	7		282	288	295	> 10	Highest
		3904	SULFATE (SO4)	08/12/97-01/24/00	7		2209	2437	2767	7.82	Highest
EP-73	4/28/00	1252	BICARBONATE (HCO3)	08/12/97-01/26/00	11		268	286.9	300	> 10	Highest
		0.14	ZINC (ZN) TOT	08/05/99-01/26/00	3	2	<0.020	0.0327	0.054	5.78	Highest
			ZINC (ZN) DIS	08/12/97-08/05/99	9	9	0.022	0.671	0.19		
EP-76	4/28/00	515	BICARBONATE (HCO3)	08/12/97-01/26/00	9		475	481	487	7.25	Highest
EP-77	4/28/00	4140	SC (UMHOS/CM AT 25 C)	08/12/97-01/25/00	11		4500	5292	5800	3.21	Lowest
		102	TURBIDITY (NTU)	08/05/99-01/25/00	3		17.6	22.9	33.1	8.95	Highest
		0.031	SELENIUM (SE) TOT	08/05/99-01/25/00	3	3	0.022	0.0227	0.023	> 10	Highest
			SELENIUM (SE) DIS	08/12/97-08/05/99	9	9	0.007	0.0196	0.034		
		0.11	ZINC (ZN) TOT	08/05/99-01/25/00	3	2	<0.020	0.0287	0.036	> 10	Highest
			ZINC (ZN) DIS	08/12/97-08/05/99	9	9	0.022	0.0307	0.063		
EP-77 (Dup)	4/28/00	4140	SC (UMHOS/CM AT 25 C)	08/12/97-01/25							

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-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EM-1		EM-2		EM-4		EM-4	
SAMPLE DATE	05/04/2000		04/26/2000		04/26/2000		04/26/2000	
SAMPLE TIME	14:45		08:45		08:15		08:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000672012		L000629003		L000629001		L000629002	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0005-195		EPRI-0005-196		EPRI-0005-197		EPRI-0005-223	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	65.78		64.39		61.72			
OXYGEN (O) (FLD) DIS	2.4		1.4	J4	0.6	J4	3.0	J4
PH (FLD)	7.9		7.08		7.32		7.34	
PH	8.0		7.7		7.0		7.1	
SC (UMHOS/CM AT 25 C)	5540.0		5070.0		8600.0		8550.0	
SC (UMHOS/CM AT 25 C) (FLD)	5390.0		5070.0		8560.0		8220.0	
TDS (MEASURED AT 180 C)	4122.0		3856.0		5159.0		4912.0	
TOTAL SUSPENDED SOLIDS	26.0	J4	8.8		<1.0		<1.0	
TURBIDITY (NTU)	9.65		7.13		0.92			
WATER TEMPERATURE (C) (FLD)	24.6		24.5		23.0		23.0	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	213.0		236.0		309.0		283.0	
MAGNESIUM (MG) DIS	125.0		89.0		137.0		127.0	
SODIUM (NA) DIS	791.0		705.0		1088.0		982.0	
POTASSIUM (K) DIS	26.0		14.0		22.0		21.0	
BICARBONATE (HCO3)	220.0		346.0		143.0		146.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	1928.0		1958.0		510.0		497.0	
CHLORIDE (CL)	774.0		544.0		2488.0		2640.0	
FLUORIDE (F)	0.82	UJ1	1.3	UJ1	1.2	UJ1	1.1	UJ1
-- NUTRIENTS --								
NITRATE + NITRITE AS N	0.12	UJ1	43.0		0.29		0.26	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	<0.005		0.8		0.01		0.01	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	3.1	J4	0.23		<0.1		<0.1	
LEAD (PB) TOT	0.011		0.004		<0.003		<0.003	
SELENIUM (SE) TOT	<0.005		0.12		<0.005		<0.005	
ZINC (ZN) TOT	0.023	UJ1	0.023		0.023		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: GROUNDWATER --

SITE CODE	EM-5		EM-6		EP-4	
SAMPLE DATE	04/26/2000		04/26/2000		04/24/2000	
SAMPLE TIME	15:40		16:00		14:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000629014		L000629015		L000620006	
SAMPLE NUMBER	EPRI-0005-198		EPRI-0005-199		EPRI-0005-100	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	15.14		37.46		7.18	
OXYGEN (O) (FLD) DIS	0.5	J4	0.7	J4	2.1	
PH (FLD)	7.59		7.25		7.53	
PH	8.1		8.0		8.0	
SC (UMHOS/CM AT 25 C)	2130.0		4060.0		2300.0	
SC (UMHOS/CM AT 25 C) (FLD)	2120.0		4130.0		2250.0	
TDS (MEASURED AT 180 C)	1367.0		2877.0		1531.0	
TOTAL SUSPENDED SOLIDS	<1.0		<1.0		290.0	
TURBIDITY (NTU)	0.9		0.9		188.0	
WATER TEMPERATURE (C) (FLD)	24.4		25.3		20.3	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	41.0		102.0		107.0	
MAGNESIUM (MG) DIS	9.7		61.0		30.0	
SODIUM (NA) DIS	341.0		637.0		307.0	
POTASSIUM (K) DIS	19.0		9.9		14.0	
BICARBONATE (HCO3)	171.0		376.0		592.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	597.0		1466.0		615.0	
CHLORIDE (CL)	271.0		412.0		258.0	
FLUORIDE (F)	6.1		1.8	UJ1	0.98	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.18		6.8		0.11	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	2.3		0.022		0.12	
CADMIUM (CD) TOT	0.009		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.028		0.035		0.14	
IRON (FE) TOT	0.6		<0.1		10.0	
LEAD (PB) TOT	0.013		0.005		0.077	
SELENIUM (SE) TOT	<0.005		0.068		<0.005	
ZINC (ZN) TOT	0.062		0.037		0.098	

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	
SAMPLE DATE	04/24/2000		04/24/2000		04/24/2000	
SAMPLE TIME	14:25		14:45		15:10	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000620007		L000620008		L000620009	
SAMPLE NUMBER	EPRI-0005-101		EPRI-0005-102		EPRI-0005-103	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	6.08		7.4		6.46	
OXYGEN (O) (FLD) DIS	1.8		5.0		3.3	
PH (FLD)	7.52		7.53		7.45	
PH	7.9		7.8		7.9	
SC (UMHOS/CM AT 25 C)	5250.0		6920.0		3110.0	
SC (UMHOS/CM AT 25 C) (FLD)	5160.0		6780.0		3090.0	
TDS (MEASURED AT 180 C)	3659.0		5399.0		2047.0	
TOTAL SUSPENDED SOLIDS	13.0		6.4		23.0	
TURBIDITY (NTU)	10.2		2.67		8.89	
WATER TEMPERATURE (C) (FLD)	23.3		23.0		22.0	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	167.0		320.0		79.0	
MAGNESIUM (MG) DIS	64.0		114.0		28.0	
SODIUM (NA) DIS	856.0		1124.0		476.0	
POTASSIUM (K) DIS	12.0		20.0		6.1	
BICARBONATE (HCO3)	753.0		477.0		388.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1288.0		2872.0		898.0	
CHLORIDE (CL)	729.0		852.0		343.0	
FLUORIDE (F)	2.2	UJ1	1.4	UJ1	2.1	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.18		3.4		0.16	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.044		0.022		0.068	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.13		<0.025		<0.025	
IRON (FE) TOT	0.19		<0.1		1.8	
LEAD (PB) TOT	0.009	UJ1	0.004	UJ1	<0.003	
SELENIUM (SE) TOT	0.027		0.054		<0.005	
ZINC (ZN) TOT	0.03		0.029		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-12		EP-13		EP-14	
SAMPLE DATE	05/09/2000		04/26/2000		04/26/2000	
SAMPLE TIME	10:00		09:45		09:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000706010		L000629005		L000629004	
SAMPLE NUMBER	EPRI-0005-104		EPRI-0005-105		EPRI-0005-106	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	61.24		60.96		59.9	
OXYGEN (O) (FLD) DIS	0.3		3.1	J4	0.4	J4
PH (FLD)	6.98		7.23		6.9	
PH	7.5		7.8		7.6	
SC (UMHOS/CM AT 25 C)	5620.0		9150.0		5080.0	
SC (UMHOS/CM AT 25 C) (FLD)	5780.0		8430.0		5070.0	
TDS (MEASURED AT 180 C)	4147.0		7339.0		4008.0	
TOTAL SUSPENDED SOLIDS	91.0		6.1		<1.0	
TURBIDITY (NTU)	7200.0		5.77		1.8	
WATER TEMPERATURE (C) (FLD)	23.5		26.4		25.6	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	277.0		294.0		349.0	
MAGNESIUM (MG) DIS	112.0		54.0		91.0	
SODIUM (NA) DIS	1158.0		2108.0		704.0	
POTASSIUM (K) DIS	15.0		64.0		49.0	
BICARBONATE (HCO3)	1159.0		390.0		376.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1631.0		4291.0		2223.0	
CHLORIDE (CL)	498.0		659.0		509.0	
FLUORIDE (F)	0.87	UJ1	1.3	UJ1	1.6	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	5.9		88.0		18.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	2.0		32.0		1.3	
CADMIUM (CD) TOT	<0.005		0.57		<0.005	
CHROMIUM (CR) TOT	0.017		<0.01		<0.01	
COPPER (CU) TOT	0.038		<0.025		<0.025	
IRON (FE) TOT	2.8		0.25		0.12	
LEAD (PB) TOT	0.024		0.008		0.005	
SELENIUM (SE) TOT	0.61		5.3		0.19	
ZINC (ZN) TOT	0.032	UJ1 J2	0.028		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-15		EP-20		EP-20		EP-21	
SAMPLE DATE	04/26/2000		05/04/2000		05/04/2000		05/08/2000	
SAMPLE TIME	13:15		09:20		09:30		15:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000629010		L000672002		L000672003		L000706006	
REMARKS					DUPLICATE			
SAMPLE NUMBER	EPRI-0005-107		EPRI-0005-108		EPRI-0005-233		EPRI-0005-109	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	59.66		14.54				25.95	
OXYGEN (O) (FLD) DIS	2.1	J4	2.5		2.3		0.2	
PH (FLD)	7.08		6.99		6.99		7.48	
PH	7.7		7.8		7.9		8.1	
SC (UMHOS/CM AT 25 C)	4560.0		9260.0		9360.0		4960.0	
SC (UMHOS/CM AT 25 C) (FLD)	4540.0		9170.0		9130.0		4890.0	
TDS (MEASURED AT 180 C)	3342.0		7998.0		8012.0		2873.0	
TOTAL SUSPENDED SOLIDS	135.0		17.0	J4	32.0	J4	34.0	
TURBIDITY (NTU)	17.6		9.52				24.8	
WATER TEMPERATURE (C) (FLD)	24.9		21.9		22.0		26.8	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	209.0		457.0		454.0		27.0	
MAGNESIUM (MG) DIS	73.0		262.0		264.0		34.0	
SODIUM (NA) DIS	671.0		1351.0		1352.0		942.0	
POTASSIUM (K) DIS	11.0		44.0		46.0		301.0	
BICARBONATE (HCO3)	378.0		354.0		353.0		1915.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	1765.0		4516.0		4405.0		191.0	
CHLORIDE (CL)	554.0		626.0		583.0		685.0	
FLUORIDE (F)	0.75	UJ1	1.8	UJ1	2.0	UJ1	7.2	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	21.0		89.0		98.0		0.06	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.007		0.76		0.78		0.062	
CADMIUM (CD) TOT	<0.005		0.068		0.063		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		0.034	
IRON (FE) TOT	2.8		0.46	J4	0.96	J4	1.7	
LEAD (PB) TOT	0.004		<0.003		<0.003		0.013	
SELENIUM (SE) TOT	0.13		0.3		0.31		0.025	
ZINC (ZN) TOT	0.029		0.042	UJ1	0.037	UJ1	0.28	J2

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: GROUNDWATER --

SITE CODE	EP-22		EP-23		EP-24	
SAMPLE DATE	04/28/2000		05/03/2000		05/08/2000	
SAMPLE TIME	10:00		14:15		16:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000648005		L000665023		L000706007	
SAMPLE NUMBER	EPRI-0005-110		EPRI-0005-111		EPRI-0005-112	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	53.15		23.26		35.09	
OXYGEN (O) (FLD) DIS	0.8		1.1		0.9	
PH (FLD)	7.1		7.51		7.06	
PH	8.0		7.6		7.6	
SC (UMHOS/CM AT 25 C)	8290.0		5230.0		5080.0	
SC (UMHOS/CM AT 25 C) (FLD)	7660.0		5160.0		4990.0	
TDS (MEASURED AT 180 C)	7001.0		3198.0		3025.0	
TOTAL SUSPENDED SOLIDS	144.0		24.0		13.0	
TURBIDITY (NTU)	15.85		13.88		9.96	
WATER TEMPERATURE (C) (FLD)	25.0		24.2		25.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	361.0		117.0		150.0	
MAGNESIUM (MG) DIS	157.0		63.0		45.0	
SODIUM (NA) DIS	1398.0		586.0		1062.0	
POTASSIUM (K) DIS	95.0		50.0		27.0	
BICARBONATE (HCO3)	537.0		477.0		1301.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	3799.0		1629.0		199.0	
CHLORIDE (CL)	649.0		488.0	J4	1086.0	
FLUORIDE (F)	2.4	UJ1	2.9	UJ1 J3	2.4	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	3.5		0.18		0.11	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	1.2		2.6		0.028	
CADMIUM (CD) TOT	0.009		0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.046		0.14		<0.025	
IRON (FE) TOT	3.7	J4	0.8		0.14	
LEAD (PB) TOT	0.075		0.06		0.003	
SELENIUM (SE) TOT	0.21		0.015		0.013	
ZINC (ZN) TOT	0.36	J2	0.075		<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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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	05/08/2000		04/28/2000		05/04/2000	
SAMPLE TIME	16:20		08:20		10:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000706008		L000648001		L000672005	
SAMPLE NUMBER	EPRI-0005-113		EPRI-0005-114		EPRI-0005-115	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	49.06		60.12		14.14	
OXYGEN (O) (FLD) DIS	0.3		0.3		2.7	
PH (FLD)	7.03		7.04		7.73	
PH	7.6		7.3		7.9	
SC (UMHOS/CM AT 25 C)	6060.0		4540.0		3150.0	
SC (UMHOS/CM AT 25 C) (FLD)	5500.0		4370.0		3150.0	
TDS (MEASURED AT 180 C)	3706.0		3393.0		2095.0	
TOTAL SUSPENDED SOLIDS	855.0		44.0		5093.0	
TURBIDITY (NTU)	>200		31.4		>200	
WATER TEMPERATURE (C) (FLD)	24.8		24.7		22.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	137.0		170.0		169.0	
MAGNESIUM (MG) DIS	30.0		54.0		33.0	
SODIUM (NA) DIS	1079.0		749.0		550.0	
POTASSIUM (K) DIS	277.0		50.0		30.0	
BICARBONATE (HCO3)	1818.0		327.0		1186.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	350.0		1638.0		876.0	
CHLORIDE (CL)	969.0		436.0		292.0	
FLUORIDE (F)	2.2	UJ1	2.0	UJ1	2.9	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.17		20.0		5.7	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	15.0		0.31		0.38	
CADMIUM (CD) TOT	<0.005		0.29		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		0.057	
COPPER (CU) TOT	<0.025		<0.025		0.037	
IRON (FE) TOT	2.2		1.6	J4	52.0	
LEAD (PB) TOT	0.025		0.014		0.034	
SELENIUM (SE) TOT	0.44		1.1		0.21	
ZINC (ZN) TOT	0.024	UJ1 J2	0.87	J2	0.099	UJ1

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-49		EP-51	
SAMPLE DATE	05/04/2000		04/28/2000		04/28/2000	
SAMPLE TIME	09:45		14:20		13:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000672004		L000648011		L000648009	
SAMPLE NUMBER	EPRI-0005-116		EPRI-0005-118		EPRI-0005-119	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	14.66		68.91		49.03	
OXYGEN (O) (FLD) DIS	2.2		0.6		1.9	
PH (FLD)	7.01		6.72		6.84	
PH	7.4		7.2		7.6	
SC (UMHOS/CM AT 25 C)	6710.0		9860.0		9660.0	
SC (UMHOS/CM AT 25 C) (FLD)	6680.0		9400.0		9160.0	
TDS (MEASURED AT 180 C)	5606.0		7808.0		7123.0	
TOTAL SUSPENDED SOLIDS	75.0	J4	189.0		26.0	
TURBIDITY (NTU)	40.8		39.0		20.0	
WATER TEMPERATURE (C) (FLD)	20.9		27.5		25.4	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	430.0		448.0		483.0	
MAGNESIUM (MG) DIS	158.0		128.0		324.0	
SODIUM (NA) DIS	910.0		1467.0		1106.0	
POTASSIUM (K) DIS	17.0		226.0		32.0	
BICARBONATE (HCO3)	594.0		978.0		238.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	2715.0		3921.0		2356.0	
CHLORIDE (CL)	521.0		648.0		1820.0	
FLUORIDE (F)	0.99	UJ1	7.3		0.97	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	59.0		8.8		190.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.51		42.0		0.56	
CADMIUM (CD) TOT	<0.005		0.053		0.031	
CHROMIUM (CR) TOT	0.016		<0.01		1.5	
COPPER (CU) TOT	<0.025		<0.025		0.2	
IRON (FE) TOT	1.5	J4	29.0		2.3	J4
LEAD (PB) TOT	0.008		0.007		0.02	
SELENIUM (SE) TOT	1.2		0.1		0.27	
ZINC (ZN) TOT	<0.02		35.0	J2	0.46	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: GROUNDWATER --

SITE CODE	EP-52		EP-53		EP-54	
SAMPLE DATE	04/28/2000		05/03/2000		04/28/2000	
SAMPLE TIME	12:45		13:45		14:45	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000648008		L000665022		L000648012	
SAMPLE NUMBER	EPRI-0005-120		EPRI-0005-121		EPRI-0005-122	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	52.89		68.28		71.18	
OXYGEN (O) (FLD) DIS	0.9		1.4		2.0	
PH (FLD)	6.35		7.09		6.49	
PH	7.8		7.4		7.4	
SC (UMHOS/CM AT 25 C)	11860.0		7530.0		10100.0	
SC (UMHOS/CM AT 25 C) (FLD)	11280.0		7440.0		9940.0	
TDS (MEASURED AT 180 C)	10140.0		5557.0		7984.0	
TOTAL SUSPENDED SOLIDS	23.0		649.0		61.0	
TURBIDITY (NTU)	16.4		>200		69.0	
WATER TEMPERATURE (C) (FLD)	25.9		26.4		28.4	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	485.0		278.0		404.0	
MAGNESIUM (MG) DIS	282.0		98.0		213.0	
SODIUM (NA) DIS	2166.0		1110.0		1769.0	
POTASSIUM (K) DIS	19.0		61.0		249.0	
BICARBONATE (HCO3)	817.0		498.0		966.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	4361.0		2972.0		4045.0	
CHLORIDE (CL)	1425.0		483.0	J4	723.0	
FLUORIDE (F)	6.3		6.1	J3	8.6	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	101.0		15.0		11.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	1.5		32.0		42.0	
CADMIUM (CD) TOT	0.51		0.38		0.6	
CHROMIUM (CR) TOT	0.12		<0.01		<0.01	
COPPER (CU) TOT	0.64		<0.025		0.36	
IRON (FE) TOT	2.8	J4	8.8		6.9	J4
LEAD (PB) TOT	0.96		0.007		0.011	
SELENIUM (SE) TOT	0.24		0.53		0.16	
ZINC (ZN) TOT	2.5	J2	1.1		10.0	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: GROUNDWATER --

SITE CODE	EP-55	EP-56	EP-57
SAMPLE DATE	05/04/2000	05/03/2000	05/08/2000
SAMPLE TIME	08:15	14:45	14:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000672001	L000665024	L000706005
SAMPLE NUMBER	EPRI-0005-123	EPRI-0005-124	EPRI-0005-125
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	57.32	50.53	9.88
OXYGEN (O) (FLD) DIS	0.9	1.3	1.0
PH (FLD)	6.36	7.35	7.07
PH	6.5	8.0	7.6
SC (UMHOS/CM AT 25 C)	9600.0	4800.0	3000.0
SC (UMHOS/CM AT 25 C) (FLD)	9300.0	4850.0	2790.0
TDS (MEASURED AT 180 C)	7937.0	3613.0	1977.0
TOTAL SUSPENDED SOLIDS	5379.0	2654.0	31.0
TURBIDITY (NTU)	>200	>200	14.1
WATER TEMPERATURE (C) (FLD)	22.6	24.5	25.7
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	573.0	266.0	108.0
MAGNESIUM (MG) DIS	324.0	60.0	99.0
SODIUM (NA) DIS	1185.0	855.0	518.0
POTASSIUM (K) DIS	126.0	27.0	19.0
BICARBONATE (HCO3)	1403.0	466.0	1503.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	4301.0	1639.0	228.0
CHLORIDE (CL)	831.0	506.0 J4	198.0
FLUORIDE (F)	14.0	2.5 UJ1 J3	0.84 UJ1
-- NUTRIENTS --			
NITRATE + NITRITE AS N	0.054 UJ1	0.86	0.068
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	54.0	1.2	0.37
CADMIUM (CD) TOT	1.3	<0.005	<0.005
CHROMIUM (CR) TOT	0.026	0.014	<0.01
COPPER (CU) TOT	0.28	0.034	<0.025
IRON (FE) TOT	67.0	32.0	1.2
LEAD (PB) TOT	0.6	0.026	0.006
SELENIUM (SE) TOT	0.27	0.015	0.01
ZINC (ZN) TOT	102.0	0.055	<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-58	EP-58	EP-59	EP-60
SAMPLE DATE	05/08/2000	05/08/2000	05/03/2000	05/03/2000
SAMPLE TIME	13:30	13:35	08:30	10:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000706001	L000706002	L000665015	L000665020
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0005-126	EPRI-0005-235	EPRI-0005-127	EPRI-0005-128
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	12.51		13.72	9.74
OXYGEN (O) (FLD) DIS	0.4	0.4	0.6	0.3
PH (FLD)	6.46	6.45	7.16	7.09
PH	7.0	7.0	7.5	7.5
SC (UMHOS/CM AT 25 C)	11460.0	11420.0	5050.0	8440.0
SC (UMHOS/CM AT 25 C) (FLD)	11180.0	11160.0	5060.0	8220.0
TDS (MEASURED AT 180 C)	8965.0	9096.0	3775.0	7037.0
TOTAL SUSPENDED SOLIDS	244.0	223.0	7.7	6.1
TURBIDITY (NTU)	38.0		8.39	16.8
WATER TEMPERATURE (C) (FLD)	26.7	26.7	24.2	24.1
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	517.0	531.0	178.0	493.0
MAGNESIUM (MG) DIS	230.0	236.0	89.0	214.0
SODIUM (NA) DIS	1800.0	1800.0	733.0	1175.0
POTASSIUM (K) DIS	217.0	222.0	77.0	11.0
BICARBONATE (HCO3)	1322.0	1305.0	468.0	321.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	4587.0	4678.0	1742.0	3085.0
CHLORIDE (CL)	950.0	803.0	492.0 J4	1127.0 J4
FLUORIDE (F)	5.6	5.5	5.3 J3	1.6 UJ1 J3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.069	0.12	5.8	52.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	3.6	3.7	2.4	0.009
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	0.023	0.43
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	4.2	3.9	0.28	1.9
LEAD (PB) TOT	0.013	0.01	0.003	<0.003
SELENIUM (SE) TOT	0.069	0.065	0.25	0.21
ZINC (ZN) TOT	0.033 UJ1 J2	0.034 UJ1 J2	<0.02	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: GROUNDWATER --

SITE CODE	EP-61	EP-62	EP-63	EP-63
SAMPLE DATE	05/08/2000	05/03/2000	05/03/2000	05/03/2000
SAMPLE TIME	14:50	09:45	10:10	10:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000706003	L000665017	L000665018	L000665019
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0005-129	EPRI-0005-130	EPRI-0005-131	EPRI-0005-231
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	10.41	7.99	7.24	
OXYGEN (O) (FLD) DIS	1.0	6.1	2.6	2.5
PH (FLD)	7.06	7.32	7.23	7.23
PH	7.4	7.6	7.5	7.5
SC (UMHOS/CM AT 25 C)	8920.0	4400.0	7340.0	7360.0
SC (UMHOS/CM AT 25 C) (FLD)	8840.0	4380.0	7230.0	7250.0
TDS (MEASURED AT 180 C)	7360.0	3201.0	5508.0	5516.0
TOTAL SUSPENDED SOLIDS	104.0	2.2	7.6	5.7
TURBIDITY (NTU)	38.1	5.3	7.55	
WATER TEMPERATURE (C) (FLD)	24.6	23.1	22.8	22.9
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	465.0	157.0	220.0	201.0
MAGNESIUM (MG) DIS	194.0	66.0	140.0	127.0
SODIUM (NA) DIS	1400.0	647.0	1228.0	1086.0
POTASSIUM (K) DIS	20.0	38.0	27.0	24.0
BICARBONATE (HCO3)	512.0	438.0	590.0	625.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	3060.0	1407.0	2428.0	2627.0
CHLORIDE (CL)	811.0	408.0 J4	726.0 J4	906.0 J4
FLUORIDE (F)	1.9 UJ1	2.9 UJ1 J3	2.0 UJ1 J3	1.9 UJ1 J3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	129.0	4.6	1.4	1.4
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.013	0.87	0.025	0.026
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	0.021	0.02
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	0.51	<0.1	0.32	0.33
LEAD (PB) TOT	0.004	0.004	0.007	0.004
SELENIUM (SE) TOT	0.32	0.28	0.14	0.14
ZINC (ZN) TOT	0.021 UJ1 J2	<0.02	0.027	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: GROUNDWATER --

SITE CODE	EP-64	EP-65	EP-66
SAMPLE DATE	05/03/2000	05/08/2000	05/03/2000
SAMPLE TIME	09:20	14:05	11:10
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000665016	L000706004	L000665021
SAMPLE NUMBER	EPRI-0005-132	EPRI-0005-133	EPRI-0005-134
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	10.83	8.93	10.66
OXYGEN (O) (FLD) DIS	6.1	0.4	4.8
PH (FLD)	8.01	7.05	7.16
PH	8.2	7.6	7.6
SC (UMHOS/CM AT 25 C)	9320.0	6480.0	7510.0
SC (UMHOS/CM AT 25 C) (FLD)	8705.0	6340.0	7760.0
TDS (MEASURED AT 180 C)	7740.0	5124.0	6405.0
TOTAL SUSPENDED SOLIDS	2.8	20.0	7.6
TURBIDITY (NTU)	2.75	6.2	5.77
WATER TEMPERATURE (C) (FLD)	25.9	26.1	27.4
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	329.0	320.0	493.0
MAGNESIUM (MG) DIS	116.0	133.0	130.0
SODIUM (NA) DIS	1635.0	1100.0	1156.0
POTASSIUM (K) DIS	16.0	21.0	38.0
BICARBONATE (HCO3)	195.0	699.0	493.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	3787.0	2628.0	3225.0
CHLORIDE (CL)	737.0 J4	471.0	595.0 J4
FLUORIDE (F)	1.8 UJ1 J3	2.2 UJ1	3.0 UJ1 J3
-- NUTRIENTS --			
NITRATE + NITRITE AS N	104.0	25.0	30.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.052	0.012	8.8
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	0.14	0.12	0.3
LEAD (PB) TOT	0.005	<0.003	<0.003
SELENIUM (SE) TOT	0.5	0.22	0.28
ZINC (ZN) TOT	<0.02	<0.02	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: GROUNDWATER --

SITE CODE	EP-67	EP-68	EP-68	EP-70
SAMPLE DATE	04/24/2000	04/24/2000	04/24/2000	04/25/2000
SAMPLE TIME	10:15	11:40	11:45	14:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000620002	L000620004	L000620005	L000620015
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0005-135	EPRI-0005-136	EPRI-0005-219	EPRI-0005-137
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	41.86	63.6		62.23
OXYGEN (O) (FLD) DIS	0.9	6.0	5.9	0.4
PH (FLD)	6.9	7.21	7.21	7.1
PH	7.4	7.5	7.6	7.6
SC (UMHOS/CM AT 25 C)	4370.0	4920.0	4960.0	6110.0
SC (UMHOS/CM AT 25 C) (FLD)	4200.0	4830.0	4970.0	5980.0
TDS (MEASURED AT 180 C)	3818.0	3691.0	3795.0	4922.0
TOTAL SUSPENDED SOLIDS	3.4	11.0	12.0	7.7
TURBIDITY (NTU)	3.85	6.67		4.6
WATER TEMPERATURE (C) (FLD)	24.7	24.2	24.2	24.8
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	367.0	266.0	270.0	276.0
MAGNESIUM (MG) DIS	114.0	119.0	120.0	146.0
SODIUM (NA) DIS	377.0	714.0	733.0	874.0
POTASSIUM (K) DIS	10.0	13.0	14.0	17.0
BICARBONATE (HCO3)	257.0	251.0	254.0	305.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	2063.0	1860.0	1805.0	3038.0
CHLORIDE (CL)	365.0	615.0	586.0	530.0
FLUORIDE (F)	0.75 UJ1	0.72 UJ1	0.73 UJ1	1.0 UJ1
-- NUTRIENTS --				
NITRATE + NITRITE AS N	17.0	33.0	35.0	45.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.02	0.005	0.005	0.59
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	0.007
CHROMIUM (CR) TOT	<0.01	0.012	0.011	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	0.12	0.25	0.29	0.12
LEAD (PB) TOT	0.009 UJ1	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	0.11	0.27	0.27	0.2
ZINC (ZN) TOT	0.051	0.025	0.029	0.12

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-71		EP-72		EP-73		
SAMPLE DATE	04/24/2000		04/25/2000		04/28/2000		
SAMPLE TIME	10:45		14:00		15:15		
LAB	TSC-SLC		TSC-SLC		TSC-SLC		
LAB NUMBER	L000620003		L000620014		L000648013		
SAMPLE NUMBER	EPRI-0005-138		EPRI-0005-139		EPRI-0005-140		
-- PHYSICAL PARAMETERS --							
DEPTH TO WATER LEVEL (FEET)	50.26		62.68		71.9		
OXYGEN (O) (FLD) DIS	0.3		1.7		0.8		
PH (FLD)	7.04		7.16		7.08		
PH	7.4		7.8		7.6		
SC (UMHOS/CM AT 25 C)	5840.0		7180.0		6380.0		
SC (UMHOS/CM AT 25 C) (FLD)	5740.0		6980.0		6080.0		
TDS (MEASURED AT 180 C)	4802.0		6065.0		5088.0		
TOTAL SUSPENDED SOLIDS	<1.0		3.1		7.4		
TURBIDITY (NTU)	1.06		2.4		7.5		
WATER TEMPERATURE (C) (FLD)	24.6		27.3		29.1		
-- MAJOR CONSTITUENTS --							
CALCIUM (CA) DIS	316.0		257.0		239.0		
MAGNESIUM (MG) DIS	150.0		215.0		111.0		
SODIUM (NA) DIS	787.0		977.0		925.0		
POTASSIUM (K) DIS	15.0		14.0		315.0		
BICARBONATE (HCO3)	292.0		349.0		1252.0		
CARBONATE AS CO3	<1.0		<1.0		<1.0		
SULFATE (SO4)	2316.0		3904.0		2735.0		
CHLORIDE (CL)	450.0		554.0		394.0		
FLUORIDE (F)	0.86	UJ1	1.2	UJ1	2.6	UJ1	
-- NUTRIENTS --							
NITRATE + NITRITE AS N	65.0		34.0		17.0		
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	0.11		0.069		0.1		
CADMIUM (CD) TOT	<0.005		<0.005		0.005		
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		
COPPER (CU) TOT	<0.025		<0.025		<0.025		
IRON (FE) TOT	<0.1		0.28		0.1	J4	
LEAD (PB) TOT	<0.003		0.003		<0.003		
SELENIUM (SE) TOT	0.22		6.0		0.95		
ZINC (ZN) TOT	0.026		0.056		0.14	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: GROUNDWATER --

SITE CODE	EP-75		EP-76		EP-77		EP-77	
SAMPLE DATE	04/28/2000		04/28/2000		04/28/2000		04/28/2000	
SAMPLE TIME	10:25		11:00		08:50		09:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000648006		L000648007		L000648002		L000648003	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0005-141		EPRI-0005-142		EPRI-0005-143		EPRI-0005-225	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	70.55		70.44		44.32			
OXYGEN (O) (FLD) DIS	1.8		0.2		0.6		0.6	
PH (FLD)	7.03		7.28		7.26		7.27	
PH	7.5		8.0		7.8		7.9	
SC (UMHOS/CM AT 25 C)	19000.0		5120.0		4140.0		4140.0	
SC (UMHOS/CM AT 25 C) (FLD)	16970.0		4930.0		3870.0		3880.0	
TDS (MEASURED AT 180 C)	17965.0		3827.0		2936.0		3040.0	
TOTAL SUSPENDED SOLIDS	32.0		5.3		157.0		137.0	
TURBIDITY (NTU)	9.6		2.33		102.0			
WATER TEMPERATURE (C) (FLD)	26.0		22.1		24.5		24.5	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	332.0		152.0		136.0		119.0	
MAGNESIUM (MG) DIS	337.0		88.0		39.0		35.0	
SODIUM (NA) DIS	4204.0		827.0		727.0		718.0	
POTASSIUM (K) DIS	556.0		75.0		22.0		19.0	
BICARBONATE (HCO3)	715.0		515.0		359.0		359.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	11533.0		1802.0		1302.0		1299.0	
CHLORIDE (CL)	257.0		510.0		469.0		441.0	
FLUORIDE (F)	1.6	UJ1	1.9	UJ1	3.2	UJ1	3.0	UJ1
-- NUTRIENTS --								
NITRATE + NITRITE AS N	210.0		5.7		0.63		0.71	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	16.0		0.92		6.5		6.6	
CADMIUM (CD) TOT	0.007		<0.005		0.009		0.009	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.069		<0.025		0.027		<0.025	
IRON (FE) TOT	0.87	J4	<0.1	UJ4	4.5	J4	3.4	J4
LEAD (PB) TOT	0.006		0.01		0.01		0.008	
SELENIUM (SE) TOT	4.8		0.16		0.031		0.028	
ZINC (ZN) TOT	0.15	J2	0.077	J2	0.11	J2	0.081	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: GROUNDWATER --

SITE CODE	EP-78	EP-79	EP-80
SAMPLE DATE	05/02/2000	05/02/2000	05/02/2000
SAMPLE TIME	10:10	09:40	13:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000665006	L000665005	L000665010
SAMPLE NUMBER	EPRI-0005-144	EPRI-0005-145	EPRI-0005-146
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	33.86	48.06	11.43
OXYGEN (O) (FLD) DIS	0.4	0.2	0.5
PH (FLD)	7.55	7.45	7.21
PH	8.0	7.9	7.8
SC (UMHOS/CM AT 25 C)	3800.0	4880.0	5150.0
SC (UMHOS/CM AT 25 C) (FLD)	3810.0	4880.0	5120.0
TDS (MEASURED AT 180 C)	2577.0	3406.0	3920.0
TOTAL SUSPENDED SOLIDS	8.0	8.3	21.0
TURBIDITY (NTU)	9.22	8.6	13.45
WATER TEMPERATURE (C) (FLD)	23.8	25.6	24.2
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	69.0	49.0	177.0
MAGNESIUM (MG) DIS	35.0	58.0	79.0
SODIUM (NA) DIS	587.0	864.0	821.0
POTASSIUM (K) DIS	48.0	7.1	13.0
BICARBONATE (HCO3)	390.0	455.0	533.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1106.0	1546.0	1794.0
CHLORIDE (CL)	258.0	514.0	385.0
FLUORIDE (F)	3.4 UJ1 J3	4.7 J3	1.3 UJ1 J3
-- NUTRIENTS --			
NITRATE + NITRITE AS N	11.0	10.0	1.7
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	4.0	0.008 UJ1	0.017 UJ1
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	0.011	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	0.21	0.13	0.67
LEAD (PB) TOT	0.004	<0.003	0.006
SELENIUM (SE) TOT	0.2	0.12	0.017
ZINC (ZN) TOT	0.022	<0.02	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-81	EP-82	EP-83
SAMPLE DATE	05/02/2000	05/02/2000	05/01/2000
SAMPLE TIME	08:15	11:00	14:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000665001	L000665008	L000648023
SAMPLE NUMBER	EPRI-0005-147	EPRI-0005-148	EPRI-0005-149
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	18.91	17.65	28.89
OXYGEN (O) (FLD) DIS	5.2	0.9	5.5
PH (FLD)	7.05	7.11	7.45
PH	7.5	7.5	7.9
SC (UMHOS/CM AT 25 C)	3200.0	4680.0	3810.0
SC (UMHOS/CM AT 25 C) (FLD)	3190.0	4700.0	3730.0
TDS (MEASURED AT 180 C)	2413.0	3426.0	2708.0
TOTAL SUSPENDED SOLIDS	79.0	7.0	22.0
TURBIDITY (NTU)	72.8	5.45	9.31
WATER TEMPERATURE (C) (FLD)	19.4	22.3	23.0
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	170.0	139.0	66.0
MAGNESIUM (MG) DIS	82.0	83.0	58.0
SODIUM (NA) DIS	425.0	756.0	779.0
POTASSIUM (K) DIS	25.0	22.0	10.0
BICARBONATE (HCO3)	449.0	410.0	378.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1127.0	1428.0	1182.0
CHLORIDE (CL)	204.0	531.0	356.0 J4
FLUORIDE (F)	2.2 UJ1 J3	2.7 UJ1 J3	3.1 UJ1
-- NUTRIENTS --			
NITRATE + NITRITE AS N	7.8	9.9	7.3
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.58	0.009 UJ1	0.008
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	2.3	<0.1	0.37
LEAD (PB) TOT	0.01	<0.003	0.003 UJ1
SELENIUM (SE) TOT	0.27	0.13	0.048
ZINC (ZN) TOT	0.067	<0.02	0.02 UJ1 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: GROUNDWATER --

SITE CODE	EP-84		EP-84		EP-85		EP-85	
SAMPLE DATE	05/01/2000		05/01/2000		05/02/2000		05/02/2000	
SAMPLE TIME	09:15		09:20		08:40		08:45	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000648015		L000648016		L000665002		L000665003	
REMARKS			DUPLICATE				DUPLICATE	
SAMPLE NUMBER	EPRI-0005-150		EPRI-0005-227		EPRI-0005-151		EPRI-0005-229	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	8.66				17.0			
OXYGEN (O) (FLD) DIS	1.9		1.8		0.7		0.6	
PH (FLD)	7.05		7.05		7.3		7.3	
PH	7.6		8.4		7.2		7.7	
SC (UMHOS/CM AT 25 C)	3080.0		3070.0		3220.0		3220.0	
SC (UMHOS/CM AT 25 C) (FLD)	3030.0		3030.0		3230.0		3230.0	
TDS (MEASURED AT 180 C)	2317.0		2279.0		2276.0		2249.0	
TOTAL SUSPENDED SOLIDS	3.0		2.2		<1.0		<1.0	
TURBIDITY (NTU)	3.4				1.79			
WATER TEMPERATURE (C) (FLD)	20.8		20.9		23.3		23.3	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	180.0		184.0		94.0		96.0	
MAGNESIUM (MG) DIS	91.0		91.0		48.0		50.0	
SODIUM (NA) DIS	345.0		317.0		504.0		515.0	
POTASSIUM (K) DIS	6.6		7.2		25.0		25.0	
BICARBONATE (HCO3)	314.0		305.0		348.0		386.0	
CARBONATE AS CO3	<1.0		12.0	J4	<1.0		<1.0	
SULFATE (SO4)	970.0		892.0		968.0		984.0	
CHLORIDE (CL)	202.0	J4	378.0	J4	282.0		259.0	
FLUORIDE (F)	0.66	UJ1	0.66	UJ1	3.1	UJ1 J3	3.2	UJ1 J3
-- NUTRIENTS --								
NITRATE + NITRITE AS N	8.2		8.1		6.6		7.4	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.04		0.041		2.2		2.2	
CADMIUM (CD) TOT	0.005		0.006		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	<0.1		<0.1		<0.1		<0.1	
LEAD (PB) TOT	0.017	UJ1	0.02	UJ1	<0.003		<0.003	
SELENIUM (SE) TOT	0.029		0.029		0.14		0.14	
ZINC (ZN) TOT	0.066	UJ1 J2	0.07	UJ1 J2	0.021		<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-86	EP-88	EP-89	EP-89
SAMPLE DATE	05/02/2000	04/28/2000	04/25/2000	04/25/2000
SAMPLE TIME	09:15	09:30	13:00	13:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000665004	L000648004	L000620011	L000620012
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0005-152	EPRI-0005-154	EPRI-0005-155	EPRI-0005-221
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	49.7	30.07	14.94	
OXYGEN (O) (FLD) DIS	7.3	0L700	3.7	3.7
PH (FLD)	7.57	7.4	7.22	7.22
PH	8.0	7.9	7.8	7.7
SC (UMHOS/CM AT 25 C)	2630.0	5180.0	2800.0	2840.0
SC (UMHOS/CM AT 25 C) (FLD)	2630.0	5040.0	2800.0	2800.0
TDS (MEASURED AT 180 C)	1739.0	3772.0	1984.0	1982.0
TOTAL SUSPENDED SOLIDS	10.0	50.0	3.0	2.8
TURBIDITY (NTU)	8.25	46.0	2.1	
WATER TEMPERATURE (C) (FLD)	22.1	24.5	24.6	24.7
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	38.0	61.0	149.0	144.0
MAGNESIUM (MG) DIS	28.0	37.0	60.0	59.0
SODIUM (NA) DIS	436.0	1090.0	330.0	319.0
POTASSIUM (K) DIS	7.6	6.2	16.0	15.0
BICARBONATE (HCO3)	366.0	569.0	273.0	271.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	625.0	1813.0	886.0	882.0
CHLORIDE (CL)	248.0	452.0	304.0	320.0
FLUORIDE (F)	2.8 UJ1 J3	2.0 UJ1	0.75 UJ1	0.74 UJ1
-- NUTRIENTS --				
NITRATE + NITRITE AS N	6.2	1.8	7.8	7.9
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.008 UJ1	0.053	0.005	0.005
CADMIUM (CD) TOT	<0.005	0.004	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	0.22	1.8 J4	<0.1	<0.1
LEAD (PB) TOT	0.005	0.012	0.004	0.005
SELENIUM (SE) TOT	0.03	0.046	0.018	0.017
ZINC (ZN) TOT	<0.02	0.066 J2	0.041	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-93		EP-94		
SAMPLE DATE	04/26/2000		05/01/2000		05/01/2000		
SAMPLE TIME	11:10		11:15		10:15		
LAB	TSC-SLC		TSC-SLC		TSC-SLC		
LAB NUMBER	L000629008		L000648020		L000648018		
SAMPLE NUMBER	EPRI-0005-156		EPRI-0005-157		EPRI-0005-158		
-- PHYSICAL PARAMETERS --							
DEPTH TO WATER LEVEL (FEET)	57.05		47.92		51.14		
OXYGEN (O) (FLD) DIS	0.6	J4	3.2		3.4		
PH (FLD)	7.11		7.16		7.24		
PH	7.8		7.7		7.7		
SC (UMHOS/CM AT 25 C)	5160.0		3740.0		4900.0		
SC (UMHOS/CM AT 25 C) (FLD)	5160.0		4050.0		4800.0		
TDS (MEASURED AT 180 C)	3930.0		2680.0		3468.0		
TOTAL SUSPENDED SOLIDS	199.0		367.0		13.0		
TURBIDITY (NTU)	17.0		59.2		8.75		
WATER TEMPERATURE (C) (FLD)	24.8		23.6		23.2		
-- MAJOR CONSTITUENTS --							
CALCIUM (CA) DIS	216.0		85.0		99.0		
MAGNESIUM (MG) DIS	113.0		58.0		97.0		
SODIUM (NA) DIS	735.0		718.0		839.0		
POTASSIUM (K) DIS	10.0		9.2		12.0		
BICARBONATE (HCO3)	371.0		544.0		406.0		
CARBONATE AS CO3	<1.0		<1.0		<1.0		
SULFATE (SO4)	2024.0		936.0		1380.0		
CHLORIDE (CL)	549.0		399.0	J4	560.0	J4	
FLUORIDE (F)	0.49	UJ1	1.4	UJ1	1.2	UJ1	
-- NUTRIENTS --							
NITRATE + NITRITE AS N	34.0		4.9		10.0		
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	0.12		0.017		0.014		
CADMIUM (CD) TOT	0.006		<0.005		<0.005		
CHROMIUM (CR) TOT	<0.01		0.013		<0.01		
COPPER (CU) TOT	<0.025		<0.025		<0.025		
IRON (FE) TOT	3.2		3.1		0.21		
LEAD (PB) TOT	0.005		0.006	UJ1	0.026		
SELENIUM (SE) TOT	1.2		0.037		0.035		
ZINC (ZN) TOT	0.028		0.048	UJ1 J2	0.034	UJ1 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: GROUNDWATER --

SITE CODE	EP-95		EP-96		EP-97		
SAMPLE DATE	05/01/2000		05/01/2000		05/01/2000		
SAMPLE TIME	09:45		10:40		13:00		
LAB	TSC-SLC		TSC-SLC		TSC-SLC		
LAB NUMBER	L000648017		L000648019		L000648021		
SAMPLE NUMBER	EPRI-0005-159		EPRI-0005-160		EPRI-0005-161		
-- PHYSICAL PARAMETERS --							
DEPTH TO WATER LEVEL (FEET)	22.74		59.31		6.55		
OXYGEN (O) (FLD) DIS	4.1		4.2		3.1		
PH (FLD)	7.65		7.17		7.36		
PH	8.3		7.8		7.8		
SC (UMHOS/CM AT 25 C)	3300.0		4780.0		5350.0		
SC (UMHOS/CM AT 25 C) (FLD)	3250.0		4690.0		5170.0		
TDS (MEASURED AT 180 C)	2229.0		3514.0		3928.0		
TOTAL SUSPENDED SOLIDS	2.5		438.0		50.0		
TURBIDITY (NTU)	2.22		190.1		31.1		
WATER TEMPERATURE (C) (FLD)	21.6		23.2		20.3		
-- MAJOR CONSTITUENTS --							
CALCIUM (CA) DIS	37.0		162.0		142.0		
MAGNESIUM (MG) DIS	60.0		93.0		109.0		
SODIUM (NA) DIS	575.0		791.0		941.0		
POTASSIUM (K) DIS	2.8		13.0		8.2		
BICARBONATE (HCO3)	388.0		527.0		644.0		
CARBONATE AS CO3	<1.0		<1.0		<1.0		
SULFATE (SO4)	806.0		1361.0		1345.0		
CHLORIDE (CL)	380.0	J4	465.0	J4	530.0	J4	
FLUORIDE (F)	3.5	UJ1	1.1	UJ1	1.3	UJ1	
-- NUTRIENTS --							
NITRATE + NITRITE AS N	7.7		11.0		0.28	UJ1	
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	0.014		0.012		0.11		
CADMIUM (CD) TOT	<0.005		<0.005		0.008		
CHROMIUM (CR) TOT	<0.01		0.011		<0.01		
COPPER (CU) TOT	<0.025		<0.025		0.11		
IRON (FE) TOT	<0.1		7.4		1.4		
LEAD (PB) TOT	<0.003		0.014	UJ1	0.054		
SELENIUM (SE) TOT	0.035		0.019		0.015		
ZINC (ZN) TOT	0.03	UJ1	0.056	UJ1	0.11	UJ1	
		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: GROUNDWATER --

SITE CODE	EP-98		EP-100		EP-101	
SAMPLE DATE	05/01/2000		04/28/2000		04/26/2000	
SAMPLE TIME	13:40		13:45		10:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000648022		L000648010		L000629006	
SAMPLE NUMBER	EPRI-0005-162		EPRI-0005-164		EPRI-0005-165	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	13.13		41.08		64.8	
OXYGEN (O) (FLD) DIS	3.4		1.0		5.1	J4
PH (FLD)	7.55		6.68		7.14	
PH	8.0		7.3		7.7	
SC (UMHOS/CM AT 25 C)	7880.0		10340.0		8770.0	
SC (UMHOS/CM AT 25 C) (FLD)	7680.0		9730.0		8880.0	
TDS (MEASURED AT 180 C)	6035.0		8285.0		6554.0	
TOTAL SUSPENDED SOLIDS	22.0		87.0		14.0	
TURBIDITY (NTU)	20.2		45.0		10.3	
WATER TEMPERATURE (C) (FLD)	24.0		27.2		26.2	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	79.0		590.0		186.0	
MAGNESIUM (MG) DIS	69.0		317.0		61.0	
SODIUM (NA) DIS	1802.0		1345.0		1902.0	
POTASSIUM (K) DIS	148.0		33.0		55.0	
BICARBONATE (HCO3)	471.0		344.0		317.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	3432.0		3084.0		3608.0	
CHLORIDE (CL)	550.0	J4	1742.0		827.0	
FLUORIDE (F)	4.8		1.0	UJ1	1.5	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	11.0		247.0		90.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.037		0.019		6.3	
CADMIUM (CD) TOT	<0.005		0.031		1.1	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.029		0.039		<0.025	
IRON (FE) TOT	0.43		2.1	J4	0.64	
LEAD (PB) TOT	0.003	UJ1	0.009		0.033	
SELENIUM (SE) TOT	0.97		0.54		3.5	
ZINC (ZN) TOT	0.041	UJ1 J2	0.22	J2	0.1	

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 --

SITE CODE	EP-102		EP-103		EP-104	
SAMPLE DATE	04/26/2000		04/26/2000		04/26/2000	
SAMPLE TIME	10:30		13:00		15:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000629007		L000629009		L000629013	
SAMPLE NUMBER	EPRI-0005-166		EPRI-0005-167		EPRI-0005-168	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	57.16		60.98		66.4	
OXYGEN (O) (FLD) DIS	2.2	J4	3.8	J4	2.2	J4
PH (FLD)	7.2		7.31		7.21	
PH	7.7		7.9		8.1	
SC (UMHOS/CM AT 25 C)	2790.0		1540.0		4620.0	
SC (UMHOS/CM AT 25 C) (FLD)	2680.0		1519.0		4550.0	
TDS (MEASURED AT 180 C)	1879.0		980.0		3303.0	
TOTAL SUSPENDED SOLIDS	6.1		20.0		78.0	
TURBIDITY (NTU)	2.44		9.7		16.33	
WATER TEMPERATURE (C) (FLD)	26.3		27.3		26.1	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	116.0		62.0		146.0	
MAGNESIUM (MG) DIS	25.0		20.0		79.0	
SODIUM (NA) DIS	343.0		198.0		744.0	
POTASSIUM (K) DIS	120.0		5.6		19.0	
BICARBONATE (HCO3)	332.0		189.0		403.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	925.0		411.0		1615.0	
CHLORIDE (CL)	213.0		190.0		468.0	
FLUORIDE (F)	1.4	UJ1	0.61	UJ1	2.0	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	9.0		2.1		13.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.26		0.016		0.072	
CADMIUM (CD) TOT	0.095		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	1.4		1.3		2.2	
LEAD (PB) TOT	0.012		0.01		0.015	
SELENIUM (SE) TOT	3.7		0.19		0.085	
ZINC (ZN) TOT	0.069		0.036		0.043	

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-105		EP-106		EP-107		
SAMPLE DATE	04/26/2000		04/26/2000		04/25/2000		
SAMPLE TIME	13:45		14:15		15:15		
LAB	TSC-SLC		TSC-SLC		TSC-SLC		
LAB NUMBER	L000629011		L000629012		L000620016		
SAMPLE NUMBER	EPRI-0005-169		EPRI-0005-170		EPRI-0005-171		
-- PHYSICAL PARAMETERS --							
DEPTH TO WATER LEVEL (FEET)	65.21		60.36		63.66		
OXYGEN (O) (FLD) DIS	2.1	J4	1.6	J4	2.1		
PH (FLD)	8.12		7.04		7.2		
PH	8.2		7.8		7.6		
SC (UMHOS/CM AT 25 C)	3440.0		4960.0		5770.0		
SC (UMHOS/CM AT 25 C) (FLD)	3410.0		4960.0		5590.0		
TDS (MEASURED AT 180 C)	2361.0		3951.0		4482.0		
TOTAL SUSPENDED SOLIDS	10.0		18.0		3.4		
TURBIDITY (NTU)	9.8		8.43		3.07		
WATER TEMPERATURE (C) (FLD)	28.8		27.1		26.8		
-- MAJOR CONSTITUENTS --							
CALCIUM (CA) DIS	125.0		252.0		345.0		
MAGNESIUM (MG) DIS	43.0		115.0		162.0		
SODIUM (NA) DIS	588.0		681.0		673.0		
POTASSIUM (K) DIS	17.0		13.0		16.0		
BICARBONATE (HCO3)	104.0		307.0		193.0		
CARBONATE AS CO3	<1.0		<1.0		<1.0		
SULFATE (SO4)	1230.0		2301.0		2041.0		
CHLORIDE (CL)	468.0		474.0		695.0		
FLUORIDE (F)	5.2		0.89	UJ1	1.1	UJ1	
-- NUTRIENTS --							
NITRATE + NITRITE AS N	0.17		9.4		64.0		
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	0.051		<0.005		0.022		
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		
COPPER (CU) TOT	<0.025		<0.025		<0.025		
IRON (FE) TOT	0.57		0.4		<0.1		
LEAD (PB) TOT	0.011		<0.003		<0.003		
SELENIUM (SE) TOT	<0.005		0.1		0.44		
ZINC (ZN) TOT	0.049		<0.02		0.029		

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-108	EP-109	EP-110
SAMPLE DATE	05/02/2000	05/02/2000	04/25/2000
SAMPLE TIME	13:15	10:30	13:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000665009	L000665007	L000620013
SAMPLE NUMBER	EPRI-0005-172	EPRI-0005-173	EPRI-0005-174
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	32.27	21.07	8.6
OXYGEN (O) (FLD) DIS	2.7	3.5	3.2
PH (FLD)	7.5	7.28	7.29
PH	7.9	7.7	7.7
SC (UMHOS/CM AT 25 C)	3500.0	3930.0	2780.0
SC (UMHOS/CM AT 25 C) (FLD)	3500.0	3910.0	2750.0
TDS (MEASURED AT 180 C)	1950.0	2782.0	1957.0
TOTAL SUSPENDED SOLIDS	8.7	32.0	17.0
TURBIDITY (NTU)	4.3	15.7	18.6
WATER TEMPERATURE (C) (FLD)	25.4	24.9	24.3
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	44.0	95.0	134.0
MAGNESIUM (MG) DIS	43.0	67.0	58.0
SODIUM (NA) DIS	595.0	624.0	333.0
POTASSIUM (K) DIS	4.8	15.0	17.0
BICARBONATE (HCO3)	425.0	384.0	273.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	999.0	1219.0	877.0
CHLORIDE (CL)	345.0	385.0	293.0
FLUORIDE (F)	2.4 UJ1 J3	2.4 UJ1 J3	0.79 UJ1
-- NUTRIENTS --			
NITRATE + NITRITE AS N	6.8	6.5	7.9
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	1.2	0.016 UJ1	0.006
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	0.49	0.76	0.38
LEAD (PB) TOT	0.006	0.006	0.008
SELENIUM (SE) TOT	0.043	0.063	0.016
ZINC (ZN) TOT	0.027	0.026	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)
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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: GROUNDWATER --

SITE CODE	EP-111	EP-112	EP-113
SAMPLE DATE	05/02/2000	05/02/2000	05/02/2000
SAMPLE TIME	14:15	14:45	15:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000665011	L000665012	L000665013
SAMPLE NUMBER	EPRI-0005-175	EPRI-0005-176	EPRI-0005-177
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	5.33	6.79	6.59
OXYGEN (O) (FLD) DIS	0.2	0.5	0.2
PH (FLD)	7.25	7.02	7.33
PH	7.6	7.5	7.7
SC (UMHOS/CM AT 25 C)	5100.0	7280.0	3890.0
SC (UMHOS/CM AT 25 C) (FLD)	5120.0	7220.0	3900.0
TDS (MEASURED AT 180 C)	3767.0	5043.0	2680.0
TOTAL SUSPENDED SOLIDS	5.4	1.1	6.4
TURBIDITY (NTU)	2.75	2.75	3.74
WATER TEMPERATURE (C) (FLD)	22.4	21.1	22.0
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	197.0	253.0	121.0
MAGNESIUM (MG) DIS	61.0	141.0	56.0
SODIUM (NA) DIS	749.0	948.0	594.0
POTASSIUM (K) DIS	51.0	87.0	36.0
BICARBONATE (HCO3)	361.0	693.0	405.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1749.0	2732.0	1271.0
CHLORIDE (CL)	543.0	684.0	372.0
FLUORIDE (F)	2.6 UJ1 J3	1.5 UJ1 J3	3.0 UJ1 J3
-- NUTRIENTS --			
NITRATE + NITRITE AS N	0.066 UJ1	<0.05	<0.05
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.83	0.013 UJ1	0.006 UJ1
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	1.4	0.32	0.77
LEAD (PB) TOT	0.004	0.003	<0.003
SELENIUM (SE) TOT	0.01	0.016	0.006
ZINC (ZN) TOT	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-114		EP-115		EP-116
SAMPLE DATE	05/04/2000		05/04/2000		05/04/2000
SAMPLE TIME	13:10		13:30		14:00
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L000672008		L000672009		L000672010
SAMPLE NUMBER	EPRI-0005-178		EPRI-0005-179		EPRI-0005-180
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	13.55		13.21		11.73
OXYGEN (O) (FLD) DIS	0.9		1.9		1.5
PH (FLD)	6.3		6.84		7.11
PH	6.6		8.1		7.4
SC (UMHOS/CM AT 25 C)	8000.0		9850.0		6400.0
SC (UMHOS/CM AT 25 C) (FLD)	2200.0	R	9490.0		6190.0
TDS (MEASURED AT 180 C)	7066.0		8166.0		4550.0
TOTAL SUSPENDED SOLIDS	7664.0		44.0	J4	1440.0
TURBIDITY (NTU)	>200		16.0		>200
WATER TEMPERATURE (C) (FLD)	23.0		24.0		28.0
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	845.0		559.0		342.0
MAGNESIUM (MG) DIS	322.0		270.0		90.0
SODIUM (NA) DIS	954.0		1326.0		980.0
POTASSIUM (K) DIS	226.0		92.0		60.0
BICARBONATE (HCO3)	1501.0		793.0		795.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	4487.0		4346.0		2350.0
CHLORIDE (CL)	1000.0		1455.0		563.0
FLUORIDE (F)	11.0		3.2	UJ1	5.8
-- NUTRIENTS --					
NITRATE + NITRITE AS N	0.076	UJ1	22.0		11.0
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	203.0		0.25		3.3
CADMIUM (CD) TOT	2.6		0.15		0.66
CHROMIUM (CR) TOT	0.11		<0.01		0.022
COPPER (CU) TOT	2.3		0.18		1.9
IRON (FE) TOT	266.0		1.5	J4	32.0
LEAD (PB) TOT	2.1		0.084		1.4
SELENIUM (SE) TOT	<0.05		0.11		0.29
ZINC (ZN) TOT	66.0		0.29		2.3

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: GROUNDWATER --

SITE CODE	EP-117	EP-118	
SAMPLE DATE	05/04/2000	05/04/2000	
SAMPLE TIME	14:15	10:30	
LAB	TSC-SLC	TSC-SLC	
LAB NUMBER	L000672011	L000672006	
SAMPLE NUMBER	EPRI-0005-181	EPRI-0005-182	
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	14.24	11.26	
OXYGEN (O) (FLD) DIS	1.3	1.6	
PH (FLD)	6.67	7.79	
PH	7.7	8.1	
SC (UMHOS/CM AT 25 C)	3120.0	3200.0	
SC (UMHOS/CM AT 25 C) (FLD)	3210.0	3120.0	
TDS (MEASURED AT 180 C)	2256.0	2126.0	
TOTAL SUSPENDED SOLIDS	4608.0	6477.0	
TURBIDITY (NTU)	>200	>200	
WATER TEMPERATURE (C) (FLD)	31.4	24.9	
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	405.0	175.0	
MAGNESIUM (MG) DIS	68.0	103.0	
SODIUM (NA) DIS	351.0	503.0	
POTASSIUM (K) DIS	92.0	39.0	
BICARBONATE (HCO3)	866.0	598.0	
CARBONATE AS CO3	<1.0	<1.0	
SULFATE (SO4)	1057.0	891.0	
CHLORIDE (CL)	359.0	284.0	
FLUORIDE (F)	4.8	1.5	UJ1
-- NUTRIENTS --			
NITRATE + NITRITE AS N	10.0	13.0	
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	7.2	0.21	
CADMIUM (CD) TOT	0.89	0.019	
CHROMIUM (CR) TOT	0.062	0.058	
COPPER (CU) TOT	0.51	0.38	
IRON (FE) TOT	73.0	184.0	
LEAD (PB) TOT	3.5	0.66	
SELENIUM (SE) TOT	1.1	0.25	
ZINC (ZN) TOT	1.1	0.47	

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	04/24/2000	04/25/2000	04/26/2000	04/28/2000	05/01/2000	05/02/2000	
SAMPLE TIME	15:40	15:45	16:15	16:15	15:30	16:00	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L000620010	L000620017	L000629016	L000648014	L000648024	L000665014	
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	
SAMPLE NUMBER	EPRI-0005-220	EPRI-0005-222	EPRI-0005-224	EPRI-0005-226	EPRI-0005-228	EPRI-0005-230	
-- PHYSICAL PARAMETERS --							
PH	8.8	8.5	7.3	7.2	7.1	7.1	
SC (UMHOS/CM AT 25 C)	19.0	18.0	18.0	17.8	17.8	18.0	
TDS (MEASURED AT 180 C)	15.0	22.0	22.0	56.0	59.0	31.0	
TOTAL SUSPENDED SOLIDS	<1.0	<1.0	<1.0	1.4	1.3	<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	2.5	2.5	2.7	3.6	3.6	<2.0	
POTASSIUM (K) DIS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
BICARBONATE (HCO3)	12.0	7.3	5.9	4.9	6.1	12.0	
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	<1.0	<1.0	<1.0	<1.0	
FLUORIDE (F)	0.73	0.73	0.75	0.75	0.76	0.77	J3
-- NUTRIENTS --							
NITRATE + NITRITE AS N	<0.05	<0.05	<0.05	<0.05	0.11	0.082	
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
LEAD (PB) TOT	0.006	<0.003	<0.003	<0.003	0.005	<0.003	
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
ZINC (ZN) TOT	<0.02	<0.02	<0.02	<0.02	0.025 J2	<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: QUALITY CONTROL --

SITE CODE	DI		DI		DI		DI		DI	
SAMPLE DATE	05/03/2000		05/04/2000		05/08/2000		05/09/2000		05/10/2000	
SAMPLE TIME	15:15		11:15		17:00		14:30		11:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000665025		L000672007		L000706009		L000706017		L000706026	
REMARKS	BLANK		BLANK		BLANK		BLANK		BLANK	
SAMPLE NUMBER	EPRI-0005-232		EPRI-0005-234		EPRI-0005-236		EPRI-0005-238		EPRI-0005-240	
-- PHYSICAL PARAMETERS --										
PH	6.9		9.0		8.8		8.8		8.5	
SC (UMHOS/CM AT 25 C)	19.0		23.0		22.0		22.0		22.0	
TDS (MEASURED AT 180 C)	29.0		22.0		31.0		32.0		39.0	
TOTAL SUSPENDED SOLIDS	<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	
MAGNESIUM (MG) DIS	<1.0		<1.0		<1.0		<1.0		<1.0	
SODIUM (NA) DIS	<2.0		3.0		<5.0		<5.0		<5.0	
POTASSIUM (K) DIS	<2.0		<2.0		<5.0		<5.0		<5.0	
BICARBONATE (HCO3)	9.5		<1.0		<1.0		<1.0		6.3	
CARBONATE AS CO3	<1.0		2.2		2.4		3.6		0.6	J4
SULFATE (SO4)	<2.0		<2.0		<2.0		<2.0		<2.0	
CHLORIDE (CL)	<1.0		<1.0		<1.0		<1.0		<1.0	
FLUORIDE (F)	0.79	J3	0.88		0.92		0.94		0.95	
-- NUTRIENTS --										
NITRATE + NITRITE AS N	<0.05		0.063		<0.05		<0.05		<0.05	
-- METALS & MINOR CONSTITUENTS --										
ARSENIC (AS) TOT	<0.005		<0.005		<0.005		<0.005		<0.005	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	<0.1		<0.1		<0.1		<0.1		<0.1	
LEAD (PB) TOT	<0.003		<0.003		<0.003		<0.003		<0.003	
SELENIUM (SE) TOT	<0.005		<0.005		<0.005		<0.005		<0.005	
ZINC (ZN) TOT	<0.02		0.029		0.021	J2	0.028	J2	0.041	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: SURFACE WATER --

SITE CODE	POND 6		SEP-1		SEP-2	
SAMPLE DATE	05/09/2000		05/09/2000		05/10/2000	
SAMPLE TIME	10:45		13:30		10:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000706011		L000706013		L000706022	
SAMPLE NUMBER	EPRI-0005-203		EPRI-0005-183		EPRI-0005-184	
-- PHYSICAL PARAMETERS --						
OXYGEN (O) (FLD) DIS	8.8		6.3		5.2	
PH (FLD)	9.64		8.51		8.38	
PH	9.3		8.3		8.3	
SC (UMHOS/CM AT 25 C)	1868.0		1120.0		1086.0	
SC (UMHOS/CM AT 25 C) (FLD)	1839.0		1104.0		1084.0	
TDS (MEASURED AT 180 C)	1227.0		723.0		694.0	
TOTAL SUSPENDED SOLIDS	38.0		107.0		74.0	
TURBIDITY (NTU)	>200		25.0		24.2	
WATER TEMPERATURE (C) (FLD)	23.3		25.7		22.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	109.0		85.0		77.0	
MAGNESIUM (MG) DIS	17.0		18.0		17.0	
SODIUM (NA) DIS	307.0		171.0		131.0	
POTASSIUM (K) DIS	12.0		10.0		9.5	
BICARBONATE (HCO3)	50.0		224.0		220.0	
CARBONATE AS CO3	41.0		<1.0		<1.0	UJ4
SULFATE (SO4)	383.0		227.0		211.0	J4
CHLORIDE (CL)	298.0		102.0		103.0	
FLUORIDE (F)	2.4	UJ1	0.73	UJ1	0.72	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.06		0.47		0.33	J4
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.75		0.007		0.007	
CADMIUM (CD) TOT	0.11		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.27		<0.025		<0.025	
IRON (FE) TOT	<0.1		1.7		1.2	
LEAD (PB) TOT	0.082		0.007		0.007	
SELENIUM (SE) TOT	0.035		<0.005		<0.005	
ZINC (ZN) TOT	0.15	J2	0.03	UJ1 J2	0.028	UJ1 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: SURFACE WATER --

SITE CODE	SEP-3	SEP-4	SEP-6	SEP-6
SAMPLE DATE	05/09/2000	05/10/2000	05/09/2000	05/09/2000
SAMPLE TIME	13:45	08:45	14:00	14:05
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000706014	L000706019	L000706015	L000706016
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0005-185	EPRI-0005-186	EPRI-0005-187	EPRI-0005-237
-- PHYSICAL PARAMETERS --				
OXYGEN (O) (FLD) DIS	6.4	6.4	6.2	6.3
PH (FLD)	8.5	8.31	8.52	8.51
PH	8.3	8.3	8.3	8.3
SC (UMHOS/CM AT 25 C)	1123.0	1122.0	1122.0	1124.0
SC (UMHOS/CM AT 25 C) (FLD)	1096.0	1130.0	1104.0	1106.0
TDS (MEASURED AT 180 C)	722.0	519.0	703.0	700.0
TOTAL SUSPENDED SOLIDS	103.0	58.0	108.0	104.0
TURBIDITY (NTU)	25.0	28.0	25.0	
WATER TEMPERATURE (C) (FLD)	26.1	19.5	26.6	25.7
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	85.0	78.0	80.0	78.0
MAGNESIUM (MG) DIS	18.0	18.0	18.0	18.0
SODIUM (NA) DIS	168.0	146.0	146.0	140.0
POTASSIUM (K) DIS	9.5	9.7	9.8	9.1
BICARBONATE (HCO3)	226.0	227.0	226.0	228.0
CARBONATE AS CO3	<1.0	<1.0 UJ4	<1.0	<1.0
SULFATE (SO4)	225.0	223.0 J4	210.0	218.0
CHLORIDE (CL)	115.0	113.0	98.0	118.0
FLUORIDE (F)	0.73 UJ1	0.72 UJ1	0.72 UJ1	0.72 UJ1
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.67	0.24 J4	0.59	0.63
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.007	0.008	0.007	0.007
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	1.9	1.1	2.0	1.9
LEAD (PB) TOT	0.003	<0.003	0.004	<0.003
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) TOT	0.029 UJ1 J2	<0.02	0.027 UJ1 J2	0.022 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: SURFACE WATER --

SITE CODE	SEP-7	SEP-9	SEP-10	SEP-10
SAMPLE DATE	05/09/2000	05/10/2000	05/10/2000	05/10/2000
SAMPLE TIME	13:15	08:20	10:30	10:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000706012	L000706018	L000706024	L000706025
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0005-188	EPRI-0005-189	EPRI-0005-190	EPRI-0005-239
-- PHYSICAL PARAMETERS --				
OXYGEN (O) (FLD) DIS	7.4	5.5	5.9	6.0
PH (FLD)	7.76	7.19	8.35	8.36
PH	8.4	8.0	8.3	8.5
SC (UMHOS/CM AT 25 C)	1108.0	1446.0	1076.0	1072.0
SC (UMHOS/CM AT 25 C) (FLD)	1093.0	1465.0	1066.0	1067.0
TDS (MEASURED AT 180 C)	697.0	918.0	685.0	678.0
TOTAL SUSPENDED SOLIDS	106.0	58.0	75.0	78.0
TURBIDITY (NTU)	25.0	19.8	21.3	
WATER TEMPERATURE (C) (FLD)	25.2	21.6	23.7	23.8
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	86.0	74.0	77.0	78.0
MAGNESIUM (MG) DIS	19.0	16.0	17.0	17.0
SODIUM (NA) DIS	162.0	224.0	135.0	138.0
POTASSIUM (K) DIS	9.6	10.0	9.7	9.5
BICARBONATE (HCO3)	215.0	220.0	220.0	206.0
CARBONATE AS CO3	7.0	<1.0 UJ4	<1.0 UJ4	7.0 J4
SULFATE (SO4)	226.0	237.0 J4	215.0 J4	277.0 J3 J4
CHLORIDE (CL)	109.0	190.0	94.0	104.0
FLUORIDE (F)	0.71 UJ1	0.79 UJ1	0.72 UJ1	0.72 UJ1
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.41	3.5 J4	6.1 J4	0.18 J4
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.007	0.011	0.009	0.01
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	2.0	0.92	1.4	1.2
LEAD (PB) TOT	0.006	0.026	0.005	0.006
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) TOT	0.03 UJ1 J2	0.036 UJ1 J2	0.026 UJ1 J2	0.03 UJ1 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: SURFACE WATER --

SITE CODE	SEP-11		SEP-12		SEP-13	
SAMPLE DATE	05/10/2000		05/10/2000		05/10/2000	
SAMPLE TIME	10:15		09:30		09:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L000706023		L000706021		L000706020	
SAMPLE NUMBER	EPRI-0005-191		EPRI-0005-192		EPRI-0005-193	
-- PHYSICAL PARAMETERS --						
OXYGEN (O) (FLD) DIS	6.2		5.7		5.9	
PH (FLD)	8.36		8.35		8.38	
PH	8.3		8.2		8.5	
SC (UMHOS/CM AT 25 C)	1083.0		1092.0		1100.0	
SC (UMHOS/CM AT 25 C) (FLD)	1067.0		1084.0		1091.0	
TDS (MEASURED AT 180 C)	687.0		688.0		684.0	
TOTAL SUSPENDED SOLIDS	79.0		64.0		62.0	
TURBIDITY (NTU)	28.5		33.3		27.4	
WATER TEMPERATURE (C) (FLD)	24.1		22.2		21.9	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	79.0		76.0		78.0	
MAGNESIUM (MG) DIS	18.0		17.0		18.0	
SODIUM (NA) DIS	137.0		133.0		142.0	
POTASSIUM (K) DIS	10.0		9.3		9.4	
BICARBONATE (HCO3)	218.0		220.0		220.0	
CARBONATE AS CO3	<1.0	UJ4	<1.0	UJ4	4.8	J4
SULFATE (SO4)	217.0	J4	223.0	J4	211.0	J4
CHLORIDE (CL)	98.0		108.0		103.0	
FLUORIDE (F)	0.72	UJ1	0.71	UJ1	0.72	UJ1
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.32	J4	0.27	J4	0.23	J4
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.008		0.008		0.008	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	1.4		1.2		1.2	
LEAD (PB) TOT	0.003		0.004		<0.003	
SELENIUM (SE) TOT	<0.005		<0.005		<0.005	
ZINC (ZN) TOT	0.024	UJ1 J2	0.027	UJ1 J2	0.023	UJ1 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: SEDIMENT/SOIL --

SITE CODE	POND 1-SED	POND 5-SED	POND 6-SED
SAMPLE DATE	05/09/2000	05/09/2000	05/09/2000
SAMPLE TIME	10:15	10:30	10:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000710001	L000710002	L000710003
SAMPLE NUMBER	EPRI-0005-216	EPRI-0005-217	EPRI-0005-218
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	2500.0	3200.0	2600.0
CADMIUM (CD) TOT	890.0	1800.0	1200.0
CHROMIUM (CR) TOT	93.0	430.0	<80.0
COPPER (CU) TOT	25000.0	24000.0	75000.0
IRON (FE) TOT	25000.0	44000.0	49000.0
LEAD (PB) TOT	3900.0	27000.0	6400.0
SELENIUM (SE) TOT	71.0	160.0	430.0
ZINC (ZN) TOT	10000.0	20000.0	27000.0

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: SEDIMENT/SOIL --

SITE CODE	SEP-2-SED	SEP-4-SED	SEP-9-SED
SAMPLE DATE	05/10/2000	05/10/2000	05/10/2000
SAMPLE TIME	10:00	08:45	08:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000710009	L000710006	L000710005
SAMPLE NUMBER	EPRI-0005-205	EPRI-0005-207	EPRI-0005-210
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	<10.0	<10.0	<10.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	190.0	<80.0	<80.0
COPPER (CU) TOT	32.0	49.0	110.0
IRON (FE) TOT	17000.0	16000.0	19000.0
LEAD (PB) TOT	20.0	36.0	58.0
SELENIUM (SE) TOT	<10.0	<10.0	<10.0
ZINC (ZN) TOT	22.0	40.0	86.0

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: SEDIMENT/SOIL --

SITE CODE	SEP-10-SED	SEP-11-SED	SEP-12-SED
SAMPLE DATE	05/10/2000	05/10/2000	05/10/2000
SAMPLE TIME	10:30	10:15	09:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L000710011	L000710010	L000710008
SAMPLE NUMBER	EPRI-0005-211	EPRI-0005-212	EPRI-0005-213
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	<10.0	<10.0	<10.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0
COPPER (CU) TOT	60.0	71.0	<20.0
IRON (FE) TOT	21000.0	18000.0	20000.0
LEAD (PB) TOT	33.0	19.0	20.0
SELENIUM (SE) TOT	<10.0	<10.0	<10.0
ZINC (ZN) TOT	52.0	41.0	93.0

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: SEDIMENT/SOIL --

SITE CODE	SEP-13-SED	SEP-14-SED
SAMPLE DATE	05/10/2000	05/09/2000
SAMPLE TIME	09:15	13:00
LAB	TSC-SLC	TSC-SLC
LAB NUMBER	L000710007	L000710004
SAMPLE NUMBER	EPRI-0005-214	EPRI-0005-215
-- METALS & MINOR CONSTITUENTS --		
ARSENIC (AS) TOT	10.0	1800.0
CADMIUM (CD) TOT	<10.0	40.0
CHROMIUM (CR) TOT	82.0	390.0
COPPER (CU) TOT	77.0	17000.0
IRON (FE) TOT	22000.0	260000.0
LEAD (PB) TOT	40.0	5900.0
SELENIUM (SE) TOT	<10.0	11.0
ZINC (ZN) TOT	83.0	25000.0

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.

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SECTION H-2

REMEDIAL INVESTIGATION WATER SAMPLES, SUMMER 2000

DATA VALIDATION REPORT
ASARCO EL PASO COPPER SMELTER
REMEDIAL INVESTIGATION
WATER SAMPLES
SUMMER 2000

Prepared by
Hydrometrics, Inc.
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February 2001

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GLOSSARY OF TERMS

CCB .....Continuing Calibration Blank

CCV .....Continuing Calibration Verification

CLP .....Contract Laboratory Program

CRDL.....Contract Required Detection Limit

% D .....Percent difference

FAA .....Flame Atomic Absorption

GFAA.....Graphite Furnace Atomic Absorption

HGAA.....Hydride Generation Atomic Absorption

ICB.....Initial Calibration Blank

ICP .....Inductively Coupled Plasma

ICV.....Initial Calibration Verification

IDL.....Instrument Detection Limit

LCS .....Laboratory Control Sample

MSA.....Method of Standard Additions

PB.....Preparation Blank

PRDL .....Project Required Detection Limit

PDLG .....Project Detection Limit Goals

QAPP .....Quality Assurance Project Plan

QC.....Quality Control

RPD.....Relative Percent Difference

RSD.....Relative Standard Deviation

SOW.....Statement of Work

TDS.....Total Dissolved Solids

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QAPP .....Quality Assurance Project Plan

QC.....Quality Control

RPD.....Relative Percent Difference

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SOW.....Statement of Work

TDS.....Total Dissolved Solids

SUMMARY

This report covers the validation of data for quarterly monitoring of water and sediment samples collected during August of 2000 for the Asarco El Paso Copper Smelter Remediation Investigation. The validation has been carried out according to requirements spelled out in the work plan (Asarco El Paso Copper Smelter Remedial Investigation Work Plan, November 1996). 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 then sent to Asarco's Technical Services laboratory in Salt Lake City for the following analyses:

Matrix	Laboratory Batches	Physical Parameters	Major Constituents	Metals (Total)*
Water	L001238	pH	Calcium	Arsenic
	L001279	Conductivity	Magnesium	Cadmium
	L001286	Dissolved Oxygen	Sodium	Chromium
	L001314	Turbidity**	Potassium	Copper
	L001335	Water Temperature	Bicarbonate	Iron
	L001361	TDS	Carbonate	Lead
		TSS	Sulfate	Selenium
			Chloride	Zinc
			Fluoride	
			NO_3+NO_2 as N	
Sediment	L001364 (XRF)	Total Metals (same metals as for water)		

* As for all monitoring events since fall 1999, both groundwater and surface water samples for the Summer 2000 monitoring event were analyzed for total metals only.

** Turbidity was measured in the field. 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 this monitoring event, sediment samples were collected at eleven of the surface water sites, and were analyzed for the metals. The sediment samples were analyzed by XRF using a matrix-specific calibration for arsenic and lead, and using a fundamental parameters calibration for

cadmium, chromium, copper, iron, selenium, and zinc. (Note that the matrix-specific calibration was for sandy soils from the Asarco site in Murray, Utah rather than being specific to soils from El Paso.)

Laboratory quality control samples for the sediment XRF analyses were all within control limits:

- For arsenic and lead only, information was provided for calibration verification samples (at a frequency of 1 in 10) and laboratory control samples (1 in 20). Recoveries on these standards were all within control limits.
- Reference standards were not analyzed for the parameters analyzed using the fundamental parameters calibration.
- Information was provided for all analytes for laboratory duplicates, which were performed at a frequency of 1 in 20. These laboratory duplicates were all within control limits.

Laboratory quality control violations for water:

Holding time exceedances resulted in a total of 127 flags:

- A total of 23 carbonate results were flagged for holding time (16 to 21 days).
- A total of 23 bicarbonate results were flagged for holding time (16 to 21 days).
- A total of 26 nitrogen (NO_2+NO_2) results were flagged for holding time (29 to 30 days).
- A total of 55 fluoride results were flagged for holding time (29 to 42 days).

Other laboratory quality control violations resulted in a total of 34 flags:

- The batch L001335 ICP-MS matrix spike had a low recovery for selenium (63%). The 12 associated selenium results were flagged to indicate a possible low bias.
- The batch L001335 ICP-MS matrix spike had a low recovery for zinc (65%). The 10 associated zinc results were flagged to indicate a possible low bias. (Two zinc results were reported from ICP analysis.)
- The batch L001335 ICP-MS matrix spike duplicate had an RPD for selenium was out of control limits (23%). The 12 associated selenium results were flagged to indicate a possible lack of reproducibility.

Completeness of laboratory quality control samples:

- There were 25 samples in batch L001279, but only one laboratory duplicate was reported for nitrogen (NO_2+NO_3).

- There were 28 samples in batch L001286, but only one laboratory duplicate was reported for bicarbonate (HCO_3).

Field Quality Control Violations resulted in a total of 60 flags:

- Detections in field blanks resulted in a total of 27 flags to indicate possible high bias at low concentrations. Flagging for field blanks is summarized in the following table.

Parameter	Number of Flags
Nitrogen	8
Lead	7
Selenium	1
Zinc	11

- Six of the 320 field duplicate measurements were out of control limits resulting in a total of 33 flags to indicate a possible lack of reproducibility.

Parameter	Matrix	Number of Flags
TDS	Water	5
Nitrogen	Water	9
Calcium	Water	2
Arsenic	Water	9
Copper	Sediment	8

Completeness of field measurements:

- The required frequency for field quality control samples was met for this monitoring event. One DI blank and one field duplicate per matrix were submitted for each of the eleven days of sampling.

A total of 230 quality control flags were applied to the data, with 13 results receiving 2 flags. In all, 217 results were flagged. Considering both lab and field data, 94 percent of the data may be used without qualification (3247 out of 3464 results). Considering laboratory results only, 92 percent of the data is unqualified (2607 out of 2824 results). Overall, the data for the Summer 2000 monitoring for the Asarco El Paso Copper Smelter Remedial Investigation 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 field measurements and laboratory analysis of 136 samples collected during August of 2000 for the Asarco El Paso Copper Smelter Remedial Investigation. The total number of samples included:

  11 ..... DI blanks
  13 ..... Field duplicates (1 sediment, 2 surface water, 10 groundwater)
  14 ..... Surface water samples (not counting duplicates)
  87 ..... Groundwater samples (not counting duplicates)
  11 ..... Sediment samples (not counting duplicates)

- Validation procedures used are generally consistent with:

  X EPA CLP National Functional Guidelines for Inorganics Data Review
  X Asarco El Paso Copper Smelter Remedial Investigation Work Plan, El Paso, Texas (November 1996)
  ___ Other

- Overall level of validation:

  ___ Contract Laboratory Program (CLP)
  X Standard
  ___ 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.

  X Yes
  ___ No

- Field measurements and field documentation were complete.

  X Yes
  ___ No

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.

  _X_ Yes
  ___ No

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

  ___ Yes
  _X_ No

  Notes: When an analyte is detected in a blank, associated results up to 5 times the blank level are flagged 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.

  The following table lists blank detections that resulted in flagging (a total of 27 flags).

Sample Number	Date	Analyte	Result (ppm)	5 times Blank (ppm)	PRDL (ppm)	# of Flags
EPRI-0008-220	08/01/00	Lead	0.011	0.055	0.003	4
		Zinc	0.023	0.115	0.020	3
EPRI-0008-224	08/03/00	Selenium	0.006	0.030	0.005	1
EPRI-0008-230	08/09/00	Nitrogen	0.10	0.50	0.05	1
EPRI-0008-231	08/10/00	Lead	0.006	0.030	0.003	3
EPRI-0008-239	08/16/00	Nitrogen	0.077	0.385	0.05	7
EPRI-0008-242	08/21/00	Zinc	0.020	0.10	0.020	8

  Flagging: UJ_1

- **Field duplicates**

  Field duplicates have been collected at the proper frequency.

  _X_ Yes
  ___ No

  The field duplicates are listed in the following table.

Sample/ Duplicate #	Site	Date	Matrix
EPRI-0008-103/ 219	EP-7	08/01/00	Groundwater
EPRI-0008-135/ 221	EP-67	08/02/00	Groundwater
EPRI-0008-138/ 223	EP-71	08/03/00	Groundwater
EPRI-0008-106/ 225	EP-14	08/04/00	Groundwater
EPRI-0008-119/ 227	EP-51	08/07/00	Groundwater
EPRI-0008-150/ 229	EP-84	08/09/00	Groundwater
EPRI-0008-127/ 231	EP-59	08/10/00	Groundwater
EPRI-0008-176/ 233	EP-112	08/14/00	Groundwater

Sample/ Duplicate #	Site	Date	Matrix
EPRI-0008-126/ 236	EP-58	08/15/00	Groundwater
EPRI-0008-109/ 238	EP-21	08/16/00	Groundwater
EPRI-0008-183/ 234	SEP-1	08/14/00	Surface Water
EPRI-0008-193/ 240	SEP-13	08/21/00	Surface Water
EPRI-0008-205/ 241	SEP-2-SED	08/21/00	Sediment

Field duplicate relative percent differences (RPDs) were within the required control limits (RPD of 20% or less for water matrix). If the sample or duplicate result is less than 5 times the PRDL, the RPD criteria are not used. In these cases, the difference between the sample and the duplicate results must be within ± the PRDL for water matrix.

___ Yes
_X_ No

Notes: Six, or approximately two percent, of the 320 field duplicate measurements were out of control limits. These field duplicate exceedances are listed in the following table. Associated sample results were flagged to indicate a possible lack of reproducibility. Samples collected the same day as the duplicate are generally considered to be associated. A total of 82 results were flagged to indicate a possible lack of reproducibility.

Sample Number/ Duplicate	Site	Sample Date	Analyte	Sample/ Duplicate Result (mg/L)	Exceedance (values in ppm)	# of Flags
EPRI-0008-103/ 219	EP-7	08/01/00	TDS	1710/ 2437	35% RPD	5
EPRI-0008-183/ 234	SEP-1	08/14/00	Nitrogen	0.66/ 0.51	26% RPD	9
EPRI-0008-126/ 236	EP-58	08/15/00	Arsenic	3.1/ 5.8	61% RPD	5
EPRI-0008-109/ 238	EP-21	08/16/00	Arsenic Calcium	0.068/ 0.054 22/ 28	23% RPD 24% RPD	4 2
EPRI-0008-205/ 241	SEP-2-SED	08/21/00	Copper	100/ 160	46% RPD	8

Flagging: J_4/UJ_4

4. LABORATORY PROCEDURES

- **Laboratory procedures followed**

___ CLP-SOW
_X_ SW-846
_X_ Methods for Chemical Analysis of Water and Wastes
_X_ XRF Standard Operating Procedures

Notes: For laboratory batch L001335, some arsenic and some zinc results were reported from ICP analysis, but no ICP quality control was reported.

- **Holding times met**

  ___ Yes

  _X_ No

  Notes: Holding time exceedances are summarized in the following table:

Analyte	Maximum Holding Time	Time Held Before Analysis	# of Flags
Bicarbonate	14 days	16 to 21 days	23
Carbonate	14 days	16 to 21 days	23
Nitrogen	28 days	29 to 30 days	26
Fluoride	28 days	29 to 42 days	55

  Flagging: J_3/ UJ_3

- **Consistency with project requirements**

  Analyses were carried out as requested.

  _X_ Yes

  ___No

  Project specified methods were used.

  _X_ Yes

  ___No

5. DETECTION LIMITS

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

  ___Yes

  _X_ No

  Notes:

  Water--The PDLG for sulfate has been set at 1 ppm. The laboratory's reporting detection limit for sulfate was 2 ppm.

  Sediment: As shown in the following table, the PDLG was not met for chromium, copper, or iron in the XRF analyses. This was not an issue for iron and copper, as all eleven sediment samples contained greater than the reporting level. For chromium, however, six of the eleven sediment samples were reported as less than 80 ppm (samples collected at Sep-2—sample and duplicate, Sep-9, Sep-10, Sep-13, and Pond 1).

Analyte	Reporting Detection Limit	PDLG
Chromium	80 ppm	20 ppm
Copper	20 ppm	10 ppm
Iron	50 ppm	20 ppm

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 PRDL/PDLG if a project detection limit 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

  Notes: The batch L001335 ICP-MS matrix spike had a low recovery for selenium (63%). The 12 associated selenium results were flagged to indicate a possible low bias.

  The batch L001335 ICP-MS matrix spike had a low recovery for zinc (65%). The 10 associated zinc results were flagged to indicate a possible low bias. (Two zinc results were reported from ICP analysis.)

8. LABORATORY DUPLICATES AND MATRIX SPIKE DUPLICATES

- Laboratory duplicate and matrix spike duplicates samples were analyzed at the proper frequency.

  ___ Yes
  _X_ No

  Notes: Laboratory batch L001279 contained 25 samples, but only one duplicate was reported for Nitrogen (NO_2+NO_3).

  Laboratory batch L001286 contained 28 samples, but only one duplicate was reported for bicarbonate.

- The laboratory duplicate and matrix spike 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, 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 the PDLG for water matrix, within plus or minus two times the PDLG for sediment or soil matrix.

___Yes
X No

Notes: The batch L001335 ICP-MS matrix spike duplicate had an RPD for selenium was out of control limits (23%). The 12 associated selenium results were flagged to indicate a possible lack of reproducibility.

9. LABORATORY CONTROL STANDARDS

- LCSs were prepared and analyzed at the proper frequency.

  X Yes
  ___No

- LCS recoveries were within the required control limits (80-120% for water, 75-125% for arsenic and lead analyzed by XRF).

  X Yes
  ___No

10. INTERPARAMETER RELATIONSHIPS

- The following relationships have been checked:

  X Lab pH vs. field pH.
  X Lab SC vs. field SC
  X TDS vs. SC

Lab pH vs. field pH: This relationship was generally in order. For samples for which both lab and field pH were measured, all but nine had percent differences equal to or less than fifteen percent. (For all but the samples collected at POND 6 and at SEP-14, the field pHs were greater than the lab pHs.) All percent differences were less than 21%. Rounded off to the nearest percent, the percent differences were distributed as follows:

equal to or less than 10%.....59
10 to 15%.....45
greater than 15%.....9

Lab SC vs. field SC: This relationship was generally in order. Only three samples had a percent differences greater than fifteen percent: 16% at EP-105, 19% at EP-108, and 27% at EP-114. Rounded to the nearest percent, the distribution of the percent differences was as follows:

equal to or less than 10%.....96
10 to 15%.....14
greater than 15%.....3

TDS vs. SC: The ratio of TDS to 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 SC measurements. (It should be noted that these measurements are less accurate in dilute waters.)

This relationship was generally in order. The TDS to laboratory SC ratios ranged from 55% at EP-21 to 94% at EP-7. The ratios were distributed as follows:

less than 55%..... 0
55 to 75% 75
75 to 90% 37

11. Historical Comparison

The data for the Summer 2000 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.

12. 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 give 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 matrix is evaluated by recoveries on laboratory matrix spikes and laboratory control samples for higher analyte concentrations, and by blanks for analyte concentrations within five times the PDLG.

Two laboratory matrix spikes had low recoveries, one for selenium (63%) and one for zinc (65%).

There were no detections in the laboratory blanks. However, parameters of interest to the project were detected in all eleven field blanks. Detections that resulted in flagging which indicated a possible high bias are listed in the following bulleted items.

- Nitrate+nitrite as N, detected in two blanks (8 flags).
- Total lead, detected in two blanks (7 flags).
- Total selenium, detected in one blank (1 flag).
- Total zinc, detected in two blanks (11 flags).

Accuracy for sediment matrix is evaluated by recoveries on laboratory reference standards, which in this case included calibration standards and laboratory control standards for arsenic and lead only since these were analyzed using a matrix-specific calibration. Recoveries on these QC samples were all within control limits. No information was provided for evaluation of accuracy for the other parameters analyzed by XRF (cadmium, chromium, copper, iron, selenium, and zinc).

Precision

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

Precision for water matrix: All but one of the laboratory duplicate measurements and approximately 98 percent (314 of 320) of the field duplicate measurements were within control limits.

Precision for sediment matrix: All XRF laboratory duplicates were within control limits, indicating good laboratory precision for the XRF analyses. The field duplicate that was submitted for the sediment matrix was out of control limits for copper.

Completeness

One measure of completeness is the percentage of results qualified as a result of the data validation. For the Spring 2000 El Paso RI monitoring:

⇒ Approximately ninety-four percent of the data may be used without qualification (3247 out of 3464) results).

⇒ No data were rejected as a result of this data review.

A summary of the completeness calculated by parameter is listed in the following table.

Parameter	Number Analyzed	Number Valid	Percent Valid	Number Not Flagged	Percent Not Flagged
DTWL	87	87	100%	87	100%
Oxygen	113	113	100%	113	100%
pH(field)	113	113	100%	113	100%
SC(field)	113	113	100%	113	100%
Turbidity	101	101	100%	101	100%
Water Temp.	113	113	100%	113	100%
pH(lab)	124	124	100%	124	100%
SC(lab)	124	124	100%	124	100%
TDS	124	124	100%	119	96%
TSS	124	124	100%	124	100%
Calcium	124	124	100%	122	98%
Magnesium	124	124	100%	124	100%

Parameter	Number Analyzed	Number Valid	Percent Valid	Number Not Flagged	Percent Not Flagged
Sodium	124	124	100%	124	100%
Potassium	124	124	100%	124	100%
Bicarbonate	124	124	100%	101	81%
Carbonate	124	124	100%	101	81%
Sulfate	124	124	100%	124	100%
Chloride	124	124	100%	124	100%
Fluoride	124	124	100%	69	56%
NO_3+NO_2 as N	124	124	100%	82	66%
Arsenic	136	136	100%	127	93%
Cadmium	136	136	100%	136	100%
Chromium	136	136	100%	136	100%
Copper	136	136	100%	128	94%
Iron	136	136	100%	136	87%
Lead	136	136	100%	129	95%
Selenium	136	136	100%	123	90%
Zinc	136	136	100%	115	85%

Completeness is also evaluated by how well the sampling event met the requirements of the project work plan. Completeness is achieved when the number of valid measurements is sufficient to address all important issues about a site. Field measurements were complete for this sampling event.

Since the quality of sample analyses is assessed indirectly through the analysis of associated quality control samples, the submission of quality control samples at the correct frequency also affects the completeness of the data. As discussed above in the sections pertaining to field quality control, the required frequency for field quality control samples was met for the Summer 2000 monitoring event.

DATA VALIDATION REPORT
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Reviewed by: **Greg Bryce**

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APPENDIX 1

TABLES

TABLE 1.

DATA VALIDATION CODES AND DEFINITIONS

CODE		DEFINITION
J	-	The associated numerical value is an estimated quantity because qualitycontrol criteria were not met. Subscripts for the "J" qualifier: 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
UJ	-	The material was analyzed for, but was not detected above the associated value. Subscripts for the "UJ" qualifier: 1 - Blank contamination. Indicates possible high bias and/or false positive. 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
R	-	Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis is necessary for verification.
E	-	Estimated. (Not an EPA code.)
A	-	Anomalous data.. No apparent explanation for discrepancy in data. (Not an EPA code.)

le 2. Summary of Flagged Data
aso RI Quarterly Monitoring, August 2000

Site	Sample No	Lab No	Date	Description		Result (ppm)	Flag	Reason for Flag
DI	EPRI-0008-230	L001286010	08/09/00	FLUORIDE (F)		<0.05	UJ3	Holding time exceeded (29 days)
DI	EPRI-0008-235	L001314015	08/14/00	FLUORIDE (F)		<0.05	UJ3	Holding time exceeded (31 days)
DI	EPRI-0008-237	L001314021	08/15/00	FLUORIDE (F)		<0.05	UJ3	Holding time exceeded (29 days)
DI	EPRI-0008-239	L001335012	08/16/00	BICARBONATE (HCO3)		<1.0	UJ3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		<0.05	UJ3	Holding time exceeded (29 days)
				SELENIUM (SE)	TOT	<0.005	UJ4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	<0.005	UJ4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	<0.02	UJ4	Matrix spike recovery 65%
DI	EPRI-0008-242	L001361012	08/21/00	BICARBONATE (HCO3)		<1.0	UJ3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
EM-1	EPRI-0008-195	L001335009	08/16/00	BICARBONATE (HCO3)		220.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		0.82	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.088	UJ1	Detection in field blank (0.077 ppm)
				ARSENIC (AS)	TOT	<0.005	UJ4	Field duplicate RPD 23%
				SELENIUM (SE)	TOT	<0.005	UJ4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	<0.005	UJ4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.023	J4	Matrix spike recovery 65%
[illegible]	EPRI-0008-197	L001238021	08/03/00	SELENIUM (SE)	TOT	0.006	UJ1	Detection in field blank (0.006 ppm)
EM-5	EPRI-0008-198	L001279010	08/04/00	FLUORIDE (F)		6.3	J3	Holding time exceeded (42 days)
EP-4	EPRI-0008-100	L001238001	08/01/00	TDS (MEASURED AT 180 C)		1422.0	J4	Field duplicate RPD 35%
				LEAD (PB)	TOT	0.016	UJ1	Detection in field blank (0.011 ppm)
				ZINC (ZN)	TOT	0.025	UJ1	Detection in field blank (0.023 ppm)
EP-5	EPRI-0008-101	L001238002	08/01/00	TDS (MEASURED AT 180 C)		3171.0	J4	Field duplicate RPD 35%
				LEAD (PB)	TOT	0.017	UJ1	Detection in field blank (0.011 ppm)
				ZINC (ZN)	TOT	0.03	UJ1	Detection in field blank (0.023 ppm)
EP-6	EPRI-0008-102	L001238003	08/01/00	TDS (MEASURED AT 180 C)		4481.0	J4	Field duplicate RPD 35%
				LEAD (PB)	TOT	0.023	UJ1	Detection in field blank (0.011 ppm)
EP-7	EPRI-0008-103	L001238004	08/01/00	TDS (MEASURED AT 180 C)		1710.0	J4	Field duplicate RPD 35%
				LEAD (PB)	TOT	0.006	UJ1	Detection in field blank (0.011 ppm)
				ZINC (ZN)	TOT	0.02	UJ1	Detection in field blank (0.023 ppm)
EP-7 (Dup)	EPRI-0008-219	L001238005	08/01/00	TDS (MEASURED AT 180 C)		2437.0	J4	Field duplicate RPD 35%
EP-12	EPRI-0008-104	L001335010	08/16/00	BICARBONATE (HCO3)		1427.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		0.77	J3	Holding time exceeded (29 days)
				SELENIUM (SE)	TOT	0.71	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.71	J4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.038	J4	Matrix spike recovery 65%
EP-21	EPRI-0008-109	L001335004	08/16/00	CALCIUM (CA) DIS		22.0	J4	Field duplicate RPD 24%
				BICARBONATE (HCO3)		1826.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		6.9	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.13	UJ1	Detection in field blank (0.077 ppm)

Table 2. Summary of Flagged Data
El Paso RI Quarterly Monitoring, August 2000

Site	Sample No	Lab No	Date	Description		Result (ppm)	Flag	Reason for Flag
EP-21	EPRI-0008-109	L001335004	08/16/00	ARSENIC (AS)	TOT	0.068	J4	Field duplicate RPD 23%
				SELENIUM (SE)	TOT	0.01	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.01	J4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.25	J4	Matrix spike recovery 65%
EP-21 (Dup)	EPRI-0008-238	L001335005	08/16/00	CALCIUM (CA) DIS		28.0	J4	Field duplicate RPD 24%
				BICARBONATE (HCO3)		1871.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		7.0	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.13	UJ1	Detection in field blank (0.077 ppm)
				ARSENIC (AS)	TOT	0.054	J4	Field duplicate RPD 23%
				SELENIUM (SE)	TOT	0.01	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.01	J4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.2	J4	Matrix spike recovery 65%
EP-23	EPRI-0008-111	L001335003	08/16/00	BICARBONATE (HCO3)		549.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		3.1	J3	Holding time exceeded (29 days)
				SELENIUM (SE)	TOT	0.009	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.009	J4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.1	J4	Matrix spike recovery 65%
EP-24	EPRI-0008-112	L001335002	08/16/00	BICARBONATE (HCO3)		1318.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		2.1	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.13	UJ1	Detection in field blank (0.077 ppm)
				ARSENIC (AS)	TOT	0.042	J4	Field duplicate RPD 23%
				SELENIUM (SE)	TOT	<0.005	UJ4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	<0.005	UJ4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	<0.02	UJ4	Matrix spike recovery 65%
EP-25	EPRI-0008-113	L001335007	08/16/00	BICARBONATE (HCO3)		1708.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		1.9	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.1	UJ1	Detection in field blank (0.077 ppm)
				SELENIUM (SE)	TOT	0.13	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.13	J4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.026	J4	Matrix spike recovery 65%
EP-43	EPRI-0008-117	L001335011	08/16/00	BICARBONATE (HCO3)		1171.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		2.6	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.11	UJ1	Detection in field blank (0.077 ppm)
				SELENIUM (SE)	TOT	0.14	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.14	J4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.054	J4	Matrix spike recovery 65%
EP-49	EPRI-0008-118	L001279018	08/07/00	FLUORIDE (F)		7.2	J3	Holding time exceeded (39 days)
EP-52	EPRI-0008-120	L001279016	08/07/00	FLUORIDE (F)		6.1	J3	Holding time exceeded (39 days)
EP-53	EPRI-0008-121	L001335006	08/16/00	BICARBONATE (HCO3)		221.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		5.9	J3	Holding time exceeded (29 days)
				SELENIUM (SE)	TOT	2.1	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	2.1	J4	Matrix spike duplicate RPD 23%
EP-54	EPRI-0008-122	L001279019	08/07/00	FLUORIDE (F)		9.9	J3	Holding time exceeded (39 days)

ble 2. Summary of Flagged Data
Paso RI Quarterly Monitoring, August 2000

Site	Sample No	Lab No	Date	Description		Result (ppm)	Flag	Reason for Flag
EP-55	EPRI-0008-123	L001335008	08/16/00	BICARBONATE (HCO3)		908.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		14.0	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.13	UJ1	Detection in field blank (0.077 ppm)
				SELENIUM (SE)	TOT	0.12	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.12	J4	Matrix spike duplicate RPD 23%
EP-56	EPRI-0008-124	L001335001	08/16/00	BICARBONATE (HCO3)		817.0	J3	Holding time exceeded (21 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (21 days)
				FLUORIDE (F)		2.6	J3	Holding time exceeded (29 days)
				SELENIUM (SE)	TOT	0.035	J4	Matrix spike recovery 63%
				SELENIUM (SE)	TOT	0.035	J4	Matrix spike duplicate RPD 23%
				ZINC (ZN)	TOT	0.11	J4	Matrix spike recovery 65%
EP-57	EPRI-0008-125	L001314016	08/15/00	FLUORIDE (F)		0.94	J3	Holding time exceeded (30 days)
				ARSENIC (AS)	TOT	0.35	J4	Field duplicate RPD 61%
EP-58	EPRI-0008-126	L001314017	08/15/00	FLUORIDE (F)		5.3	J3	Holding time exceeded (30 days)
				ARSENIC (AS)	TOT	3.1	J4	Field duplicate RPD 61%
EP-58 (Dup)	EPRI-0008-236	L001314018	08/15/00	FLUORIDE (F)		5.3	J3	Holding time exceeded (30 days)
				ARSENIC (AS)	TOT	5.8	J4	Field duplicate RPD 61%
EP-59	EPRI-0008-127	L001286021	08/10/00	NITRATE + NITRITE AS N		4.1	J3	Holding time exceeded (29 days)
EP-59 (Dup)	EPRI-0008-231	L001286022	08/10/00	NITRATE + NITRITE AS N		4.2	J3	Holding time exceeded (29 days)
60	EPRI-0008-128	L001286026	08/10/00	NITRATE + NITRITE AS N		52.0	J3	Holding time exceeded (29 days)
				LEAD (PB)	TOT	0.006	UJ1	Detection in field blank (0.006 ppm)
EP-61	EPRI-0008-129	L001314020	08/15/00	FLUORIDE (F)		1.5	J3	Holding time exceeded (30 days)
				ARSENIC (AS)	TOT	0.007	J4	Field duplicate RPD 61%
EP-62	EPRI-0008-130	L001286024	08/10/00	NITRATE + NITRITE AS N		2.6	J3	Holding time exceeded (29 days)
EP-63	EPRI-0008-131	L001286025	08/10/00	NITRATE + NITRITE AS N		1.1	J3	Holding time exceeded (29 days)
				LEAD (PB)	TOT	0.01	UJ1	Detection in field blank (0.006 ppm)
EP-64	EPRI-0008-132	L001286023	08/10/00	NITRATE + NITRITE AS N		86.0	J3	Holding time exceeded (29 days)
EP-65	EPRI-0008-133	L001314019	08/15/00	FLUORIDE (F)		1.7	J3	Holding time exceeded (30 days)
				ARSENIC (AS)	TOT	0.006	J4	Field duplicate RPD 61%
EP-66	EPRI-0008-134	L001286027	08/10/00	NITRATE + NITRITE AS N		34.0	J3	Holding time exceeded (29 days)
				LEAD (PB)	TOT	0.006	UJ1	Detection in field blank (0.006 ppm)
EP-78	EPRI-0008-144	L001286013	08/09/00	FLUORIDE (F)		3.6	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		7.2	J3	Holding time exceeded (30 days)
EP-79	EPRI-0008-145	L001286017	08/09/00	FLUORIDE (F)		5.0	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		10.0	J3	Holding time exceeded (30 days)
EP-80	EPRI-0008-146	L001286020	08/10/00	NITRATE + NITRITE AS N		0.4	J3	Holding time exceeded (29 days)
EP-81	EPRI-0008-147	L001286019	08/09/00	FLUORIDE (F)		2.6	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		6.1	J3	Holding time exceeded (30 days)
	EPRI-0008-148	L001286015	08/09/00	FLUORIDE (F)		3.8	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		2.5	J3	Holding time exceeded (30 days)

Table 2. Summary of Flagged Data
El Paso RI Quarterly Monitoring, August 2000

Site	Sample No	Lab No	Date	Description	Result (ppm)	Flag	Reason for Flag
EP-83	EPRI-0008-149	L001286009	08/09/00	FLUORIDE (F)	3.1	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	9.2	J3	Holding time exceeded (30 days)
EP-84	EPRI-0008-150	L001286002	08/09/00	FLUORIDE (F)	0.65	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	8.3	J3	Holding time exceeded (30 days)
EP-84 (Dup)	EPRI-0008-229	L001286003	08/09/00	FLUORIDE (F)	0.69	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	8.6	J3	Holding time exceeded (30 days)
EP-85	EPRI-0008-151	L001286018	08/09/00	FLUORIDE (F)	3.7	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	8.4	J3	Holding time exceeded (30 days)
EP-86	EPRI-0008-152	L001286016	08/09/00	FLUORIDE (F)	2.6	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	6.3	J3	Holding time exceeded (30 days)
EP-93	EPRI-0008-157	L001286007	08/09/00	FLUORIDE (F)	1.7	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	8.2	J3	Holding time exceeded (30 days)
EP-94	EPRI-0008-158	L001286005	08/09/00	FLUORIDE (F)	1.3	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	15.0	J3	Holding time exceeded (30 days)
EP-95	EPRI-0008-159	L001286004	08/09/00	FLUORIDE (F)	4.0	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	9.2	J3	Holding time exceeded (30 days)
EP-96	EPRI-0008-160	L001286006	08/09/00	FLUORIDE (F)	1.0	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	17.0	J3	Holding time exceeded (30 days)
EP-97	EPRI-0008-161	L001286008	08/09/00	FLUORIDE (F)	1.4	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	0.073	UJ1	Detection in field blank (0.10 ppm)
				NITRATE + NITRITE AS N	0.073	J3	Holding time exceeded (30 days)
EP-98	EPRI-0008-162	L001286011	08/09/00	FLUORIDE (F)	2.5	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	11.0	J3	Holding time exceeded (30 days)
EP-99	EPRI-0008-163	L001286001	08/09/00	FLUORIDE (F)	3.6	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	80.0	J3	Holding time exceeded (30 days)
EP-108	EPRI-0008-172	L001286012	08/09/00	NITRATE + NITRITE AS N	5.1	J3	Holding time exceeded (30 days)
EP-109	EPRI-0008-173	L001286014	08/09/00	FLUORIDE (F)	2.4	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N	8.9	J3	Holding time exceeded (30 days)
EP-111	EPRI-0008-175	L001314001	08/14/00	FLUORIDE (F)	2.6	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N	0.074	J4	Field duplicate RPD 26%
EP-112	EPRI-0008-176	L001314002	08/14/00	FLUORIDE (F)	1.7	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N	0.1	J4	Field duplicate RPD 26%
EP-112 (Dup)	EPRI-0008-233	L001314003	08/14/00	FLUORIDE (F)	1.7	J3	Holding time exceeded (31 days)
EP-113	EPRI-0008-177	L001314004	08/14/00	FLUORIDE (F)	3.1	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N	0.086	J4	Field duplicate RPD 26%
EP-114	EPRI-0008-178	L001314005	08/14/00	FLUORIDE (F)	10.0	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N	0.082	J4	Field duplicate RPD 26%
EP-115	EPRI-0008-179	L001314006	08/14/00	FLUORIDE (F)	3.3	J3	Holding time exceeded (31 days)

Table 2. Summary of Flagged Data
Paso RI Quarterly Monitoring, August 2000

Site	Sample No	Lab No	Date	Description		Result (ppm)	Flag	Reason for Flag
EP-116	EPRI-0008-180	L001314007	08/14/00	FLUORIDE (F)		4.9	J3	Holding time exceeded (31 days)
EP-117	EPRI-0008-181	L001314008	08/14/00	FLUORIDE (F)		4.5	J3	Holding time exceeded (31 days)
EP-118	EPRI-0008-182	L001314014	08/14/00	FLUORIDE (F)		1.5	J3	Holding time exceeded (31 days)
POND 1	EPRI-0008-201	L001361010	08/21/00	BICARBONATE (HCO3)		39.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
POND 6	EPRI-0008-203	L001361011	08/21/00	BICARBONATE (HCO3)		61.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
SEP-1	EPRI-0008-183	L001314010	08/14/00	FLUORIDE (F)		0.66	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N		0.66	J4	Field duplicate RPD 26%
SEP-1 (Dup)	EPRI-0008-234	L001314011	08/14/00	FLUORIDE (F)		0.68	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N		0.51	J4	Field duplicate RPD 26%
SEP-2	EPRI-0008-184	L001361005	08/21/00	BICARBONATE (HCO3)		272.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.05	UJ1	Detection in field blank (0.020 ppm)
SEP-2-SED	EPRI-0008-205	L001364004	08/21/00	COPPER (CU)	TOT	100.0	J4	Field duplicate RPD 46%
SEP-2-SED (Dup)	EPRI-0008-241	L001364005	08/21/00	COPPER (CU)	TOT	160.0	J4	Field duplicate RPD 46%
SEP-3	EPRI-0008-185	L001314012	08/14/00	FLUORIDE (F)		0.68	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N		0.57	J4	Field duplicate RPD 26%
SEP-4	EPRI-0008-186	L001361001	08/21/00	BICARBONATE (HCO3)		271.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.046	UJ1	Detection in field blank (0.020 ppm)
SEP-4-SED	EPRI-0008-207	L001364001	08/21/00	COPPER (CU)	TOT	210.0	J4	Field duplicate RPD 46%
SEP-6	EPRI-0008-187	L001314013	08/14/00	FLUORIDE (F)		0.68	J3	Holding time exceeded (31 days)
				NITRATE + NITRITE AS N		0.63	J4	Field duplicate RPD 26%
SEP-7	EPRI-0008-188	L001314009	08/14/00	FLUORIDE (F)		0.69	J3	Holding time exceeded (29 days)
				NITRATE + NITRITE AS N		0.53	J4	Field duplicate RPD 26%
SEP-9	EPRI-0008-189	L001361008	08/21/00	BICARBONATE (HCO3)		227.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.046	UJ1	Detection in field blank (0.020 ppm)
SEP-9-SED	EPRI-0008-210	L001364008	08/21/00	COPPER (CU)	TOT	56.0	J4	Field duplicate RPD 46%
SEP-10	EPRI-0008-190	L001361007	08/21/00	BICARBONATE (HCO3)		226.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		10.0	J3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.039	UJ1	Detection in field blank (0.020 ppm)
SEP-10-SED	EPRI-0008-211	L001364007	08/21/00	COPPER (CU)	TOT	190.0	J4	Field duplicate RPD 46%
SEP-11	EPRI-0008-191	L001361006	08/21/00	BICARBONATE (HCO3)		250.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.035	UJ1	Detection in field blank (0.020 ppm)
SEP-11-SED	EPRI-0008-212	L001364006	08/21/00	COPPER (CU)	TOT	65.0	J4	Field duplicate RPD 46%

Table 2. Summary of Flagged Data
El Paso RI Quarterly Monitoring, August 2000

Site	Sample No	Lab No	Date	Description		Result (ppm)	Flag	Reason for Flag
SEP-12	EPRI-0008-192	L001361004	08/21/00	BICARBONATE (HCO3)		266.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		4.8	J3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.04	UJ1	Detection in field blank (0.020 ppm)
SEP-12-SED	EPRI-0008-213	L001364003	08/21/00	COPPER (CU)	TOT	38.0	J4	Field duplicate RPD 46%
SEP-13	EPRI-0008-193	L001361002	08/21/00	BICARBONATE (HCO3)		255.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.04	UJ1	Detection in field blank (0.020 ppm)
SEP-13 (Dup)	EPRI-0008-240	L001361003	08/21/00	BICARBONATE (HCO3)		265.0	J3	Holding time exceeded (16 days)
				CARBONATE AS CO3		<1.0	UJ3	Holding time exceeded (16 days)
				ZINC (ZN)	TOT	0.036	UJ1	Detection in field blank (0.020 ppm)
SEP-13-SED	EPRI-0008-214	L001364002	08/21/00	COPPER (CU)	TOT	520.0	J4	Field duplicate RPD 46%

TABLE 3. SUMMARY OF HISTORICAL COMPARISONS

Asarco El Paso, August 2000

Summary of the comparison of Summer 2000 Data to All Existing Data Showing Parameters that are More than Three Standard Deviations From the Mean of the Comparison Period

Notes: All quantities are in mg/L unless otherwise noted. All results are LABORATORY unless marked FLD (Field). N is the number of samples in the comparison data set; 50% of the samples in the data set must be above the detection level before the mean & Std Dev are calculated. Results with A & R flags were excluded from the calculations. The detection limit was used in the calculations.

Site	Sample Date	Result mg/L	Parameter	Comparison Database Period	N	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Devs rom Mean	Relation to Database Period
EM-1	08/16/00	1621	Chloride (CL)	08/13/1997-05/04/2000	12	358	701.1667	797	7.4	Highest
EM-5	08/04/00	16.1	Depth to Water Level (Feet)	08/11/1997-04/26/2000	13	14.34	14.4923	15.14	7.6	Highest
		2.25	Turbidity (NTU)	08/06/1999-04/26/2000	4	0.75	0.98	1.46	3.9	Highest
		29.8	Water Temperature (C) (Fld)	08/11/1997-04/26/2000	13	22.8	24.0077	25.8	6.96	Highest
		1.6	Arsenic (As) Tot	08/06/1999-04/26/2000	4	2.3	2.4	2.6	5.66	Lowest
EM-6	08/04/00	2.65	Turbidity (NTU)	08/06/1999-04/26/2000	4	0.9	1.32	1.6	4.47	Highest
EP-5	08/01/00	0.13	Arsenic (As) Tot	08/02/1999-04/24/2000	3	0.042	0.0477	0.057	> 10	Highest
EP-6	08/01/00	593	Chloride (CL)	08/06/1997-04/24/2000	12	760	885.5833	1013	4.53	Lowest
		1.9	Fluoride (F)	08/06/1997-04/24/2000	12	1.2	1.4417	1.6	3.7	Highest
EP-7	08/01/00	3.67	Turbidity (NTU)	08/02/1999-04/24/2000	3	8.4	8.7633	9	> 10	Lowest
EP-12	08/16/00	506	Total Suspended Solids	11/03/1997-05/09/2000	11	7.9	80.3818	329	4.46	Highest
		0.028	Chromium (Cr) Tot	08/11/1999-05/09/2000	4	0.01	0.013	0.017	4.21	Highest
EP-13	08/04/00	7580	SC (umhos/cm at 25C)	08/07/1997-04/26/2000	12	8960	11001.667	12500	3.1	Lowest
		288	Bicarbonate (HCO3)	08/07/1997-04/26/2000	12	327	400.9167	429	3.94	Lowest
		.17	Arsenic (As) Tot	08/03/1999-04/26/2000	4	31	33.75	38	5.41	Lowest
EP-22	08/07/00	0.006	Lead (Pb) Tot	01/26/2000-04/28/2000	2	0.075	0.0875	0.1	4.61	Lowest
		0.53	Selenium (Se) Tot	01/26/2000-04/28/2000	2	0.11	0.16	0.21	5.23	Highest
EP-23	08/16/00	2.9	Oxygen (O) (Fld) Dis	08/11/1997-05/03/2000	10	0.6	1.072	1.9	4.89	Highest
		27.4	Turbidity (NTU)	08/04/1999-05/03/2000	2	13	13.44	13.88	> 10	Highest
		0.42	Nitrate + Nitrite as N	08/11/1997-05/03/2000	13	<0.050	0.1414	0.32	3.1	Highest
EP-26	08/07/00	28	Nitrate + Nitrite as N	08/11/1997-04/28/2000	11	1.4	5.3273	20	3.76	Highest
EP-43	08/16/00	1171	Bicarbonate (HCO3)	11/03/1997-02/08/2000	10	631	756.7	1054	3.09	Highest
		0.069	Copper (Cu) Tot	08/11/1999-02/08/2000	3	<0.025	0.029	0.035	7.56	Highest
		0.054	Zinc (Zn) Tot	08/11/1999-02/08/2000	3	<0.020	0.026	0.03	5.29	Highest
EP-49	08/07/00	11	Nitrate + Nitrite as N	11/19/1997-04/28/2000	10	<0.050	1.715	8.8	3.01	Highest
EP-52	08/07/00	36	Turbidity (NTU)	08/05/1999-04/28/2000	4	14.8	18.7775	22.91	4.52	Highest
EP-55	08/16/00	9300	SC (umhos/cm at 25C)	08/15/1997-05/04/2000	12	9600	10233.333	10550	3.13	Lowest
EP-56	08/16/00	4510	SC (umhos/cm at 25C)	08/26/1997-05/03/2000	12	4800	5420	5600	3.74	Lowest
		361	Calcium (Ca) Dis	08/26/1997-05/03/2000	12	227	257.5	299	5.92	Highest
		0.063	Chromium (Cr) Tot	08/04/1999-05/03/2000	4	0.01	0.0115	0.014	> 10	Highest
		0.064	Copper (Cu) Tot	08/04/1999-05/03/2000	4	<0.025	0.0335	0.047	3.13	Highest
		77	Iron (Fe) Tot	08/04/1999-05/03/2000	4	2.9	19.475	32	4.24	Highest
		0.11	Zinc (Zn) Tot	08/04/1999-05/03/2000	4	0.045	0.0498	0.055	> 10	Highest
EP-57	08/15/00	4180	SC (umhos/cm at 25C)	08/16/1997-05/08/2000	12	2070	2880.8333	3330	3.37	Highest
EP-58	08/15/00	436	Calcium (Ca) Dis	08/16/1997-05/08/2000	12	463	501.5833	531	3.48	Lowest

TABLE 3. SUMMARY OF HISTORICAL COMPARISONS

Asarco El Paso, August 2000

Summary of the comparison of Summer 2000 Data to All Existing Data Showing Parameters that are More than Three Standard Deviations From the Mean of the Comparison Period

Notes: All quantities are in mg/L unless otherwise noted. All results are LABORATORY unless marked FLD (Field). N is the number of samples in the comparison data set; 50% of the samples in the data set must be above the detection level before the mean & Std Dev are calculated. Results with A & R flags were excluded from the calculations. The detection limit was used in the calculations.

Site	Sample Date	Result mg/L	Parameter	Comparison Database Period	N	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Devs rom Mean	Relation to Database Period
		573	Chloride (CL)	08/16/1997-05/08/2000	12	709	894.6667	990	3.78	Lowest
EP-58 (Dup)	08/15/00	436	Calcium (Ca) Dis	08/16/1997-05/08/2000	12	463	501.5833	531	3.48	Lowest
		5.8	Arsenic (As) Tot	08/10/1999-05/08/2000	4	3.4	3.8	4.2	5.48	Highest
EP-60	08/10/00	0.012	Arsenic (As) Tot	08/03/1999-05/03/2000	4	0.008	0.0088	0.01	3.39	Highest
		0.91	Chromium (Cr) Tot	08/03/1999-05/03/2000	4	0.05	0.2	0.43	3.92	Highest
		4.8	Iron (Fe) Tot	08/03/1999-05/03/2000	4	0.46	1.365	2	4.74	Highest
EP-61	08/15/00	854	Bicarbonate (HCO3)	08/16/1997-05/08/2000	12	366	460.0833	608	5.93	Highest
		0.21	Selenium (Se) Tot	08/10/1999-05/08/2000	4	0.31	0.335	0.37	4.72	Lowest
EP-62	08/10/00	3.4	Fluoride (F)	08/09/1997-05/03/2000	12	2.7	2.95	3.2	3.11	Highest
EP-65	08/15/00	8	pH	08/16/1997-05/08/2000	12	7.3	7.6	7.8	3.13	Highest
		99	Magnesium (Mg) Dis	08/16/1997-05/08/2000	12	126	141.25	165	3.64	Lowest
EP-70	08/03/00	125	Magnesium (Mg) Dis	08/26/1997-04/25/2000	12	134	151.25	165	3.02	Lowest
EP-72	08/03/00	7540	SC (umhos/cm at 25C)	08/12/1997-04/25/2000	8	5700	6167.5	7180	3.16	Highest
		28.1	Water Temperature (C) (Fld)	08/12/1997-04/25/2000	8	24.5	25.4875	27.3	3.2	Highest
		234	Magnesium (Mg) Dis	08/12/1997-04/25/2000	8	148	166.25	215	3.24	Highest
		1227	Sodium (Na) Dis	08/12/1997-04/25/2000	8	900	999.5	1086	4.25	Highest
		464	Chloride (CL)	08/12/1997-04/25/2000	8	504	562.75	608	3.22	Lowest
		<0.05	Arsenic (As) Tot	01/24/2000-04/25/2000	2	0.065	0.067	0.069	6.01	Lowest
		0.044	Zinc (Zn) Tot	01/24/2000-04/25/2000	2	0.053	0.0545	0.056	4.95	Lowest
EP-73	08/07/00	8.5	pH	08/12/1997-04/28/2000	12	7.4	7.6	7.9	5.85	Highest
		218	Calcium (Ca) Dis	08/12/1997-04/28/2000	12	239	269.1667	292	3.12	Lowest
		92	Magnesium (Mg) Dis	08/12/1997-04/28/2000	12	111	117.25	125	5.21	Lowest
EP-75	08/07/00	6957	Depth to Water Level (Feet)	08/12/1997-04/28/2000	11	55.38	60.2018	70.55	> 10	Highest
		14850	SC (umhos/cm at 25C)	08/12/1997-04/28/2000	11	16010	18748.182	20000	3.68	Lowest
		13269	TDS (Measured at 180 C)	08/12/1997-04/28/2000	11	14853	18139.636	20923	3.06	Lowest
		3000	Sodium (Na) Dis	08/12/1997-04/28/2000	11	3775	4286.6364	5246	3.18	Lowest
		11	Arsenic (As) Tot	08/06/1999-04/28/2000	3	14	15.3333	16	3.75	Lowest
EP-76	08/07/00	0.007	Lead (Pb) Tot	01/26/2000-04/28/2000	2	0.01	0.0105	0.011	4.95	Lowest
EP-77	08/04/00	25	Magnesium (Mg) Dis	08/12/1997-04/28/2000	12	36	48.8333	58	3.32	Lowest
EP-80	08/10/00	5.8	SC (umhos/cm at 25C) (Fld)	08/13/1997-05/02/2000	12	4870	5368.3333	6840	9.44	Lowest
		484	Chloride (CL)	08/13/1997-05/02/2000	12	356	389.5833	435	3.22	Highest
EP-81	08/09/00	3720	SC (umhos/cm at 25C) (Fld)	08/13/1997-05/02/2000	12	2370	2805	3290	3.09	Highest
EP-82	08/09/00	8.3	pH	08/13/1997-05/02/2000	12	7.4	7.7	8.1	3.07	Highest
		2130	SC (umhos/cm at 25C)	08/13/1997-05/02/2000	12	3250	4395.8333	4880	4.24	Lowest
		2380	SC (umhos/cm at 25C) (Fld)	08/13/1997-05/02/2000	12	3580	4559.1667	5360	4.23	Lowest
		1453	TDS (Measured at 180 C)	08/13/1997-05/02/2000	12	2274	3179.5	3826	3.62	Lowest
		33	Calcium (Ca) Dis	08/13/1997-05/02/2000	12	72	136.1667	170	3.49	Lowest

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Site	Sample Date	Result mg/L	Parameter	Comparison Database Period	N	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Devs rom Mean	Relation to Database Period
		18	Magnesium (Mg) Dis	08/13/1997-05/02/2000	12	43	73.3333	87	3.86	Lowest
		359	Sodium (Na) Dis	08/13/1997-05/02/2000	12	613	805.3333	987	3.82	Lowest
		109	Chloride (CL)	08/13/1997-05/02/2000	12	361	475.9167	568	4.85	Lowest
EP-82	08/09/00	3.8	Fluoride (F)	08/13/1997-05/02/2000	12	2.3	2.7667	3.2	3.64	Highest
		2.5	Nitrate + Nitrite as N	08/13/1997-05/02/2000	12	6	8.9417	11	4.25	Lowest
		0.058	Selenium (Se) Tot	08/09/1999-05/02/2000	4	0.11	0.1275	0.15	4.07	Lowest
EP-83	08/09/00	3	Turbidity (NTU)	08/09/1999-05/01/2000	3	6.8	7.87	9.31	3.76	Lowest
EP-84	08/09/00	0.013	Cadmium (Cd) Tot	08/09/1999-05/01/2000	4	<0.005	0.0058	0.007	7.57	Highest
EP-84 (Dup)	08/09/00	0.013	Cadmium (Cd) Tot	08/09/1999-05/01/2000	4	<0.005	0.0058	0.007	7.57	Highest
EP-85	08/09/00	6.5	Turbidity (NTU)	08/09/1999-05/02/2000	3	1.1	1.3667	1.79	> 10	Highest
		8.4	Nitrate + Nitrite as N	08/13/1997-05/02/2000	12	5.8	6.8667	7.6	3.02	Highest
EP-86	08/09/00	8.6	pH	08/13/1997-05/02/2000	12	7.8	8.025	8.3	3.72	Highest
EP-88	08/04/00	292	Chloride (CL)	08/12/1997-04/28/2000	12	407	453	493	5.43	Lowest
EP-89	08/02/00	41.34	Depth to Water Level (Feet)	08/12/1997-04/25/2000	12	13.46	14.7767	15.33	> 10	Highest
EP-94	08/09/00	3.7	Turbidity (NTU)	01/27/2000-05/01/2000	2	7.7	8.225	8.75	6.09	Lowest
EP-95	08/09/00	2127	TDS (Measured at 180 C)	10/26/1999-05/01/2000	3	2187	2205.3333	2229	3.64	Lowest
		481	Sodium (Na) Dis	10/26/1999-05/01/2000	3	575	594	625	4.17	Lowest
		4	Fluoride (F)	10/26/1999-05/01/2000	3	3.4	3.5333	3.7	3.06	Highest
EP-97	08/09/00	4040	SC (umhos/cm at 25C)	10/18/1999-05/01/2000	3	4940	5103.3333	5350	4.89	Lowest
		4190	SC (umhos/cm at 25C) (Fld)	10/18/1999-05/01/2000	3	4880	5026.6667	5170	5.77	Lowest
		2817	TDS (Measured at 180 C)	10/18/1999-05/01/2000	3	3584	3733.6667	3928	5.2	Lowest
		72	Magnesium (Mg) Dis	10/18/1999-05/01/2000	3	109	120	128	4.87	Lowest
		663	Sodium (Na) Dis	10/18/1999-05/01/2000	3	847	879.6667	941	4.08	Lowest
		348	Chloride (CL)	10/18/1999-05/01/2000	3	530	561.3333	609	5.08	Lowest
		0.073	Nitrate + Nitrite as N	10/18/1999-05/01/2000	3	0.28	0.37	0.46	3.3	Lowest
EP-98	08/09/00	8.3	pH	10/18/1999-05/01/2000	3	8	8.0667	8.1	4.04	Highest
		26.7	Water Temperature (C) (Fld)	10/18/1999-05/01/2000	3	21.7	22.5667	24	3.31	Highest
		432	Bicarbonate (HCO3)	10/18/1999-05/01/2000	3	467	469.3333	471	> 10	Lowest
		684	Chloride (CL)	10/18/1999-05/01/2000	3	550	560	571	> 10	Highest
		0.032	Zinc (Zn) Tot	10/18/1999-05/01/2000	3	0.041	0.0443	0.048	3.51	Lowest
EP-100	08/07/00	336	Bicarbonate (HCO3)	10/20/1999-04/28/2000	3	344	344.6667	346	7.51	Lowest
EP-101	08/04/00	7.3	pH	10/21/1999-04/26/2000	3	7.7	7.7333	7.8	7.51	Lowest
EP-102	08/04/00	7.2	pH	10/21/1999-04/26/2000	3	7.7	7.8	7.9	6	Lowest
		2530	SC (umhos/cm at 25C)	10/21/1999-04/26/2000	3	2760	2806.6667	2870	4.87	Lowest
		1738	TDS (Measured at 180 C)	10/21/1999-04/26/2000	3	1879	1923	1954	4.72	Lowest
		89	Calcium (Ca) Dis	10/21/1999-04/26/2000	3	116	123	128	5.44	Lowest
		280	Sodium (Na) Dis	10/21/1999-04/26/2000	3	343	354	360	7.76	Lowest

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Site	Sample Date	Result mg/L	Parameter	Comparison Database Period	N	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Devs rom Mean	Relation to Database Period
		228	Bicarbonate (HCO3)	10/21/1999-04/26/2000	3	332	345	366	6.37	Lowest
		642	Sulfate (SO4)	10/21/1999-04/26/2000	3	888	920.6667	949	9.07	Lowest
		171	Chloride (CL)	10/21/1999-04/26/2000	3	197	208.6667	216	3.69	Lowest
EP-104	08/03/00	65.14	Depth to Water Level (Feet)	10/21/1999-04/26/2000	3	66.4	66.49	66.59	> 10	Lowest
EP-104	08/03/00	4410	SC (umhos/cm at 25C)	10/21/1999-04/26/2000	3	4600	4620	4640	> 10	Lowest
		65	Magnesium (Mg) Dis	10/21/1999-04/26/2000	3	72	75.6667	79	3.04	Lowest
		395	Bicarbonate (HCO3)	10/21/1999-04/26/2000	3	403	406	408	4.16	Lowest
EP-106	08/02/00	8.1	pH	10/21/1999-04/26/2000	3	7.7	7.7333	7.8	6.35	Highest
EP-107	08/03/00	63.39	Depth to Water Level (Feet)	10/21/1999-04/25/2000	3	63.66	63.6667	63.68	> 10	Lowest
		0.41	Turbidity (NTU)	01/24/2000-04/25/2000	2	2.39	2.73	3.07	4.82	Lowest
EP-108	08/09/00	28	Magnesium (Mg) Dis	10/26/1999-05/02/2000	3	40	44.3333	50	3.18	Lowest
		38	Potassium (K) Dis	10/26/1999-05/02/2000	3	4.8	8.4333	15	5.19	Highest
EP-109	08/09/00	8.9	Nitrate + Nitrite as N	10/26/1999-05/02/2000	3	5.2	5.8333	6.5	4.71	Highest
		0.16	Iron (Fe) Tot	10/26/1999-05/02/2000	3	0.76	0.9567	1.2	3.56	Lowest
		0.056	Selenium (Se) Tot	10/26/1999-05/02/2000	3	0.063	0.0633	0.064	> 10	Lowest
EP-110	08/02/00	2900	SC (umhos/cm at 25C)	10/29/1999-04/25/2000	3	2750	2770	2780	7.51	Highest
		2	Turbidity (NTU)	10/29/1999-04/25/2000	3	18.6	25.37	32.41	3.38	Lowest
EP-111	08/14/00	7.82	Turbidity (NTU)	01/29/2000-05/02/2000	2	2.75	3.625	4.5	3.39	Highest
EP-112	08/14/00	5.44	Turbidity (NTU)	01/29/2000-05/02/2000	2	2.75	2.875	3	> 10	Highest
		1.7	Fluoride (F)	10/28/1999-05/02/2000	3	1.4	1.4667	1.5	4.04	Highest
		0.015	Arsenic (As) Tot	10/28/1999-05/02/2000	3	0.012	0.0127	0.013	4.04	Highest
EP-112 (Dup)	08/14/00	1.7	Fluoride (F)	10/28/1999-05/02/2000	3	1.4	1.4667	1.5	4.04	Highest
EP-113	08/14/00	3560	SC (umhos/cm at 25C)	10/28/1999-05/02/2000	3	3890	4043.3333	4180	3.32	Lowest
		3630	SC (umhos/cm at 25C) (Fld)	10/28/1999-05/02/2000	3	3900	4010	4080	3.94	Lowest
		23.6	Water Temperature (C) (Fld)	10/28/1999-05/02/2000	3	21.6	22	22.4	4	Highest
		246	Chloride (CL)	10/28/1999-05/02/2000	3	364	381.3333	408	5.77	Lowest
EP-114	08/14/00	13.1	Depth to Water Level (Feet)	11/18/1999-05/04/2000	3	13.55	13.8067	13.97	3.14	Lowest
		620	Chloride (CL)	11/18/1999-05/04/2000	3	930	955.6667	1000	8.71	Lowest
EP-116	08/14/00	5510	SC (umhos/cm at 25C) (Fld)	11/18/1999-05/04/2000	3	6020	6223.3333	6460	3.21	Lowest
		4396	TDS (Measured at 180 C)	11/18/1999-05/04/2000	3	4550	4634	4700	3.11	Lowest
		442	Total Suspended Solids	11/18/1999-05/04/2000	3	1440	1654	1993	4.08	Lowest
		4.9	Fluoride (F)	11/18/1999-05/04/2000	3	5.4	5.6	5.8	3.5	Lowest
EP-117	08/14/00	3.1	Oxygen (O) (Fld) Dis	11/18/1999-05/04/2000	3	1.3	1.3333	1.4	> 10	Highest
		3720	SC (umhos/cm at 25C)	11/18/1999-05/04/2000	3	2580	2780	3120	3.18	Highest
		2832	TDS (Measured at 180 C)	11/18/1999-05/04/2000	3	1914	2028.6667	2256	4.08	Highest
		1350	Sulfate (SO4)	11/18/1999-05/04/2000	3	843	943.3333	1057	3.78	Highest
EP-118	08/14/00	8.3	pH	11/18/1999-05/04/2000	3	8	8.0333	8.1	4.62	Highest

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Site	Sample Date	Result mg/L	Parameter	Comparison Database Period	N	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Devs rom Mean	Relation to Database Period
POND 6	08/21/00	0.69	Cadmium (Cd) Tot	11/02/1999-05/09/2000	3	0.09	0.1233	0.17	> 10	Highest
		0.26	Lead (Pb) Tot	11/02/1999-05/09/2000	3	0.082	0.104	0.12	7.92	Highest
		0.099	Selenium (Se) Tot	11/02/1999-05/09/2000	3	0.012	0.0203	0.035	6.17	Highest
		1.9	Zinc (Zn) Tot	11/02/1999-05/09/2000	3	0.15	0.3333	0.44	9.82	Highest
SEP-1	08/14/00	5.9	Iron (Fe) Tot	11/01/1999-05/09/2000	3	0.2	1	1.7	6.49	Highest
SEP-1 (Dup)	08/14/00	5.6	Iron (Fe) Tot	11/01/1999-05/09/2000	3	0.2	1	1.7	6.09	Highest
SEP-2	08/21/00	426	Total Suspended Solids	08/15/1997-05/10/2000	12	20	98.4167	339	3.39	Highest
		9	Iron (Fe) Tot	11/01/1999-05/10/2000	3	0.48	0.8067	1.2	> 10	Highest
SEP-3	08/14/00	6	Iron (Fe) Tot	11/01/1999-05/09/2000	3	0.27	1.1233	1.9	5.96	Highest
SEP-4	08/21/00	12	Iron (Fe) Tot	11/01/1999-05/10/2000	3	0.34	0.66	1.1	> 10	Highest
SEP-4-SED	08/21/00	210	Copper (Cu) Tot	08/20/1999-05/10/2000	4	<20	40	70	7.05	Highest
		170	Lead (Pb) Tot	08/20/1999-05/10/2000	4	19	37.25	66	6.51	Highest
		130	Zinc (Zn) Tot	08/20/1999-05/10/2000	4	20	30.5	40	> 10	Highest
SEP-6	08/14/00	5.8	Iron (Fe) Tot	11/01/1999-05/09/2000	3	0.2	1.1333	2	5.17	Highest
SEP-7	08/14/00	6.3	Iron (Fe) Tot	11/01/1999-05/09/2000	3	0.19	1.0633	2	5.78	Highest
SEP-9	08/21/00	4.6	Iron (Fe) Tot	11/01/1999-05/10/2000	3	0.17	0.5833	0.92	> 10	Highest
SEP-10	08/21/00	<0.005	Arsenic (As) Tot	11/01/1999-05/10/2000	3	0.009	0.0113	0.013	3.04	Lowest
		8.1	Iron (Fe) Tot	11/01/1999-05/10/2000	3	0.59	0.9267	1.4	> 10	Highest
SEP-10-SED	08/21/00	190	Copper (Cu) Tot	08/20/1999-05/10/2000	4	<20	37	60	8.67	Highest
		120	Lead (Pb) Tot	08/20/1999-05/10/2000	4	12	25.25	35	8.79	Highest
		150	Zinc (Zn) Tot	08/20/1999-05/10/2000	4	<10	36.25	52	6.25	Highest
SEP-11	08/21/00	8.2	Iron (Fe) Tot	11/02/1999-05/10/2000	3	0.47	0.8667	1.4	> 10	Highest
SEP-12	08/21/00	10	Iron (Fe) Tot	11/01/1999-05/10/2000	3	0.54	0.8	1.2	> 10	Highest
		0.013	Lead (Pb) Tot	11/01/1999-05/10/2000	3	<0.003	0.004	0.005	9	Highest
SEP-13	08/21/00	9.7	Iron (Fe) Tot	11/01/1999-05/10/2000	3	0.46	0.73	1.2	> 10	Highest
SEP-13 (Dup)	08/21/00	9.6	Iron (Fe) Tot	11/01/1999-05/10/2000	3	0.46	0.73	1.2	> 10	Highest
SEP-13-SED	08/21/00	520	Copper (Cu) Tot	08/20/1999-05/10/2000	4	37	67.75	96	> 10	Highest
		380	Lead (Pb) Tot	08/20/1999-05/10/2000	4	31	47	66	> 10	Highest
		220	Zinc (Zn) Tot	08/20/1999-05/10/2000	4	15	58.25	89	4.68	Highest
SEP-14	08/21/00	8.33	pH (Fld)	11/12/1998-08/11/1999	2	9.03	9.18	9.33	4.01	Lowest
		0.41	Nitrate + Nitrite as N	11/12/1998-08/11/1999	2	0.09	0.095	<0.10	> 10	Highest

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Site	Sample Date	Result mg/L	Parameter	Comparison Database Period	N	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Devs rom Mean	Relation to Database Period
SEP-14-SED	08/21/00	190000	Iron (Fe) Tot	08/11/1999-05/09/2000	4	220000	247500	260000	3.04	Lowest

APPENDIX 2

DATABASE

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-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EM-1		EM-2	EM-4	
SAMPLE DATE	08/16/2000		08/03/2000	08/03/2000	
SAMPLE TIME	13:00		10:45	10:15	
LAB	TSC-SLC		TSC-SLC	TSC-SLC	
LAB NUMBER	L001335009		L001238026	L001238021	
SAMPLE NUMBER	EPRI-0008-195		EPRI-0008-196	EPRI-0008-197	
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	65.78		62.87	60.98	
OXYGEN (O) (FLD) DIS	1.3		1.4	3.0	
PH (FLD)	7.49		6.96	7.26	
PH	7.9		7.9	8.0	
SC (UMHOS/CM AT 25 C)	5560.0		4430.0	9640.0	
SC (UMHOS/CM AT 25 C) (FLD)	5540.0		4560.0	9570.0	
TDS (MEASURED AT 180 C)	3999.0		3230.0	6014.0	
TOTAL SUSPENDED SOLIDS	7.3		5.1	<1.0	
TURBIDITY (NTU)	8.46		6.9	0.95	
WATER TEMPERATURE (C) (FLD)	25.7		26.6	25.0	
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	172.0		183.0	314.0	
MAGNESIUM (MG) DIS	99.0		67.0	138.0	
SODIUM (NA) DIS	737.0		667.0	1215.0	
POTASSIUM (K) DIS	21.0		14.0	26.0	
BICARBONATE (HCO3)	220.0	J3	329.0	154.0	
CARBONATE AS CO3	<1.0	UJ3	<1.0	<1.0	
SULFATE (SO4)	1845.0		1548.0	430.0	
CHLORIDE (CL)	1621.0		436.0	2937.0	
FLUORIDE (F)	0.82	J3	1.3	1.2	
-- NUTRIENTS --					
NITRATE + NITRITE AS N	0.088	UJ1	26.0	0.2	
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	<0.005	UJ4	0.68	<0.005	
CADMIUM (CD) TOT	<0.005		<0.005	<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01	<0.01	
COPPER (CU) TOT	<0.025		<0.025	<0.025	
IRON (FE) TOT	0.52		0.61	0.12	
LEAD (PB) TOT	0.015		0.008	<0.005	
SELENIUM (SE) TOT	<0.005	UJ4	0.098	0.006	UJ1
ZINC (ZN) TOT	0.023	J4	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EM-5		EM-6	EP-4	
SAMPLE DATE	08/04/2000		08/04/2000	08/01/2000	
SAMPLE TIME	14:30		15:00	13:45	
LAB	TSC-SLC		TSC-SLC	TSC-SLC	
LAB NUMBER	L001279010		L001279011	L001238001	
SAMPLE NUMBER	EPRI-0008-198		EPRI-0008-199	EPRI-0008-100	
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	16.1		37.25	7.18	
OXYGEN (O) (FLD) DIS	1.4		2.1	1.0	
PH (FLD)	7.47		7.16	7.24	
PH	8.1		8.0	8.2	
SC (UMHOS/CM AT 25 C)	2910.0		4350.0	2220.0	
SC (UMHOS/CM AT 25 C) (FLD)	2880.0		4360.0	2220.0	
TDS (MEASURED AT 180 C)	1894.0		3086.0	1422.0	J4
TOTAL SUSPENDED SOLIDS	2.4		2.6	77.0	
TURBIDITY (NTU)	2.25		2.65	44.0	
WATER TEMPERATURE (C) (FLD)	29.8		25.5	26.3	
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	61.0		105.0	104.0	
MAGNESIUM (MG) DIS	14.0		61.0	29.0	
SODIUM (NA) DIS	500.0		750.0	337.0	
POTASSIUM (K) DIS	23.0		9.7	15.0	
BICARBONATE (HCO3)	177.0		398.0	310.0	
CARBONATE AS CO3	<1.0		<1.0	<1.0	
SULFATE (SO4)	736.0		1531.0	457.0	
CHLORIDE (CL)	343.0		386.0	295.0	
FLUORIDE (F)	6.3	J3	2.0	0.94	
-- NUTRIENTS --					
NITRATE + NITRITE AS N	<0.1		7.5	<0.1	
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	1.6		0.022	0.14	
CADMIUM (CD) TOT	0.006		<0.005	<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01	<0.01	
COPPER (CU) TOT	<0.025		0.031	0.025	
IRON (FE) TOT	0.83		1.2	3.2	
LEAD (PB) TOT	0.013		0.008	0.016	UJ1
SELENIUM (SE) TOT	<0.005		0.072	<0.005	
ZINC (ZN) TOT	0.059		0.026	0.025	UJ1

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	08/01/2000		08/01/2000		08/01/2000		08/01/2000	
SAMPLE TIME	14:00		14:30		14:45		14:50	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001238002		L001238003		L001238004		L001238005	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0008-101		EPRI-0008-102		EPRI-0008-103		EPRI-0008-219	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	6.36		7.0		6.24			
OXYGEN (O) (FLD) DIS	1.4		1.5		1.9		2.5	
PH (FLD)	7.2		7.36		7.47		7.48	
PH	8.0		8.1		8.0		8.1	
SC (UMHOS/CM AT 25 C)	4690.0		6060.0		2610.0		2600.0	
SC (UMHOS/CM AT 25 C) (FLD)	4710.0		6060.0		2590.0		2580.0	
TDS (MEASURED AT 180 C)	3171.0	J4	4481.0	J4	1710.0	J4	2437.0	J4
TOTAL SUSPENDED SOLIDS	9.0		3.2		5.9		5.5	
TURBIDITY (NTU)	6.42		2.2		3.67			
WATER TEMPERATURE (C) (FLD)	28.6		28.6		26.8		25.0	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	114.0		227.0		62.0		61.0	
MAGNESIUM (MG) DIS	47.0		76.0		20.0		20.0	
SODIUM (NA) DIS	800.0		1000.0		450.0		450.0	
POTASSIUM (K) DIS	12.0		20.0		6.3		6.3	
BICARBONATE (HCO3)	914.0		449.0		338.0		337.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	973.0		2408.0		633.0		710.0	
CHLORIDE (CL)	581.0		593.0		287.0		280.0	
FLUORIDE (F)	2.4		1.9		2.3		2.2	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	0.16		2.5		<0.1		<0.1	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.13		0.027		0.069		0.077	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.047		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.46		<0.1		1.3		1.4	
LEAD (PB) TOT	0.017	UJ1	0.023	UJ1	0.006	UJ1	<0.005	
SELENIUM (SE) TOT	0.006		0.057		<0.005		<0.005	
ZINC (ZN) TOT	0.03	UJ1	<0.02		0.02	UJ1	<0.02	

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R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-12		EP-13	EP-14	EP-14
SAMPLE DATE	08/16/2000		08/04/2000	08/04/2000	08/04/2000
SAMPLE TIME	14:15		09:20	09:00	09:05
LAB	TSC-SLC		TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001335010		L001279003	L001279001	L001279002
REMARKS					DUPLICATE
SAMPLE NUMBER	EPRI-0008-104		EPRI-0008-105	EPRI-0008-106	EPRI-0008-225
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	60.56		60.84	59.69	
OXYGEN (O) (FLD) DIS	0.6		0.3	0.4	0.3
PH (FLD)	7.11		7.06	6.75	6.76
PH	7.5		7.5	7.8	7.6
SC (UMHOS/CM AT 25 C)	5030.0		7580.0	5030.0	5030.0
SC (UMHOS/CM AT 25 C) (FLD)	5180.0		8210.0	4980.0	4980.0
TDS (MEASURED AT 180 C)	3780.0		5755.0	3791.0	3915.0
TOTAL SUSPENDED SOLIDS	506.0		8.3	1.7	2.2
TURBIDITY (NTU)	>200		5.45	7.8	
WATER TEMPERATURE (C) (FLD)	25.5		28.4	25.8	25.7
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	178.0		195.0	314.0	299.0
MAGNESIUM (MG) DIS	92.0		36.0	78.0	75.0
SODIUM (NA) DIS	853.0		1300.0	665.0	614.0
POTASSIUM (K) DIS	10.0		39.0	44.0	42.0
BICARBONATE (HCO3)	1427.0	J3	288.0	368.0	370.0
CARBONATE AS CO3	<1.0	UJ3	<1.0	<1.0	<1.0
SULFATE (SO4)	1156.0		2878.0	1767.0	2061.0
CHLORIDE (CL)	537.0		617.0	457.0	425.0
FLUORIDE (F)	0.77	J3	1.3	1.5	1.6
-- NUTRIENTS --					
NITRATE + NITRITE AS N	4.0		71.0	16.0	14.0
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	1.8		17.0	1.3	1.3
CADMIUM (CD) TOT	<0.005		0.36	<0.005	<0.005
CHROMIUM (CR) TOT	0.028		<0.01	<0.01	<0.01
COPPER (CU) TOT	0.044		0.03	<0.025	<0.025
IRON (FE) TOT	3.7		0.63	0.28	0.33
LEAD (PB) TOT	0.028		0.017	0.004	0.004
SELENIUM (SE) TOT	0.71	J4	3.1	0.19	0.19
ZINC (ZN) TOT	0.038	J4	0.034	<0.02	0.03

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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-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-15	EP-20	EP-21	EP-21
SAMPLE DATE	08/03/2000	08/02/2000	08/16/2000	08/16/2000
SAMPLE TIME	14:45	08:45	09:40	09:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001238025	L001238007	L001335004	L001335005
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0008-107	EPRI-0008-108	EPRI-0008-109	EPRI-0008-238
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	59.25	13.9	25.87	
OXYGEN (O) (FLD) DIS	1.2	2.1	1.4	0.8
PH (FLD)	7.01	6.95	7.4	7.35
PH	8.0	7.7	8.0	8.0
SC (UMHOS/CM AT 25 C)	4650.0	9570.0	4920.0	4930.0
SC (UMHOS/CM AT 25 C) (FLD)	4670.0	9540.0	4860.0	4880.0
TDS (MEASURED AT 180 C)	3377.0	8056.0	2734.0	2734.0
TOTAL SUSPENDED SOLIDS	110.0	42.0	41.0	39.0
TURBIDITY (NTU)	18.0	34.1	25.3	
WATER TEMPERATURE (C) (FLD)	25.2	22.8	24.9	25.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	190.0	421.0	22.0 J4	28.0 J4
MAGNESIUM (MG) DIS	66.0	232.0	26.0	30.0
SODIUM (NA) DIS	725.0	1600.0	684.0	696.0
POTASSIUM (K) DIS	11.0	48.0	245.0	238.0
BICARBONATE (HCO3)	359.0	336.0	1826.0 J3	1871.0 J3
CARBONATE AS CO3	<1.0	<1.0	<1.0 UJ3	<1.0 UJ3
SULFATE (SO4)	1546.0	4796.0	114.0	114.0
CHLORIDE (CL)	478.0	735.0	628.0	624.0
FLUORIDE (F)	0.81	1.9	6.9 J3	7.0 J3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	27.0	116.0	0.13 UJ1	0.13 UJ1
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.007	0.76	0.068 J4	0.054 J4
CADMIUM (CD) TOT	<0.005	0.047	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	1.7	0.72	1.2	1.0
LEAD (PB) TOT	<0.005	<0.005	0.004	0.005
SELENIUM (SE) TOT	0.14	0.3	0.01 J4	0.01 J4
ZINC (ZN) TOT	<0.02	0.036	0.25 J4	0.2 J4

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R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-22	EP-23	EP-24
SAMPLE DATE	08/07/2000	08/16/2000	08/16/2000
SAMPLE TIME	14:10	09:15	08:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001279020	L001335003	L001335002
SAMPLE NUMBER	EPRI-0008-110	EPRI-0008-111	EPRI-0008-112
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	53.37	22.99	34.86
OXYGEN (O) (FLD) DIS	0.9	2.9	1.0
PH (FLD)	7.12	7.61	7.0
PH	8.2	7.9	7.9
SC (UMHOS/CM AT 25 C)	8940.0	4870.0	5880.0
SC (UMHOS/CM AT 25 C) (FLD)	8820.0	4710.0	5520.0
TDS (MEASURED AT 180 C)	7388.0	2867.0	3502.0
TOTAL SUSPENDED SOLIDS	27.0	34.0	15.0
TURBIDITY (NTU)	25.5	27.4	8.46
WATER TEMPERATURE (C) (FLD)	28.9	24.0	24.5
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	377.0	94.0	144.0
MAGNESIUM (MG) DIS	167.0	52.0	74.0
SODIUM (NA) DIS	1400.0	627.0	978.0
POTASSIUM (K) DIS	88.0	45.0	23.0
BICARBONATE (HCO3)	569.0	549.0 J3	1318.0 J3
CARBONATE AS CO3	<1.0	<1.0 UJ3	<1.0 UJ3
SULFATE (SO4)	3741.0	1423.0	538.0
CHLORIDE (CL)	600.0	485.0	1228.0
FLUORIDE (F)	2.6	3.1 J3	2.1 J3
-- NUTRIENTS --			
NITRATE + NITRITE AS N	15.0	0.42	0.13 UJ1
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	1.5	4.7	0.042 J4
CADMIUM (CD) TOT	0.013	0.007	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	0.036	0.26	<0.025
IRON (FE) TOT	0.87	1.1	0.57
LEAD (PB) TOT	0.006	0.077	<0.003
SELENIUM (SE) TOT	0.53	0.009 J4	<0.005 UJ4
ZINC (ZN) TOT	0.41	0.1 J4	<0.02 UJ4

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-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-25		EP-26	EP-29
SAMPLE DATE	08/16/2000		08/07/2000	08/02/2000
SAMPLE TIME	10:50		16:10	09:30
LAB	TSC-SLC		TSC-SLC	TSC-SLC
LAB NUMBER	L001335007		L001279023	L001238009
SAMPLE NUMBER	EPRI-0008-113		EPRI-0008-114	EPRI-0008-115
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	49.42		60.1	13.7
OXYGEN (O) (FLD) DIS	0.1		0.6	2.7
PH (FLD)	7.02		7.07	7.64
PH	7.7		7.9	8.3
SC (UMHOS/CM AT 25 C)	5840.0		4600.0	3180.0
SC (UMHOS/CM AT 25 C) (FLD)	5490.0		4620.0	3170.0
TDS (MEASURED AT 180 C)	3441.0		3348.0	2115.0
TOTAL SUSPENDED SOLIDS	84.0		28.0	905.0
TURBIDITY (NTU)	>200		16.0	>200
WATER TEMPERATURE (C) (FLD)	26.4		26.1	24.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	104.0		175.0	66.0
MAGNESIUM (MG) DIS	26.0		51.0	19.0
SODIUM (NA) DIS	855.0		700.0	600.0
POTASSIUM (K) DIS	195.0		54.0	19.0
BICARBONATE (HCO3)	1708.0	J3	305.0	445.0
CARBONATE AS CO3	<1.0	UJ3	<1.0	<1.0
SULFATE (SO4)	202.0		1527.0	993.0
CHLORIDE (CL)	1053.0		437.0	310.0
FLUORIDE (F)	1.9	J3	2.0	3.1
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.1	UJ1	28.0	3.9
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	6.5		0.38	0.28
CADMIUM (CD) TOT	<0.005		0.35	<0.005
CHROMIUM (CR) TOT	<0.01		<0.01	0.01
COPPER (CU) TOT	0.011		<0.025	<0.025
IRON (FE) TOT	1.0		0.89	13.0
LEAD (PB) TOT	0.012		0.008	0.009
SELENIUM (SE) TOT	0.13	J4	1.1	0.13
ZINC (ZN) TOT	0.026	J4	1.2	0.042

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: GROUNDWATER --

SITE CODE	EP-35	EP-43	EP-49
SAMPLE DATE	08/02/2000	08/16/2000	08/07/2000
SAMPLE TIME	09:15	15:15	13:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001238008	L001335011	L001279018
SAMPLE NUMBER	EPRI-0008-116	EPRI-0008-117	EPRI-0008-118
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	14.91	58.12	68.95
OXYGEN (O) (FLD) DIS	2.40	0.1	0.2
PH (FLD)	6.98	7.04	6.81
PH	7.8	7.4	7.8
SC (UMHOS/CM AT 25 C)	6540.0	3790.0	9830.0
SC (UMHOS/CM AT 25 C) (FLD)	6490.0	3550.0	9720.0
TDS (MEASURED AT 180 C)	5323.0	2448.0	7534.0
TOTAL SUSPENDED SOLIDS	136.0	244.0	218.0
TURBIDITY (NTU)	85.8	>200	17.6
WATER TEMPERATURE (C) (FLD)	23.8	27.8	27.6
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	379.0	119.0	485.0
MAGNESIUM (MG) DIS	130.0	28.0	131.0
SODIUM (NA) DIS	900.0	571.0	1400.0
POTASSIUM (K) DIS	17.0	29.0	231.0
BICARBONATE (HCO3)	601.0	1171.0 J3	956.0
CARBONATE AS CO3	<1.0	<1.0 UJ3	<1.0
SULFATE (SO4)	2796.0	466.0	4132.0
CHLORIDE (CL)	497.0	508.0	663.0
FLUORIDE (F)	0.98	2.6 J3	7.2 J3
-- NUTRIENTS --			
NITRATE + NITRITE AS N	59.0	0.11 UJ1	11.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.62	1.4	34.0
CADMIUM (CD) TOT	<0.005	<0.005	0.088
CHROMIUM (CR) TOT	0.036	0.046	0.02
COPPER (CU) TOT	<0.025	0.069	0.025
IRON (FE) TOT	1.9	2.1	21.0
LEAD (PB) TOT	0.011	0.041	0.007
SELENIUM (SE) TOT	1.1	0.14 J4	0.05
ZINC (ZN) TOT	0.039	0.054 J4	32.0

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-51	EP-52	EP-53
SAMPLE DATE	08/07/2000	08/07/2000	08/07/2000	08/16/2000
SAMPLE TIME	09:15	09:20	10:20	09:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001279013	L001279014	L001279016	L001335006
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0008-119	EPRI-0008-227	EPRI-0008-120	EPRI-0008-121
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	50.64		53.57	67.81
OXYGEN (O) (FLD) DIS	0.6	0.6	0.5	1.7
PH (FLD)	6.75	6.74	6.34	6.76
PH	7.4	7.4	7.5	6.8
SC (UMHOS/CM AT 25 C)	10620.0	10710.0	11640.0	8020.0
SC (UMHOS/CM AT 25 C) (FLD)	10250.0	10380.0	11420.0	8070.0
TDS (MEASURED AT 180 C)	7689.0	7775.0	9649.0	6717.0
TOTAL SUSPENDED SOLIDS	48.0	49.0	26.0	510.0
TURBIDITY (NTU)	52.0		36.0	157.0
WATER TEMPERATURE (C) (FLD)	25.0	25.0	26.1	26.9
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	551.0	526.0	440.0	402.0
MAGNESIUM (MG) DIS	357.0	343.0	239.0	81.0
SODIUM (NA) DIS	1100.0	1100.0	1800.0	1004.0
POTASSIUM (K) DIS	34.0	34.0	15.0	62.0
BICARBONATE (HCO3)	223.0	222.0	754.0	221.0 J3
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0 UJ3
SULFATE (SO4)	2295.0	2046.0	4650.0	3473.0
CHLORIDE (CL)	2235.0	2398.0	1255.0	501.0
FLUORIDE (F)	0.89	0.95	6.1 J3	5.9 J3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	192.0	207.0	106.0	130.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.75	0.88	1.3	35.0
CADMIUM (CD) TOT	0.029	0.03	0.43	1.3
CHROMIUM (CR) TOT	4.3	5.5	0.12	<0.01
COPPER (CU) TOT	0.19	0.21	0.54	0.043
IRON (FE) TOT	5.1	5.9	3.1	6.6
LEAD (PB) TOT	0.039	0.047	0.83	0.008
SELENIUM (SE) TOT	0.27	0.27	0.18	2.1 J4
ZINC (ZN) TOT	0.43	0.47	2.7	3.4

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	08/07/2000		08/16/2000		08/16/2000	
SAMPLE TIME	13:20		11:15		08:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001279019		L001335008		L001335001	
SAMPLE NUMBER	EPRI-0008-122		EPRI-0008-123		EPRI-0008-124	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	70.89		57.89		50.68	
OXYGEN (O) (FLD) DIS	2.1		1.0		1.0	
PH (FLD)	6.55		6.44		7.22	
PH	7.7		7.1		8.0	
SC (UMHOS/CM AT 25 C)	10250.0		9300.0		4510.0	
SC (UMHOS/CM AT 25 C) (FLD)	9930.0		8550.0		4500.0	
TDS (MEASURED AT 180 C)	8003.0		7357.0		3262.0	
TOTAL SUSPENDED SOLIDS	78.0		701.0		2224.0	
TURBIDITY (NTU)	70.0		>200		>200	
WATER TEMPERATURE (C) (FLD)	29.3		28.4		24.0	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	398.0		487.0		361.0	
MAGNESIUM (MG) DIS	186.0		260.0		65.0	
SODIUM (NA) DIS	1400.0		1162.0		801.0	
POTASSIUM (K) DIS	224.0		122.0		33.0	
BICARBONATE (HCO3)	1183.0		908.0	J3	817.0	J3
CARBONATE AS CO3	<1.0		<1.0	UJ3	<1.0	UJ3
SULFATE (SO4)	4153.0		3887.0		1568.0	
CHLORIDE (CL)	711.0		942.0		477.0	
FLUORIDE (F)	9.9	J3	14.0	J3	2.6	J3
-- NUTRIENTS --						
NITRATE + NITRITE AS N	14.0		0.13	UJ1	0.71	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	34.0		63.0		1.4	
CADMIUM (CD) TOT	0.66		0.56		<0.005	
CHROMIUM (CR) TOT	0.02		<0.01		0.063	
COPPER (CU) TOT	0.55		0.064		0.064	
IRON (FE) TOT	14.0		41.0		77.0	
LEAD (PB) TOT	0.018		0.14		0.036	
SELENIUM (SE) TOT	0.13		0.12	J4	0.035	J4
ZINC (ZN) TOT	11.0		43.0		0.11	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-57		EP-58		EP-58		EP-59	
SAMPLE DATE	08/15/2000		08/15/2000		08/15/2000		08/10/2000	
SAMPLE TIME	13:45		13:15		13:20		09:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001314016		L001314017		L001314018		L001286021	
REMARKS					DUPLICATE			
SAMPLE NUMBER	EPRI-0008-125		EPRI-0008-126		EPRI-0008-236		EPRI-0008-127	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	9.19		12.02				13.09	
OXYGEN (O) (FLD) DIS	1.0		0.5		0.4		0.2	
PH (FLD)	6.95		6.4		6.4		7.08	
PH	7.6		7.3		7.4		7.7	
SC (UMHOS/CM AT 25 C)	4180.0		11390.0		11410.0		4960.0	
SC (UMHOS/CM AT 25 C) (FLD)	3810.0		11230.0		11230.0		4920.0	
TDS (MEASURED AT 180 C)	2882.0		8897.0		8759.0		3632.0	
TOTAL SUSPENDED SOLIDS	17.0		126.0		141.0		7.2	
TURBIDITY (NTU)	13.4		24.0				8.95	
WATER TEMPERATURE (C) (FLD)	26.8		27.4		27.5		25.6	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	162.0		436.0		436.0		166.0	
MAGNESIUM (MG) DIS	108.0		197.0		199.0		81.0	
SODIUM (NA) DIS	570.0		1606.0		1541.0		706.0	
POTASSIUM (K) DIS	17.0		188.0		183.0		86.0	
BICARBONATE (HCO3)	1720.0		1342.0		1296.0		422.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	693.0		4978.0		5107.0		1665.0	
CHLORIDE (CL)	269.0		573.0		683.0		459.0	
FLUORIDE (F)	0.94	J3	5.3	J3	5.3	J3	5.1	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	0.17		0.12		0.12		4.1	J3
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.35	J4	3.1	J4	5.8	J4	2.3	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		0.027	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.59		2.1		2.0		0.38	
LEAD (PB) TOT	<0.003		0.006		0.005		<0.003	
SELENIUM (SE) TOT	<0.005		0.023		0.024		0.23	
ZINC (ZN) TOT	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-59		EP-60		EP-61	
SAMPLE DATE	08/10/2000		08/10/2000		08/15/2000	
SAMPLE TIME	09:40		11:00		14:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001286022		L001286026		L001314020	
REMARKS	DUPLICATE					
SAMPLE NUMBER	EPRI-0008-231		EPRI-0008-128		EPRI-0008-129	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)			9.57		9.79	
OXYGEN (O) (FLD) DIS	0.2		0.3		0.5	
PH (FLD)	7.08		7.03		7.04	
PH	7.8		7.8		7.8	
SC (UMHOS/CM AT 25 C)	4990.0		8300.0		8890.0	
SC (UMHOS/CM AT 25 C) (FLD)	4920.0		8200.0		8860.0	
TDS (MEASURED AT 180 C)	3579.0		6745.0		7074.0	
TOTAL SUSPENDED SOLIDS	6.2		14.0		39.0	
TURBIDITY (NTU)			16.11		16.0	
WATER TEMPERATURE (C) (FLD)	25.6		26.5		26.0	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	165.0		505.0		339.0	
MAGNESIUM (MG) DIS	80.0		192.0		149.0	
SODIUM (NA) DIS	675.0		1064.0		1186.0	
POTASSIUM (K) DIS	83.0		14.0		15.0	
BICARBONATE (HCO3)	427.0		321.0		854.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1796.0		3542.0		3101.0	
CHLORIDE (CL)	461.0		914.0		762.0	
FLUORIDE (F)	5.1		1.7		1.5	J3
-- NUTRIENTS --						
NITRATE + NITRITE AS N	4.2	J3	52.0	J3	127.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	2.4		0.012		0.007	J4
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	0.026		0.91		<0.01	
COPPER (CU) TOT	<0.025		0.025		<0.025	
IRON (FE) TOT	0.34		4.8		0.24	
LEAD (PB) TOT	<0.003		0.006	UJ1	<0.003	
SELENIUM (SE) TOT	0.24		0.21		0.21	
ZINC (ZN) TOT	<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, Spike, or Split Exceedance; R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-62		EP-63		EP-64	
SAMPLE DATE	08/10/2000		08/10/2000		08/10/2000	
SAMPLE TIME	10:15		10:40		10:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001286024		L001286025		L001286023	
SAMPLE NUMBER	EPRI-0008-130		EPRI-0008-131		EPRI-0008-132	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	7.54		6.89		10.39	
OXYGEN (O) (FLD) DIS	4.0		0.3		4.3	
PH (FLD)	7.15		7.15		7.56	
PH	7.8		7.8		8.2	
SC (UMHOS/CM AT 25 C)	4170.0		7600.0		9200.0	
SC (UMHOS/CM AT 25 C) (FLD)	4160.0		7480.0		8860.0	
TDS (MEASURED AT 180 C)	3025.0		5714.0		7559.0	
TOTAL SUSPENDED SOLIDS	1.7		17.0		4.1	
TURBIDITY (NTU)	3.7		17.0		3.16	
WATER TEMPERATURE (C) (FLD)	28.9		24.9		29.6	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	149.0		224.0		344.0	
MAGNESIUM (MG) DIS	57.0		137.0		104.0	
SODIUM (NA) DIS	558.0		1102.0		1415.0	
POTASSIUM (K) DIS	43.0		31.0		19.0	
BICARBONATE (HCO3)	405.0		627.0		268.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1371.0		2832.0		4164.0	
CHLORIDE (CL)	357.0		852.0		616.0	
FLUORIDE (F)	3.4		2.0		1.9	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	2.6	J3	1.1	J3	86.0	J3
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	1.1		0.021		0.049	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		0.022		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.14		0.89		0.17	
LEAD (PB) TOT	<0.003		0.01	UJ1	<0.003	
SELENIUM (SE) TOT	0.28		0.2		0.5	
ZINC (ZN) TOT	<0.02		0.021		<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-65		EP-66		EP-67	EP-67
SAMPLE DATE	08/15/2000		08/10/2000		08/02/2000	08/02/2000
SAMPLE TIME	14:00		11:30		14:10	14:10
LAB	TSC-SLC		TSC-SLC		TSC-SLC	TSC-SLC
LAB NUMBER	L001314019		L001286027		L001238012	L001238013
REMARKS						DUPLICATE
SAMPLE NUMBER	EPRI-0008-133		EPRI-0008-134		EPRI-0008-135	EPRI-0008-221
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	8.5		10.39		41.34	
OXYGEN (O) (FLD) DIS	1.0		3.1		1.1	1.1
PH (FLD)	7.0		7.09		6.86	6.85
PH	8.0		7.9		7.9	7.7
SC (UMHOS/CM AT 25 C)	6220.0		7420.0		4300.0	4300.0
SC (UMHOS/CM AT 25 C) (FLD)	6190.0		7890.0		4280.0	4270.0
TDS (MEASURED AT 180 C)	4964.0		6233.0		3611.0	3638.0
TOTAL SUSPENDED SOLIDS	16.0		2.5		1.6	1.3
TURBIDITY (NTU)	6.7		2.35		1.75	
WATER TEMPERATURE (C) (FLD)	27.8		30.3		25.5	25.4
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	241.0		454.0		373.0	363.0
MAGNESIUM (MG) DIS	99.0		112.0		112.0	107.0
SODIUM (NA) DIS	887.0		1144.0		400.0	400.0
POTASSIUM (K) DIS	16.0		49.0		12.0	11.0
BICARBONATE (HCO3)	720.0		475.0		248.0	246.0
CARBONATE AS CO3	<1.0		<1.0		<1.0	<1.0
SULFATE (SO4)	2539.0		3531.0		2067.0	1848.0
CHLORIDE (CL)	559.0		543.0		366.0	382.0
FLUORIDE (F)	1.7	J3	3.2		0.73	0.77
-- NUTRIENTS --						
NITRATE + NITRITE AS N	22.0		34.0	J3	16.0	16.0
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.006	J4	8.5		0.01	0.011
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	<0.005
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	<0.01
COPPER (CU) TOT	<0.025		<0.025		<0.025	<0.025
IRON (FE) TOT	0.5		0.17		<0.1	<0.1
LEAD (PB) TOT	0.003		0.006	UJ1	<0.005	0.009
SELENIUM (SE) TOT	0.18		0.29		0.094	0.097
ZINC (ZN) TOT	<0.02		0.021		<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, Spike, or Split Exceedance; R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-68	EP-70	EP-71	EP-71
SAMPLE DATE	08/02/2000	08/03/2000	08/03/2000	08/03/2000
SAMPLE TIME	14:45	09:15	08:45	08:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001238014	L001238019	L001238017	L001238018
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0008-136	EPRI-0008-137	EPRI-0008-138	EPRI-0008-223
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	63.2	61.8	49.84	
OXYGEN (O) (FLD) DIS	6.1	0.3	0.3	0.3
PH (FLD)	7.18	6.97	6.85	6.85
PH	7.9	7.9	8.0	8.0
SC (UMHOS/CM AT 25 C)	4580.0	6050.0	5780.0	5810.0
SC (UMHOS/CM AT 25 C) (FLD)	4590.0	5990.0	5740.0	5760.0
TDS (MEASURED AT 180 C)	3331.0	4624.0	4632.0	4600.0
TOTAL SUSPENDED SOLIDS	18.0	3.6	1.2	1.6
TURBIDITY (NTU)	6.6	2.9	1.87	
WATER TEMPERATURE (C) (FLD)	24.8	24.7	24.4	24.4
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	212.0	245.0	295.0	283.0
MAGNESIUM (MG) DIS	93.0	125.0	137.0	130.0
SODIUM (NA) DIS	600.0	859.0	700.0	759.0
POTASSIUM (K) DIS	12.0	17.0	16.0	15.0
BICARBONATE (HCO3)	270.0	267.0	285.0	287.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	1492.0	2406.0	2152.0	2233.0
CHLORIDE (CL)	549.0	576.0	450.0	475.0
FLUORIDE (F)	0.69	0.99	0.84	0.85
-- NUTRIENTS --				
NITRATE + NITRITE AS N	39.0	51.0	78.0	70.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	<0.005	0.56	0.11	0.11
CADMIUM (CD) TOT	<0.005	0.006	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	0.47	<0.1	0.1	<0.1
LEAD (PB) TOT	<0.005	<0.005	<0.005	<0.005
SELENIUM (SE) TOT	0.23	0.19	0.21	0.21
ZINC (ZN) TOT	<0.02	0.12	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-72	EP-73	EP-75
SAMPLE DATE	08/03/2000	08/07/2000	08/07/2000
SAMPLE TIME	09:45	11:00	15:10
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001238020	L001279017	L001279022
SAMPLE NUMBER	EPRI-0008-139	EPRI-0008-140	EPRI-0008-141
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	62.35	70.55	6957.0
OXYGEN (O) (FLD) DIS	1.9	0.3	2.8
PH (FLD)	7.01	7.04	7.01
PH	8.1	8.5	7.2
SC (UMHOS/CM AT 25 C)	7540.0	6220.0	14850.0
SC (UMHOS/CM AT 25 C) (FLD)	7430.0	6130.0	12970.0
TDS (MEASURED AT 180 C)	6394.0	4747.0	13269.0
TOTAL SUSPENDED SOLIDS	3.8	1.4	7.4
TURBIDITY (NTU)	3.25	4.5	5.5
WATER TEMPERATURE (C) (FLD)	28.1	29.1	28.6
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	245.0	218.0	339.0
MAGNESIUM (MG) DIS	234.0	92.0	300.0
SODIUM (NA) DIS	1227.0	900.0	3000.0
POTASSIUM (K) DIS	16.0	286.0	504.0
BICARBONATE (HCO3)	351.0	257.0	382.0
CARBONATE AS CO3	<1.0	24.0	<1.0
SULFATE (SO4)	3559.0	2330.0	9407.0
CHLORIDE (CL)	464.0	435.0	230.0
FLUORIDE (F)	1.2	3.0	1.4
-- NUTRIENTS --			
NITRATE + NITRITE AS N	41.0	16.0	182.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	<0.05	0.027	11.0
CADMIUM (CD) TOT	<0.005	<0.005	0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	0.049
IRON (FE) TOT	0.19	<0.1	0.47
LEAD (PB) TOT	<0.005	<0.003	0.006
SELENIUM (SE) TOT	6.0	0.84	3.4
ZINC (ZN) TOT	0.044	0.025	0.1

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 --

SITE CODE	EP-76	EP-77	EP-78	
SAMPLE DATE	08/07/2000	08/04/2000	08/09/2000	
SAMPLE TIME	14:40	13:45	14:10	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L001279021	L001279008	L001286013	
SAMPLE NUMBER	EPRI-0008-142	EPRI-0008-143	EPRI-0008-144	
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	69.02	44.4	30.56	
OXYGEN (O) (FLD) DIS	0.5	0.5	0.7	
PH (FLD)	7.28	7.2	7.61	
PH	8.1	8.1	7.7	
SC (UMHOS/CM AT 25 C)	5300.0	3940.0	2480.0	
SC (UMHOS/CM AT 25 C) (FLD)	5250.0	3860.0	2770.0	
TDS (MEASURED AT 180 C)	3794.0	2707.0	1624.0	
TOTAL SUSPENDED SOLIDS	2.5	226.0	21.0	
TURBIDITY (NTU)	2.45	90.3	9.1	
WATER TEMPERATURE (C) (FLD)	23.5	25.1	24.5	
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	162.0	106.0	51.0	
MAGNESIUM (MG) DIS	88.0	25.0	24.0	
SODIUM (NA) DIS	800.0	700.0	376.0	
POTASSIUM (K) DIS	93.0	17.0	53.0	
BICARBONATE (HCO3)	494.0	355.0	301.0	
CARBONATE AS CO3	<1.0	<1.0	<1.0	
SULFATE (SO4)	1827.0	1271.0	741.0	
CHLORIDE (CL)	456.0	372.0	130.0	
FLUORIDE (F)	2.2	3.5	3.6	J3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	4.0	0.97	7.2	J3
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	1.1	6.4	3.5	
CADMIUM (CD) TOT	<0.005	0.007	<0.005	
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	
COPPER (CU) TOT	<0.025	<0.025	<0.025	
IRON (FE) TOT	0.3	3.7	0.49	
LEAD (PB) TOT	0.007	0.008	0.006	
SELENIUM (SE) TOT	0.15	0.015	0.47	
ZINC (ZN) TOT	0.084	0.022	0.033	

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-79		EP-80		EP-81	
SAMPLE DATE	08/09/2000		08/10/2000		08/09/2000	
SAMPLE TIME	15:40		09:15		16:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001286017		L001286020		L001286019	
SAMPLE NUMBER	EPRI-0008-145		EPRI-0008-146		EPRI-0008-147	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	45.69		10.74		18.07	
OXYGEN (O) (FLD) DIS	1.0		0.3		3.5	
PH (FLD)	7.55		7.13		7.15	
PH	8.3		7.9		7.8	
SC (UMHOS/CM AT 25 C)	4350.0		5230.0		3260.0	
SC (UMHOS/CM AT 25 C) (FLD)	4890.0		5.8		3720.0	
TDS (MEASURED AT 180 C)	2946.0		3789.0		2344.0	
TOTAL SUSPENDED SOLIDS	30.0		6.6		11.0	
TURBIDITY (NTU)	6.5		6.0		6.35	
WATER TEMPERATURE (C) (FLD)	26.5		25.3		30.6	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	44.0		163.0		169.0	
MAGNESIUM (MG) DIS	46.0		74.0		76.0	
SODIUM (NA) DIS	813.0		766.0		431.0	
POTASSIUM (K) DIS	12.0		21.0		30.0	
BICARBONATE (HCO3)	455.0		542.0		342.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1337.0		1877.0		1189.0	
CHLORIDE (CL)	387.0		484.0		235.0	
FLUORIDE (F)	5.0	J3	1.3		2.6	J3
-- NUTRIENTS --						
NITRATE + NITRITE AS N	10.0	J3	0.4	J3	6.1	J3
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.007		0.013		0.78	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.32		0.26		0.32	
LEAD (PB) TOT	<0.003		<0.003		<0.003	
SELENIUM (SE) TOT	0.11		<0.005		0.28	
ZINC (ZN) TOT	<0.02		<0.02		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: GROUNDWATER --

SITE CODE	EP-82		EP-83		EP-84		EP-84	
SAMPLE DATE	08/09/2000		08/09/2000		08/09/2000		08/09/2000	
SAMPLE TIME	14:45		11:00		08:50		09:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001286015		L001286009		L001286002		L001286003	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0008-148		EPRI-0008-149		EPRI-0008-150		EPRI-0008-229	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	16.62		28.3		9.11			
OXYGEN (O) (FLD) DIS	0.6		5.4		1.1		1.1	
PH (FLD)	7.37		7.5		7.1		7.11	
PH	8.3		8.3		7.9		7.9	
SC (UMHOS/CM AT 25 C)	2130.0		3820.0		2880.0		2860.0	
SC (UMHOS/CM AT 25 C) (FLD)	2380.0		3830.0		2870.0		2810.0	
TDS (MEASURED AT 180 C)	1453.0		2623.0		2124.0		2136.0	
TOTAL SUSPENDED SOLIDS	5.0		4.3		2.2		2.2	
TURBIDITY (NTU)	3.3		3.0		4.0			
WATER TEMPERATURE (C) (FLD)	23.8		22.9		23.7		23.8	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	33.0		63.0		166.0		176.0	
MAGNESIUM (MG) DIS	18.0		55.0		77.0		82.0	
SODIUM (NA) DIS	359.0		609.0		245.0		269.0	
POTASSIUM (K) DIS	17.0		9.4		6.9		6.6	
BICARBONATE (HCO3)	561.0		375.0		303.0		301.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	569.0		1297.0		941.0		997.0	
CHLORIDE (CL)	109.0		362.0		283.0		310.0	
FLUORIDE (F)	3.8	J3	3.1	J3	0.65	J3	0.69	J3
-- NUTRIENTS --								
NITRATE + NITRITE AS N	2.5	J3	9.2	J3	8.3	J3	8.6	J3
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.009		0.005		0.036		0.035	
CADMIUM (CD) TOT	<0.005		<0.005		0.013		0.013	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.11		<0.1		<0.1		<0.1	
LEAD (PB) TOT	<0.003		<0.003		0.026		0.02	
SELENIUM (SE) TOT	0.058		0.042		0.018		0.019	
ZINC (ZN) TOT	<0.02		<0.02		0.081		0.068	

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R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-85		EP-86		EP-88
SAMPLE DATE	08/09/2000		08/09/2000		08/04/2000
SAMPLE TIME	16:00		15:15		14:00
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L001286018		L001286016		L001279009
SAMPLE NUMBER	EPRI-0008-151		EPRI-0008-152		EPRI-0008-154
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	13.66		50.06		29.69
OXYGEN (O) (FLD) DIS	1.0		8.7		0.6
PH (FLD)	7.35		7.6		7.24
PH	8.1		8.6		8.1
SC (UMHOS/CM AT 25 C)	2620.0		2600.0		5290.0
SC (UMHOS/CM AT 25 C) (FLD)	2920.0		2910.0		5220.0
TDS (MEASURED AT 180 C)	1784.0		1652.0		3705.0
TOTAL SUSPENDED SOLIDS	15.0		8.8		3.4
TURBIDITY (NTU)	6.5		4.95		3.5
WATER TEMPERATURE (C) (FLD)	24.8		23.8		26.9
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	65.0		38.0		54.0
MAGNESIUM (MG) DIS	31.0		27.0		34.0
SODIUM (NA) DIS	387.0		425.0		1000.0
POTASSIUM (K) DIS	25.0		12.0		3.9
BICARBONATE (HCO3)	403.0		301.0		609.0
CARBONATE AS CO3	<1.0		20.0		<1.0
SULFATE (SO4)	765.0		675.0		1633.0
CHLORIDE (CL)	164.0		271.0		292.0
FLUORIDE (F)	3.7	J3	2.6	J3	2.1
-- NUTRIENTS --					
NITRATE + NITRITE AS N	8.4	J3	6.3	J3	2.8
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	2.6		<0.005		0.027
CADMIUM (CD) TOT	<0.005		<0.005		<0.005
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01
COPPER (CU) TOT	<0.025		<0.025		<0.025
IRON (FE) TOT	0.44		0.21		0.1
LEAD (PB) TOT	0.006		<0.003		0.0
SELENIUM (SE) TOT	0.18		0.028		0.041
ZINC (ZN) TOT	<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
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R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-89	EP-90	EP-93	
SAMPLE DATE	08/02/2000	08/04/2000	08/09/2000	
SAMPLE TIME	14:10	10:45	10:30	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L001238011	L001279006	L001286007	
SAMPLE NUMBER	EPRI-0008-155	EPRI-0008-156	EPRI-0008-157	
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	41.34	57.38	48.01	
OXYGEN (O) (FLD) DIS	3.4	0.3	2.9	
PH (FLD)	7.15	6.99	7.19	
PH	8.1	8.1	8.1	
SC (UMHOS/CM AT 25 C)	2900.0	5030.0	4840.0	
SC (UMHOS/CM AT 25 C) (FLD)	2870.0	5020.0	4680.0	
TDS (MEASURED AT 180 C)	1995.0	3853.0	3351.0	
TOTAL SUSPENDED SOLIDS	2.0	133.0	337.0	
TURBIDITY (NTU)	2.41	61.0	16.5	
WATER TEMPERATURE (C) (FLD)	24.8	25.1	25.7	
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	139.0	219.0	116.0	
MAGNESIUM (MG) DIS	55.0	106.0	73.0	
SODIUM (NA) DIS	350.0	712.0	850.0	
POTASSIUM (K) DIS	16.0	8.3	12.0	
BICARBONATE (HCO3)	278.0	343.0	756.0	
CARBONATE AS CO3	<1.0	<1.0	<1.0	
SULFATE (SO4)	796.0	1953.0	1118.0	
CHLORIDE (CL)	334.0	500.0	448.0	
FLUORIDE (F)	0.77	0.5	1.7	J3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	7.9	29.0	8.2	J3
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	<0.005	0.13	0.01	
CADMIUM (CD) TOT	<0.005	0.01	<0.005	
CHROMIUM (CR) TOT	<0.01	<0.01	0.016	
COPPER (CU) TOT	<0.025	<0.025	<0.025	
IRON (FE) TOT	<0.1	1.6	9.3	
LEAD (PB) TOT	0.019	0.003	0.009	
SELENIUM (SE) TOT	0.017	1.2	0.029	
ZINC (ZN) TOT	<0.02	<0.02	0.041	

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: GROUNDWATER --

SITE CODE	EP-94		EP-95		EP-96	
SAMPLE DATE	08/09/2000		08/09/2000		08/09/2000	
SAMPLE TIME	09:45		09:20		10:10	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001286005		L001286004		L001286006	
SAMPLE NUMBER	EPRI-0008-158		EPRI-0008-159		EPRI-0008-160	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	50.7		22.26		60.1	
OXYGEN (O) (FLD) DIS	4.2		5.1		6.1	
PH (FLD)	7.25		7.67		7.19	
PH	8.0		8.3		8.0	
SC (UMHOS/CM AT 25 C)	4910.0		3220.0		4780.0	
SC (UMHOS/CM AT 25 C) (FLD)	4870.0		3240.0		4700.0	
TDS (MEASURED AT 180 C)	3391.0		2127.0		3366.0	
TOTAL SUSPENDED SOLIDS	1.2		2.8		307.0	
TURBIDITY (NTU)	3.7		3.7		69.3	
WATER TEMPERATURE (C) (FLD)	24.4		22.0		24.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	100.0		35.0		140.0	
MAGNESIUM (MG) DIS	96.0		57.0		84.0	
SODIUM (NA) DIS	725.0		481.0		681.0	
POTASSIUM (K) DIS	13.0		2.7		12.0	
BICARBONATE (HCO3)	400.0		372.0		500.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1411.0		859.0		1388.0	
CHLORIDE (CL)	554.0		355.0		454.0	
FLUORIDE (F)	1.3	J3	4.0	J3	1.0	J3
-- NUTRIENTS --						
NITRATE + NITRITE AS N	15.0	J3	9.2	J3	17.0	J3
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.009		0.011		0.008	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.11		0.14		4.2	
LEAD (PB) TOT	<0.003		<0.003		0.007	
SELENIUM (SE) TOT	0.026		0.027		0.017	
ZINC (ZN) TOT	0.028		<0.02		0.034	

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-97		EP-98		EP-99	
SAMPLE DATE	08/09/2000		08/09/2000		08/09/2000	
SAMPLE TIME	12:45		13:15		08:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001286008		L001286011		L001286001	
SAMPLE NUMBER	EPRI-0008-161		EPRI-0008-162		EPRI-0008-163	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	6.89		12.61		71.55	
OXYGEN (O) (FLD) DIS	4.5		2.8		1.5	
PH (FLD)	7.01		7.44		7.07	
PH	8.0		8.3		7.6	
SC (UMHOS/CM AT 25 C)	4040.0		6460.0		5830.0	
SC (UMHOS/CM AT 25 C) (FLD)	4190.0		7140.0		5840.0	
TDS (MEASURED AT 180 C)	2817.0		4548.0		4783.0	
TOTAL SUSPENDED SOLIDS	7.5		14.0		18.0	
TURBIDITY (NTU)	3.2		7.8		9.8	
WATER TEMPERATURE (C) (FLD)	28.6		26.7		25.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	108.0		73.0		323.0	
MAGNESIUM (MG) DIS	72.0		67.0		112.0	
SODIUM (NA) DIS	663.0		1008.0		676.0	
POTASSIUM (K) DIS	11.0		90.0		91.0	
BICARBONATE (HCO3)	659.0		432.0		365.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	947.0		2168.0		2274.0	
CHLORIDE (CL)	348.0		684.0		358.0	
FLUORIDE (F)	1.4	J3	2.5	J3	3.6	J3
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.073	UJ1 J3	11.0	J3	80.0	J3
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.15		0.021		6.5	
CADMIUM (CD) TOT	0.009		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.19		<0.025		0.058	
IRON (FE) TOT	0.45		0.3		2.2	
LEAD (PB) TOT	0.024		0.004		0.036	
SELENIUM (SE) TOT	0.009		0.46		1.1	
ZINC (ZN) TOT	0.095		0.032		0.095	

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
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R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-100	EP-101	EP-102
SAMPLE DATE	08/07/2000	08/04/2000	08/04/2000
SAMPLE TIME	09:45	09:45	10:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001279015	L001279004	L001279005
SAMPLE NUMBER	EPRI-0008-164	EPRI-0008-165	EPRI-0008-166
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	41.8	64.71	56.99
OXYGEN (O) (FLD) DIS	0.5	1.6	0.5
PH (FLD)	6.69	6.94	7.02
PH	7.4	7.3	7.2
SC (UMHOS/CM AT 25 C)	10160.0	9460.0	2530.0
SC (UMHOS/CM AT 25 C) (FLD)	9960.0	9480.0	2610.0
TDS (MEASURED AT 180 C)	7987.0	6935.0	1738.0
TOTAL SUSPENDED SOLIDS	79.0	53.0	11.0
TURBIDITY (NTU)	50.0	24.0	4.0
WATER TEMPERATURE (C) (FLD)	26.1	28.9	27.6
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	576.0	185.0	89.0
MAGNESIUM (MG) DIS	293.0	56.0	16.0
SODIUM (NA) DIS	1200.0	1800.0	280.0
POTASSIUM (K) DIS	29.0	61.0	103.0
BICARBONATE (HCO3)	336.0	249.0	228.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2879.0	3552.0	642.0
CHLORIDE (CL)	1499.0	832.0	171.0
FLUORIDE (F)	1.2	1.6	1.5
-- NUTRIENTS --			
NITRATE + NITRITE AS N	241.0	102.0	9.1
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.014	6.8	0.28
CADMIUM (CD) TOT	0.027	1.3	0.099
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	0.03	0.026	<0.025
IRON (FE) TOT	1.9	2.1	1.2
LEAD (PB) TOT	0.005	0.012	0.009
SELENIUM (SE) TOT	0.52	3.4	3.6
ZINC (ZN) TOT	0.18	0.13	0.053

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: GROUNDWATER --

SITE CODE	EP-103	EP-104	EP-105
SAMPLE DATE	08/04/2000	08/03/2000	08/04/2000
SAMPLE TIME	13:15	14:15	08:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001279007	L001238024	L001279025
SAMPLE NUMBER	EPRI-0008-167	EPRI-0008-168	EPRI-0008-169
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	60.77	65.14	65.88
OXYGEN (O) (FLD) DIS	3.2	1.2	5.0
PH (FLD)	7.09	7.14	7.72
PH	8.0	8.1	8.3
SC (UMHOS/CM AT 25 C)	1552.0	4410.0	3720.0
SC (UMHOS/CM AT 25 C) (FLD)	1534.0	4420.0	3210.0
TDS (MEASURED AT 180 C)	964.0	3038.0	2641.0
TOTAL SUSPENDED SOLIDS	4.2	27.0	9.6
TURBIDITY (NTU)	8.1	16.3	8.8
WATER TEMPERATURE (C) (FLD)	30.4	25.8	32.1
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	59.0	111.0	156.0
MAGNESIUM (MG) DIS	18.0	65.0	57.0
SODIUM (NA) DIS	200.0	788.0	500.0
POTASSIUM (K) DIS	4.0	20.0	15.0
BICARBONATE (HCO3)	165.0	395.0	232.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	412.0	1386.0	1382.0
CHLORIDE (CL)	169.0	468.0	393.0
FLUORIDE (F)	0.63	2.2	3.0
-- NUTRIENTS --			
NITRATE + NITRITE AS N	2.5	11.0	4.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.023	0.082	0.6
CADMIUM (CD) TOT	0.007	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	0.045
IRON (FE) TOT	0.28	0.63	1.2
LEAD (PB) TOT	<0.003	0.008	0.018
SELENIUM (SE) TOT	0.23	0.096	0.039
ZINC (ZN) TOT	<0.02	0.026	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)
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R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-106	EP-107	EP-108	
SAMPLE DATE	08/02/2000	08/03/2000	08/09/2000	
SAMPLE TIME	15:15	13:15	13:45	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L001238015	L001238023	L001286012	
SAMPLE NUMBER	EPRI-0008-170	EPRI-0008-171	EPRI-0008-172	
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	60.1	63.39	20.29	
OXYGEN (O) (FLD) DIS	2.2	3.2	2.7	
PH (FLD)	7.04	7.0	7.51	
PH	8.1	7.9	8.3	
SC (UMHOS/CM AT 25 C)	4700.0	6190.0	2520.0	
SC (UMHOS/CM AT 25 C) (FLD)	4670.0	6100.0	3450.0	
TDS (MEASURED AT 180 C)	3647.0	4730.0	1657.0	
TOTAL SUSPENDED SOLIDS	6.8	<1.0	1.3	
TURBIDITY (NTU)	4.6	0.41	2.2	
WATER TEMPERATURE (C) (FLD)	28.3	27.4	25.4	
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	210.0	364.0	35.0	
MAGNESIUM (MG) DIS	96.0	171.0	28.0	
SODIUM (NA) DIS	650.0	784.0	326.0	
POTASSIUM (K) DIS	14.0	18.0	38.0	
BICARBONATE (HCO3)	293.0	200.0	307.0	
CARBONATE AS CO3	<1.0	<1.0	<1.0	
SULFATE (SO4)	1780.0	1752.0	693.0	
CHLORIDE (CL)	355.0	898.0	218.0	
FLUORIDE (F)	0.85	1.0	2.4	
-- NUTRIENTS --				
NITRATE + NITRITE AS N	10.0	86.0	5.1	J3
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.006	0.022	1.3	
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	
COPPER (CU) TOT	<0.025	<0.025	<0.025	
IRON (FE) TOT	0.43	<0.1	0.12	
LEAD (PB) TOT	0.006	<0.005	0.005	
SELENIUM (SE) TOT	0.11	0.43	0.051	
ZINC (ZN) TOT	<0.02	0.024	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)
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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: GROUNDWATER --

SITE CODE	EP-109		EP-110		EP-111	
SAMPLE DATE	08/09/2000		08/02/2000		08/14/2000	
SAMPLE TIME	14:30		13:30		09:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001286014		L001238010		L001314001	
SAMPLE NUMBER	EPRI-0008-173		EPRI-0008-174		EPRI-0008-175	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	19.29		8.25		4.82	
OXYGEN (O) (FLD) DIS	4.0		2.4		0.2	
PH (FLD)	7.29		7.19		7.1	
PH	8.1		8.1		7.8	
SC (UMHOS/CM AT 25 C)	3930.0		2900.0		5160.0	
SC (UMHOS/CM AT 25 C) (FLD)	4400.0		2860.0		5220.0	
TDS (MEASURED AT 180 C)	2726.0		1985.0		3814.0	
TOTAL SUSPENDED SOLIDS	5.9		1.4		13.0	
TURBIDITY (NTU)	3.45		2.0		7.82	
WATER TEMPERATURE (C) (FLD)	25.4		25.7		25.0	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	84.0		135.0		221.0	
MAGNESIUM (MG) DIS	63.0		57.0		64.0	
SODIUM (NA) DIS	587.0		350.0		813.0	
POTASSIUM (K) DIS	20.0		19.0		59.0	
BICARBONATE (HCO3)	383.0		288.0		354.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1308.0		805.0		2041.0	
CHLORIDE (CL)	369.0		354.0		491.0	
FLUORIDE (F)	2.4	J3	0.78		2.6	J3
-- NUTRIENTS --						
NITRATE + NITRITE AS N	8.9	J3	7.7		0.074	J4
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.011		0.007		0.97	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.16		<0.1		1.6	
LEAD (PB) TOT	<0.003		<0.005		<0.003	
SELENIUM (SE) TOT	0.056		0.017		0.007	
ZINC (ZN) TOT	0.022		<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)
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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: GROUNDWATER --

SITE CODE	EP-112		EP-112		EP-113		EP-114	
SAMPLE DATE	08/14/2000		08/14/2000		08/14/2000		08/14/2000	
SAMPLE TIME	09:40		09:45		10:10		13:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001314002		L001314003		L001314004		L001314005	
REMARKS			DUPLICATE					
SAMPLE NUMBER	EPRI-0008-176		EPRI-0008-233		EPRI-0008-177		EPRI-0008-178	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	6.3				6.01		13.1	
OXYGEN (O) (FLD) DIS	0.2		0.2		0.1		0.5	
PH (FLD)	6.97		6.97		7.3		6.5	
PH	7.6		7.9		7.8		6.6	
SC (UMHOS/CM AT 25 C)	7290.0		7260.0		3560.0		7730.0	
SC (UMHOS/CM AT 25 C) (FLD)	7430.0		7430.0		3630.0		6480.0	
TDS (MEASURED AT 180 C)	5212.0		5156.0		2494.0		6743.0	
TOTAL SUSPENDED SOLIDS	5.7		5.1		1.7		3973.0	
TURBIDITY (NTU)	5.44				3.25		>200	
WATER TEMPERATURE (C) (FLD)	23.5		23.6		23.6		26.3	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	237.0		240.0		106.0		732.0	
MAGNESIUM (MG) DIS	119.0		122.0		47.0		285.0	
SODIUM (NA) DIS	996.0		908.0		518.0		944.0	
POTASSIUM (K) DIS	88.0		88.0		34.0		203.0	
BICARBONATE (HCO3)	695.0		695.0		393.0		1171.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	2890.0		2908.0		1221.0		3840.0	
CHLORIDE (CL)	543.0		507.0		246.0		620.0	
FLUORIDE (F)	1.7	J3	1.7	J3	3.1	J3	10.0	J3
-- NUTRIENTS --								
NITRATE + NITRITE AS N	0.1	J4	0.11		0.086	J4	0.082	J4
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.015		0.014		0.005		240.0	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		1.7	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		0.066	
COPPER (CU) TOT	<0.025		<0.025		<0.025		1.6	
IRON (FE) TOT	0.42		0.38		0.67		210.0	
LEAD (PB) TOT	<0.003		<0.003		<0.003		1.1	
SELENIUM (SE) TOT	0.016		0.013		<0.005		0.063	
ZINC (ZN) TOT	<0.02		<0.02		<0.02		51.0	

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-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-115		EP-116		EP-117	
SAMPLE DATE	08/14/2000		08/14/2000		08/14/2000	
SAMPLE TIME	13:15		13:40		14:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001314006		L001314007		L001314008	
SAMPLE NUMBER	EPRI-0008-179		EPRI-0008-180		EPRI-0008-181	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	13.31		11.44		13.9	
OXYGEN (O) (FLD) DIS	1.5		2.0		3.1	
PH (FLD)	6.84		7.08		7.52	
PH	7.6		7.7		7.9	
SC (UMHOS/CM AT 25 C)	9410.0		6180.0		3720.0	
SC (UMHOS/CM AT 25 C) (FLD)	8160.0		5510.0		3380.0	
TDS (MEASURED AT 180 C)	7750.0		4396.0		2832.0	
TOTAL SUSPENDED SOLIDS	8.5		442.0		5468.0	
TURBIDITY (NTU)	5.03		>200		30.6	
WATER TEMPERATURE (C) (FLD)	29.5		27.9		25.7	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	489.0		257.0		330.0	
MAGNESIUM (MG) DIS	212.0		73.0		51.0	
SODIUM (NA) DIS	1263.0		849.0		375.0	
POTASSIUM (K) DIS	81.0		49.0		83.0	
BICARBONATE (HCO3)	822.0		558.0		599.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	4050.0		2458.0		1350.0	
CHLORIDE (CL)	762.0		481.0		353.0	
FLUORIDE (F)	3.3	J3	4.9	J3	4.5	J3
-- NUTRIENTS --						
NITRATE + NITRITE AS N	52.0		11.0		11.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.25		3.1		5.8	
CADMIUM (CD) TOT	0.14		0.4		0.54	
CHROMIUM (CR) TOT	<0.01		<0.01		0.028	
COPPER (CU) TOT	0.18		5.6		0.35	
IRON (FE) TOT	0.48		11.0		37.0	
LEAD (PB) TOT	0.037		0.55		1.8	
SELENIUM (SE) TOT	0.31		0.19		0.95	
ZINC (ZN) TOT	0.24		2.4		0.79	

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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: GROUNDWATER --

SITE CODE	EP-118
SAMPLE DATE	08/14/2000
SAMPLE TIME	15:45
LAB	TSC-SLC
LAB NUMBER	L001314014
SAMPLE NUMBER	EPRI-0008-182

-- PHYSICAL PARAMETERS --		
DEPTH TO WATER LEVEL (FEET)	10.89	
OXYGEN (O) (FLD) DIS	2.1	
PH (FLD)	7.95	
PH	8.3	
SC (UMHOS/CM AT 25 C)	3280.0	
SC (UMHOS/CM AT 25 C) (FLD)	2910.0	
TDS (MEASURED AT 180 C)	2243.0	
TOTAL SUSPENDED SOLIDS	1139.0	
TURBIDITY (NTU)	>200	
WATER TEMPERATURE (C) (FLD)	26.3	
-- MAJOR CONSTITUENTS --		
CALCIUM (CA) DIS	96.0	
MAGNESIUM (MG) DIS	49.0	
SODIUM (NA) DIS	480.0	
POTASSIUM (K) DIS	16.0	
BICARBONATE (HCO3)	265.0	
CARBONATE AS CO3	<1.0	
SULFATE (SO4)	1060.0	
CHLORIDE (CL)	251.0	
FLUORIDE (F)	1.5	J3
-- NUTRIENTS --		
NITRATE + NITRITE AS N	15.0	
-- METALS & MINOR CONSTITUENTS --		
ARSENIC (AS) TOT	0.22	
CADMIUM (CD) TOT	<0.005	
CHROMIUM (CR) TOT	0.01	
COPPER (CU) TOT	0.073	
IRON (FE) TOT	37.0	
LEAD (PB) TOT	0.12	
SELENIUM (SE) TOT	0.3	
ZINC (ZN) TOT	0.11	

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	08/01/2000	08/02/2000	08/03/2000	08/04/2000	08/07/2000	08/09/2000	
SAMPLE TIME	15:30	15:45	12:45	15:30	16:45	12:00	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L001238006	L001238016	L001238022	L001279012	L001279024	L001286010	
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	
SAMPLE NUMBER	EPRI-0008-220	EPRI-0008-222	EPRI-0008-224	EPRI-0008-226	EPRI-0008-228	EPRI-0008-230	
-- PHYSICAL PARAMETERS --							
PH	5.7	5.8	6.0	5.5	5.6	5.7	
SC (UMHOS/CM AT 25 C)	<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	
TOTAL SUSPENDED SOLIDS	<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	
SODIUM (NA) DIS	<5.0	<5.0	<5.0	<5.0	<5.0	<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	<1.0	<1.0	<1.0	<1.0	
FLUORIDE (F)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	UJ3
-- NUTRIENTS --							
NITRATE + NITRITE AS N	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	<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) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
LEAD (PB) TOT	0.011	<0.005	<0.005	<0.003	<0.003	<0.003	
SELENIUM (SE) TOT	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	
ZINC (ZN) TOT	0.023	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: QUALITY CONTROL --

SITE CODE	DI	DI	DI	DI	DI
SAMPLE DATE	08/10/2000	08/14/2000	08/15/2000	08/16/2000	08/21/2000
SAMPLE TIME	11:50	16:15	15:00	16:00	14:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001286028	L001314015	L001314021	L001335012	L001361012
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK
SAMPLE NUMBER	EPRI-0008-232	EPRI-0008-235	EPRI-0008-237	EPRI-0008-239	EPRI-0008-242
-- PHYSICAL PARAMETERS --					
PH	5.8	6.0	5.8	5.4	5.6
SC (UMHOS/CM AT 25 C)	<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
TOTAL SUSPENDED SOLIDS	<1.0	<1.0	<1.0	1.7	1.3
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	<1.0	<1.0	<1.0	<1.0	<1.0
MAGNESIUM (MG) DIS	<1.0	<1.0	<1.0	<1.0	<1.0
SODIUM (NA) DIS	<2.0	<2.0	<2.0	<2.0	<2.0
POTASSIUM (K) DIS	<2.0	<2.0	<2.0	<2.0	<2.0
BICARBONATE (HCO3)	<1.0	<1.0	<1.0	<1.0 UJ3	<1.0 UJ3
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0 UJ3	<1.0 UJ3
SULFATE (SO4)	<2.0	<2.0	<2.0	<2.0	<2.0
CHLORIDE (CL)	<1.0	<1.0	<1.0	<1.0	<1.0
FLUORIDE (F)	<0.05	<0.05 UJ3	<0.05 UJ3	<0.05 UJ3	<0.05
-- NUTRIENTS --					
NITRATE + NITRITE AS N	<0.1	<0.05	0.068	0.077	<0.05
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	<0.005	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1
LEAD (PB) TOT	0.006	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005 UJ4	<0.005
ZINC (ZN) TOT	<0.02	<0.02	<0.02	<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	POND 1		POND 6		SEP-1		SEP-1	
SAMPLE DATE	08/21/2000		08/21/2000		08/14/2000		08/14/2000	
SAMPLE TIME	13:30		14:00		14:45		14:50	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001361010		L001361011		L001314010		L001314011	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0008-201		EPRI-0008-203		EPRI-0008-183		EPRI-0008-234	
-- PHYSICAL PARAMETERS --								
OXYGEN (O) (FLD) DIS	4.7		8.3		5.6		5.7	
PH (FLD)	7.29		8.41		8.41		8.4	
PH	7.4		7.6		8.6		8.6	
SC (UMHOS/CM AT 25 C)	8280.0		2190.0		984.0		987.0	
SC (UMHOS/CM AT 25 C) (FLD)	8060.0		2110.0		878.0		880.0	
TDS (MEASURED AT 180 C)	6514.0		1598.0		611.0		626.0	
TOTAL SUSPENDED SOLIDS	15.0		22.0		278.0		275.0	
TURBIDITY (NTU)	5.86		9.72		26.0			
WATER TEMPERATURE (C) (FLD)	30.1		32.2		28.8		28.8	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	184.0		188.0		67.0		68.0	
MAGNESIUM (MG) DIS	26.0		33.0		16.0		16.0	
SODIUM (NA) DIS	1493.0		219.0		103.0		99.0	
POTASSIUM (K) DIS	38.0		13.0		9.1		8.5	
BICARBONATE (HCO3)	39.0	J3	61.0	J3	222.0		224.0	
CARBONATE AS CO3	<1.0	UJ3	<1.0	UJ3	11.0		11.0	
SULFATE (SO4)	3778.0		745.0		213.0		207.0	
CHLORIDE (CL)	410.0		246.0		80.0		73.0	
FLUORIDE (F)	14.0		2.9		0.66	J3	0.68	J3
-- NUTRIENTS --								
NITRATE + NITRITE AS N	45.0		0.57		0.66	J4	0.51	J4
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.27		0.97		<0.005		<0.005	
CADMIUM (CD) TOT	4.3		0.69		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.46		0.69		<0.025		<0.025	
IRON (FE) TOT	0.38		0.28		5.9		5.6	
LEAD (PB) TOT	0.17		0.26		0.006		0.005	
SELENIUM (SE) TOT	0.39		0.099		<0.005		<0.005	
ZINC (ZN) TOT	2.8		1.9		0.034		0.024	

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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: SURFACE WATER --

SITE CODE	SEP-2		SEP-3		SEP-4	
SAMPLE DATE	08/21/2000		08/14/2000		08/21/2000	
SAMPLE TIME	10:45		15:10		09:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001361005		L001314012		L001361001	
SAMPLE NUMBER	EPRI-0008-184		EPRI-0008-185		EPRI-0008-186	
-- PHYSICAL PARAMETERS --						
OXYGEN (O) (FLD) DIS	5.4		6.0		5.6	
PH (FLD)	8.25		8.35		7.95	
PH	8.3		8.6		8.3	
SC (UMHOS/CM AT 25 C)	931.0		987.0		938.0	
SC (UMHOS/CM AT 25 C) (FLD)	911.0		882.0		922.0	
TDS (MEASURED AT 180 C)	609.0		634.0		617.0	
TOTAL SUSPENDED SOLIDS	426.0		280.0		437.0	
TURBIDITY (NTU)	17.8		25.0		18.0	
WATER TEMPERATURE (C) (FLD)	26.8		28.7		26.7	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	75.0		71.0		85.0	
MAGNESIUM (MG) DIS	19.0		16.0		21.0	
SODIUM (NA) DIS	91.0		103.0		101.0	
POTASSIUM (K) DIS	8.4		9.3		11.0	
BICARBONATE (HCO3)	272.0	J3	221.0		271.0	J3
CARBONATE AS CO3	<1.0	UJ3	11.0		<1.0	UJ3
SULFATE (SO4)	184.0		208.0		181.0	
CHLORIDE (CL)	87.0		76.0		83.0	
FLUORIDE (F)	0.69		0.68	J3	0.64	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.69		0.57	J4	0.6	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.005		<0.005		<0.005	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		0.013	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	9.0		6.0		12.0	
LEAD (PB) TOT	0.019		0.005		0.009	
SELENIUM (SE) TOT	<0.005		<0.005		<0.005	
ZINC (ZN) TOT	0.05	UJ1	0.023		0.046	UJ1

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-6		SEP-7		SEP-9	
SAMPLE DATE	08/14/2000		08/14/2000		08/21/2000	
SAMPLE TIME	15:30		14:30		13:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001314013		L001314009		L001361008	
SAMPLE NUMBER	EPRI-0008-187		EPRI-0008-188		EPRI-0008-189	
-- PHYSICAL PARAMETERS --						
OXYGEN (O) (FLD) DIS	5.5		5.7		5.4	
PH (FLD)	8.36		8.41		7.84	
PH	8.6		8.6		8.2	
SC (UMHOS/CM AT 25 C)	987.0		956.0		1264.0	
SC (UMHOS/CM AT 25 C) (FLD)	869.0		892.0		1242.0	
TDS (MEASURED AT 180 C)	630.0		603.0		803.0	
TOTAL SUSPENDED SOLIDS	274.0		286.0		248.0	
TURBIDITY (NTU)	25.0		24.0		17.0	
WATER TEMPERATURE (C) (FLD)	27.9		28.8		28.4	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	65.0		72.0		67.0	
MAGNESIUM (MG) DIS	15.0		17.0		15.0	
SODIUM (NA) DIS	93.0		100.0		155.0	
POTASSIUM (K) DIS	8.2		9.1		8.1	
BICARBONATE (HCO3)	223.0		229.0		227.0	J3
CARBONATE AS CO3	11.0		4.8		<1.0	UJ3
SULFATE (SO4)	188.0		187.0		236.0	
CHLORIDE (CL)	73.0		78.0		145.0	
FLUORIDE (F)	0.68	J3	0.69	J3	0.75	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.63	J4	0.53	J4	3.8	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<0.005		<0.005		0.007	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	5.8		6.3		4.6	
LEAD (PB) TOT	0.006		0.005		0.007	
SELENIUM (SE) TOT	<0.005		<0.005		<0.005	
ZINC (ZN) TOT	0.026		0.043		0.046	UJ1

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: SURFACE WATER --

SITE CODE	SEP-10		SEP-11		SEP-12	
SAMPLE DATE	08/21/2000		08/21/2000		08/21/2000	
SAMPLE TIME	11:20		11:00		10:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001361007		L001361006		L001361004	
SAMPLE NUMBER	EPRI-0008-190		EPRI-0008-191		EPRI-0008-192	
-- PHYSICAL PARAMETERS --						
OXYGEN (O) (FLD) DIS	5.4		5.8		5.4	
PH (FLD)	8.2		8.2		8.25	
PH	8.5		8.3		8.4	
SC (UMHOS/CM AT 25 C)	927.0		929.0		930.0	
SC (UMHOS/CM AT 25 C) (FLD)	902.0		907.0		917.0	
TDS (MEASURED AT 180 C)	588.0		583.0		594.0	
TOTAL SUSPENDED SOLIDS	406.0		401.0		418.0	
TURBIDITY (NTU)	16.5		17.0		17.0	
WATER TEMPERATURE (C) (FLD)	26.6		26.9		26.7	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	75.0		69.0		77.0	
MAGNESIUM (MG) DIS	18.0		17.0		19.0	
SODIUM (NA) DIS	94.0		89.0		95.0	
POTASSIUM (K) DIS	8.7		8.2		9.3	
BICARBONATE (HCO3)	226.0	J3	250.0	J3	266.0	J3
CARBONATE AS CO3	10.0	J3	<1.0	UJ3	4.8	J3
SULFATE (SO4)	172.0		186.0		190.0	
CHLORIDE (CL)	78.0		83.0		85.0	
FLUORIDE (F)	0.66		0.65		0.66	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.61		0.58		0.69	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<0.005		<0.005		<0.005	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	8.1		8.2		10.0	
LEAD (PB) TOT	0.008		0.009		0.013	
SELENIUM (SE) TOT	<0.005		<0.005		<0.005	
ZINC (ZN) TOT	0.039	UJ1	0.035	UJ1	0.04	UJ1

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-13		SEP-13		SEP-14
SAMPLE DATE	08/21/2000		08/21/2000		08/21/2000
SAMPLE TIME	10:00		10:10		13:15
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L001361002		L001361003		L001361009
REMARKS			DUPLICATE		
SAMPLE NUMBER	EPRI-0008-193		EPRI-0008-240		EPRI-0008-194
-- PHYSICAL PARAMETERS --					
OXYGEN (O) (FLD) DIS	6.0		6.0		5.9
PH (FLD)	8.16		8.21		8.33
PH	8.3		8.3		7.7
SC (UMHOS/CM AT 25 C)	931.0		931.0		183.0
SC (UMHOS/CM AT 25 C) (FLD)	914.0		916.0		182.0
TDS (MEASURED AT 180 C)	602.0		607.0		136.0
TOTAL SUSPENDED SOLIDS	427.0		428.0		49.0
TURBIDITY (NTU)	17.6				5.8
WATER TEMPERATURE (C) (FLD)	29.2		26.5		30.6
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	78.0		74.0		12.0
MAGNESIUM (MG) DIS	18.0		18.0		3.0
SODIUM (NA) DIS	94.0		94.0		16.0
POTASSIUM (K) DIS	9.3		9.3		2.6
BICARBONATE (HCO3)	255.0	J3	265.0	J3	54.0
CARBONATE AS CO3	<1.0	UJ3	<1.0	UJ3	<1.0
SULFATE (SO4)	172.0		178.0		33.0
CHLORIDE (CL)	81.0		82.0		6.0
FLUORIDE (F)	0.65		0.65		0.24
-- NUTRIENTS --					
NITRATE + NITRITE AS N	0.69		0.71		0.41
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	<0.005		<0.005		0.058
CADMIUM (CD) TOT	<0.005		<0.005		<0.005
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01
COPPER (CU) TOT	<0.025		<0.025		0.25
IRON (FE) TOT	9.7		9.6		2.3
LEAD (PB) TOT	0.008		0.007		0.073
SELENIUM (SE) TOT	<0.005		<0.005		0.006
ZINC (ZN) TOT	0.04	UJ1	0.036	UJ1	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)
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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	POND 1-SED	POND 5-SED	POND 6-SED
SAMPLE DATE	08/21/2000	08/21/2000	08/21/2000
SAMPLE TIME	13:30	13:50	14:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001364010	L001364011	L001364012
SAMPLE NUMBER	EPRI-0008-216	EPRI-0008-217	EPRI-0008-218
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	5700.0	3300.0	12000.0
CADMIUM (CD) TOT	1300.0	1100.0	2100.0
CHROMIUM (CR) TOT	<80.0	200.0	120.0
COPPER (CU) TOT	13000.0	76000.0	70000.0
IRON (FE) TOT	21000.0	68000.0	36000.0
LEAD (PB) TOT	5100.0	37000.0	6700.0
SELENIUM (SE) TOT	120.0	140.0	120.0
ZINC (ZN) TOT	15000.0	38000.0	52000.0

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: SEDIMENT/SOIL --

SITE CODE	SEP-2-SED		SEP-2-SED		SEP-4-SED		SEP-9-SED	
SAMPLE DATE	08/21/2000		08/21/2000		08/21/2000		08/21/2000	
SAMPLE TIME	10:45		10:50		09:30		13:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001364004		L001364005		L001364001		L001364008	
REMARKS			DUPLICATE					
SAMPLE NUMBER	EPRI-0008-205		EPRI-0008-241		EPRI-0008-207		EPRI-0008-210	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	<10.0		17.0		24.0		12.0	
CADMIUM (CD) TOT	<10.0		<10.0		<10.0		<10.0	
CHROMIUM (CR) TOT	<80.0		<80.0		93.0		<80.0	
COPPER (CU) TOT	100.0	J4	160.0	J4	210.0	J4	56.0	J4
IRON (FE) TOT	21000.0		21000.0		20000.0		20000.0	
LEAD (PB) TOT	85.0		92.0		170.0		56.0	
SELENIUM (SE) TOT	<10.0		<10.0		<10.0		<10.0	
ZINC (ZN) TOT	100.0		85.0		130.0		90.0	

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: SEDIMENT/SOIL --

SITE CODE	SEP-10-SED		SEP-11-SED		SEP-12-SED	
SAMPLE DATE	08/21/2000		08/21/2000		08/21/2000	
SAMPLE TIME	11:20		11:00		10:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001364007		L001364006		L001364003	
SAMPLE NUMBER	EPRI-0008-211		EPRI-0008-212		EPRI-0008-213	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	50.0		<10.0		11.0	
CADMIUM (CD) TOT	<10.0		<10.0		<10.0	
CHROMIUM (CR) TOT	<80.0		120.0		86.0	
COPPER (CU) TOT	190.0	J4	65.0	J4	38.0	J4
IRON (FE) TOT	21000.0		17000.0		21000.0	
LEAD (PB) TOT	120.0		74.0		46.0	
SELENIUM (SE) TOT	<10.0		<10.0		<10.0	
ZINC (ZN) TOT	150.0		58.0		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: SEDIMENT/SOIL --

SITE CODE	SEP-13-SED		SEP-14-SED
SAMPLE DATE	08/21/2000		08/21/2000
SAMPLE TIME	10:00		13:15
LAB	TSC-SLC		TSC-SLC
LAB NUMBER	L001364002		L001364009
SAMPLE NUMBER	EPRI-0008-214		EPRI-0008-215
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	14.0		1200.0
CADMIUM (CD) TOT	<10.0		32.0
CHROMIUM (CR) TOT	<80.0		280.0
COPPER (CU) TOT	520.0	J4	15000.0
IRON (FE) TOT	20000.0		190000.0
LEAD (PB) TOT	380.0		4200.0
SELENIUM (SE) TOT	<10.0		<10.0
ZINC (ZN) TOT	220.0		15000.0

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.

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33	L001314011	EPRI-0008-234	08/14/2000	SEP-1
34	L001314012	EPRI-0008-185	08/14/2000	SEP-3
35	L001314013	EPRI-0008-187	08/14/2000	SEP-6
30	L001314014	EPRI-0008-182	08/14/2000	EP-118
32	L001314015	EPRI-0008-235	08/14/2000	DI
11	L001314016	EPRI-0008-125	08/15/2000	EP-57
11	L001314017	EPRI-0008-126	08/15/2000	EP-58
11	L001314018	EPRI-0008-236	08/15/2000	EP-58
14	L001314019	EPRI-0008-133	08/15/2000	EP-65
12	L001314020	EPRI-0008-129	08/15/2000	EP-61
32	L001314021	EPRI-0008-237	08/15/2000	DI
10	L001335001	EPRI-0008-124	08/16/2000	EP-56
6	L001335002	EPRI-0008-112	08/16/2000	EP-24
6	L001335003	EPRI-0008-111	08/16/2000	EP-23
5	L001335004	EPRI-0008-109	08/16/2000	EP-21
5	L001335005	EPRI-0008-238	08/16/2000	EP-21
9	L001335006	EPRI-0008-121	08/16/2000	EP-53
7	L001335007	EPRI-0008-113	08/16/2000	EP-25
10	L001335008	EPRI-0008-123	08/16/2000	EP-55
1	L001335009	EPRI-0008-195	08/16/2000	EM-1
4	L001335010	EPRI-0008-104	08/16/2000	EP-12
8	L001335011	EPRI-0008-117	08/16/2000	EP-43
32	L001335012	EPRI-0008-239	08/16/2000	DI
34	L001361001	EPRI-0008-186	08/21/2000	SEP-4
37	L001361002	EPRI-0008-193	08/21/2000	SEP-13
37	L001361003	EPRI-0008-240	08/21/2000	SEP-13
36	L001361004	EPRI-0008-192	08/21/2000	SEP-12
34	L001361005	EPRI-0008-184	08/21/2000	SEP-2
36	L001361006	EPRI-0008-191	08/21/2000	SEP-11
36	L001361007	EPRI-0008-190	08/21/2000	SEP-10
35	L001361008	EPRI-0008-189	08/21/2000	SEP-9
37	L001361009	EPRI-0008-194	08/21/2000	SEP-14
33	L001361010	EPRI-0008-201	08/21/2000	POND 1
33	L001361011	EPRI-0008-203	08/21/2000	POND 6
32	L001361012	EPRI-0008-242	08/21/2000	DI
39	L001364001	EPRI-0008-207	08/21/2000	SEP-4-SED
41	L001364002	EPRI-0008-214	08/21/2000	SEP-13-SED
40	L001364003	EPRI-0008-213	08/21/2000	SEP-12-SED
39	L001364004	EPRI-0008-205	08/21/2000	SEP-2-SED
39	L001364005	EPRI-0008-241	08/21/2000	SEP-2-SED
40	L001364006	EPRI-0008-212	08/21/2000	SEP-11-SED
40	L001364007	EPRI-0008-211	08/21/2000	SEP-10-SED
39	L001364008	EPRI-0008-210	08/21/2000	SEP-9-SED
41	L001364009	EPRI-0008-215	08/21/2000	SEP-14-SED
38	L001364010	EPRI-0008-216	08/21/2000	POND 1-SED
38	L001364011	EPRI-0008-217	08/21/2000	POND 5-SED
38	L001364012	EPRI-0008-218	08/21/2000	POND 6-SED

SECTION H-3

REMEDIAL INVESTIGATION WATER SAMPLES, FALL 2000

DATA VALIDATION REPORT
ASARCO EL PASO COPPER SMELTER
REMEDIAL INVESTIGATION
WATER SAMPLES
FALL 2000

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GLOSSARY OF TERMS

CCV .....Continuing Calibration Verification

CLP .....Contract Laboratory Program

CRDL.....Contract Required Detection Limit

% Diff.....Percent difference

IDL.....Instrument Detection Limit

LCS .....Laboratory Control Sample

PDLG .....Project Detection Limit Goal

QAPP .....Quality Assurance Project Plan

QC .....Quality Control

RPD.....Relative Percent Difference

SOW.....Statement of Work

SC.....Specific Condutivity

TDS.....Total Dissolved Solids

TSS.....Total Suspended Solids

SUMMARY

This report covers the validation of data for quarterly monitoring water and sediment samples collected during October and November of 2000 for the Asarco El Paso Copper Smelter Remediation Investigation. The validation has been carried out according to requirements spelled out in the work plan (Asarco El Paso Copper Smelter Remedial Investigation Work Plan, November 1996). 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 then sent to Asarco's Technical Services laboratory in Salt Lake City for the following analyses:

Matrix	Laboratory Batches	Physical Parameters	Major Constituents	Metals (Total)
Water	L001820	PH	Calcium	Arsenic
	L001839	Conductivity	Magnesium	Cadmium
	L001857	TDS	Sodium	Chromium
	L001874	TSS	Potassium	Copper
	L001894		Bicarbonate	Iron
	L001895		Carbonate	Lead
	L001906		Sulfate	Zinc
			Chloride	
			Fluoride	
			NO_3+NO_2 as N	
Sediment	L001909 (XRF)	Total Metals (same metals as for water)		

Note that both groundwater and surface water samples from the Fall 2000 monitoring event were analyzed for total metals only. Turbidity was measured in the field. 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 statistics 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 eleven of the surface water sites, and were analyzed for the metals. The sediment samples were analyzed by XRF using a matrix-specific calibration for arsenic and lead, and using a fundamental parameters calibration for cadmium, chromium, copper, iron, selenium, and zinc. (The matrix-specific calibration, however, was for sandy soils from the Asarco site in Murray, Utah rather than being specific to soils from El Paso.)

Following is a summary of groundwater and surface water quality control results:

Laboratory quality control violations resulted in a total of 62 flags:

- Two nitrate + nitrite results were flagged for holding time exceedances. A holding time flag indicates that the result may not be representative of the true sample value.
- Laboratory control standards for batch L001820 had low recoveries for calcium (75%), iron (78%), and zinc (76%). All calcium, iron and zinc values for this batch were flagged to indicate a possible low bias (20 flags each).

Field quality control violations resulted in a total of 154 flags:

- A field duplicate was not submitted for four surface samples that were collected on 11/10/00. This was a frequency violation because the work plan calls for a least one duplicate per matrix per day. A groundwater duplicate sample was submitted on that day and was used to evaluate the precision for the surface water samples.
- One field specific conductivity result was rejected as a result of historical comparisons and interparameter relationships.
- Analytes were detected in field blanks submitted 10/30/00, 10/31/00, 11/1/00, 11/2/00, 11/3/00, 11/8/00, 11/13/00, and 11/14/00 resulted in a total of 60 flags to indicate possible high bias at low concentrations. Flagging for field blanks is summarized in the following table.

Parameter	Number of Flags
Nitrate+Nitrite	4
Zinc (tot)	56

- Of particular note, out of 12 field blanks submitted, zinc was detected in 8 blank samples. The laboratory blanks did not show signs of zinc, therefore, the zinc contamination most likely occurred in the field and was systematic in nature. As a result of this contamination, 56 out of 136 zinc results were flagged.
- Nine out of 13 field duplicate samples had measurements were out of control limits resulting in a total of 93 flags to indicate a possible lack of reproducibility.

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
Lead (tot)	7
Iron (tot)	24
Potassium (dis)	6
TSS	8
Chromium (tot)	11
Nitrate+Nitrite	19
Chloride	11
Zinc (tot)	7

Following is a summary of sediment quality control results:

Laboratory quality control standards for the sediment XRF analyses were all within control limits:

- For arsenic and lead only, information was provided for calibration verification samples (at a frequency of 1 in 10) and laboratory control samples (1 in 20). Recoveries on these standards were all within control limits.
- Reference standards were not analyzed for the parameters analyzed using the fundamental parameters calibration.
- Information was provided for all analytes for laboratory duplicates, which were performed at a frequency of 1 in 20.

Field quality control sample violations resulted in a total of 8 flags:

- A field duplicate collected 11/14/00 was out of control limits for copper, lead, selenium and zinc. These violations resulted in the flagging of two results for each analyte.

Completeness for this project 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 divided by the total number of planned measurements, expressed as a percentage. Completeness was calculated at 99.3% (3521 valid measurements per 3545 planned measurements) for this sampling event. As there were enough valid measurements to satisfactorily address the important issues of the study, completeness for the Fall 2000 sampling event was achieved.

- All sites were sampled according to the work plan.
- One surface water field duplicate was not submitted as required by the work plan.
- One sample result (field specific conductivity measurement) was rejected. It should be noted that the laboratory specific conductivity measurement for this sample was

deemed acceptable, therefore, the rejection of the field measurement data does not affect the overall quality of the data set.

A total of 224 quality control flags were applied to the data, with 34 results receiving 2 flags. Therefore, a total of 190 results were flagged. Considering both lab and field data, 94.6 percent of the data may be used without qualification (3332 out of 3522 results). Of the flagged data, one result was rejected. In conclusion, the data for the Asarco El Paso Copper Smelter Remedial Investigation Fall 2000 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 139 samples collected during April and May of 2000 for the Asarco El Paso Copper Smelter Remedial Investigation. The total number of samples included:
  - 12 DI blanks
  - 15 Field duplicates (2 surface water, 11 groundwater, and 2 sediment)
  - 14 Surface water samples (not counting duplicate)
  - 87 Groundwater samples (not counting duplicates)
  - 11 Sediment samples (not counting dulicates)

- Validation procedures used are generally consistent with:
  (Check all that apply)
  - _X_ EPA CLP National Functional Guidelines for Inorganics Data Review
  - _X_ Asarco El Paso Copper Smelter Remedial Investigation Work Plan, El Paso, Texas (November 1996)
  - ___ Other

- Overall level of validation:
  - ___ Contract Laboratory Program (CLP)
  - _X_ Standard
  - ___ 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.
  - _X_ Yes
  - ___ No

- Field measurements and field documentation were complete.
  - _X_ Yes
  - ___ No

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.
  _X_ 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
  _X_No

  Notes: When an analyte is detected in a blank, associated results up to 5 times the blank level are flagged with "**UJ1**" 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.

  Note that there was an unusual amount of zinc contamination in the field blanks. After reviewing the laboratory preparation blanks, it was determined that the zinc contamination took place in the field. This contamination appeared to be systematic in nature. Possible reasons for the contamination may have been the source of the DI water, container contamination or improper rinsing of equipment. However, improper rinsing of equipment usually does not cause a systematic error and other contaminants would also be present in the blank.

Following is a summary of field blank detections:

Sample	Sample Date	Analyte	Result (mg/L)	5 times Blank Result (mg/L)	PDLG (mg/L)	# of Flags
EPRI-0011-220	10/30/00	Zinc (tot)	0.042	0.210	0.020	7
EPRI-0011-222	10/31/00	Zinc (tot)	0.029	0.145	0.020	12
		SC	2240	NA	5(1)	0(2)
EPRI-0011-223	11/1/00	Potassium (dis)	2.2	11	2.0(1)	0(3)
		TDS	12	NA	10	0(4)
		Nitrate+Nitrite	0.09	0.45	0.05(1)	1
		Zinc (tot)	0.046	0.230	0.020	8

Continued on next page

Field Blank Detections (cont.)

Sample	Sample Date	Analyte	Result (mg/L)	5 times Blank Result (mg/L)	PDLG (mg/L)	# of Flags
EPRI-0011-226	11/2/00	TDS	12	NA	10	0(4)
		Nitrate+Nitrite	0.09	0.45	0.05(1)	0(3)
		Zinc (tot)	0.042	0.210	0.020	6
EPRI-0011-228	11/3/00	Zinc (tot)	0.030	0.150	0.020	7
EPRI-0011-230	11/7/00	Potassium (dis)	2.3	11.5	2.0	0(3)
EPRI-0011-231	11/8/00	TDS	10	NA	10	0(4)
		Zinc (dis)	0.039	0.195	0.20	9
EPRI-0011-234	11/9/00	TDS	11	NA	10	0(4)
EPRI-0011-238	11/13/00	Nitrate+Nitrite	0.054	0.27	0.05(1)	3
		Zinc (tot)	0.025	0.125	0.20	2
EPRI-0011-240	11/14/00	Zinc (tot)	0.033	0.165	0.020	5
EPRI-0011-245	11/15/00	TDS	10	NA	10	0(4)

Notes:

1) Laboratory reporting limit was used, not the PDLG.
2) Even though the SC result for this blank was unusually high, no samples were flagged. All associated sample SC results were in line with historical data.
3) No associated sample results were less than 5 times the blank value.
4) Associated sample results are not flagged for this analyte.

- **Field duplicates**

  Field duplicates have been collected at the proper frequency.

  ___Yes
  _X_No

  Notes: At least one field duplicate was submitted for each day of sampling. However, the project work plan requires a minimum of one field duplicate **per sample matrix** per day. On 11/10/00, four surface water samples were collected in addition to 8 groundwater samples but only one groundwater duplicate was submitted. The groundwater duplicate was used to evaluate the precision for all samples for this day.

  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 ± 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
  _X_No

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

(with the exception of the samples collected 11/10/00) and collected the same day as the duplicate.

Following is a summary of field duplicate exceedances for water samples:

Sample / Duplicate	Site	Sample Date	Analyte	Sample/ Duplicate Result (mg/L)	PDLG (mg/L)	RPD / Diff (mg/L)	# of Flags
EPRI-0011-100 / 219	EP-4	10/30/00	Lead (tot) Iron (tot)	0.023 / 0.017 2.8 / 2.0	0.003 0.1	30.3% RPD 33.3% RPD	7 7
EPRI-0011-137 / 224	EP-70	11/1/00	Potassium (dis)	19 / 15	2.0*	23.5% RPD	6
EPRI-0011-107 / 225	EP-15	11/2/00	Iron (tot)	2.1 / 1.4	0.1	40.0 % RPD	7
EPRI-0011-156 / 227	EP-90	11/3/00	TSS	39 / 100	1.0*	87.8%	8
EPRI-0011-119 / 229	EP-51	11/7/00	Iron (tot) Chromium (tot)	8.1 / 5.5 2.1 / 1.4	0.1 0.01	38.2% 40.0%	10 11
EPRI-0011-151 / 233	EP-85	11/9/00	Nitrate+ Nitrite	5.4 / 6.7	0.05	21.5% RPD	6
EPRI-0011-175 / 235	EP-111	11/10/00	Nitrate+ Nitrite Chloride	0.11 / 0.21 521 / 412	0.05* 1.0	10 mg/L Diff 23.4% RPD	5 11
EPRI-0011-129 / 237	EP-61	11/13/00	Nitrate+ Nitrite	108 / 133	0.05*	20.7% RPD	8
EPRI-0011-109 / 239	EP-21	11/14/00	Zinc (tot)	0.19 / 0.24	0.02	23.3%	7

* Laboratory reporting limit was used, not the PDLG.

Following is a summary of field duplicate exceedances for sediment samples (only the samples and its duplicate were flagged for exceedances):

Sample Number / Duplicate	Site	Sample Date	Analyte	Sample/ Duplicate Result (mg/L)	PDLG (mg/L)	RPD / Diff (mg/L)	# of Flags
EPRI-0011-217 / 241	Pond 5-SED	10/30/00	Copper Lead Selenium Zinc	49000 / 20000 28000 / 16000 220 / 140 31000 / 13000	20* 10 10 10	84% RPD 55% RPD 44% RPD 82% RPD	2 2 2 2

* Laboratory reporting limit was used, not the PDLG.

4. LABORATORY PROCEDURES

- **Laboratory procedures followed**

  ___ CLP-SOW

_X_ SW-846
_X_ Methods for Chemical Analysis of Water and Wastes
_X_ XRF Standard Operating Procedures

- **Holding times met**

___ Yes
_X_ No

Notes: The following table summarizes the sample results flagged for holding time exceedances. A holding time flag **("J3" or "UJ3")** indicates that the result may not be representative of the true sample value.

Site	Sample	Lab No	Analyte	Result (mg/L)	Analyte Holding Time	Actual Holding Time	Days Past Holding Time
EP-75	EPRI-0011-141	L001857009	Nitrate+ Nitrite	172	28	29	1
EP-102	EPRI-0011-102	L001857001	Nitrate+ Nitrite	0.52	28	30	2

- **Consistency with project requirements**

Analyses were carried out as requested.
_X_ Yes
___No

Project specified methods were used.
_X_ Yes
___No

5. DETECTION LIMITS

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

___Yes
_X_ No

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 and iron using the XRF method. Iron was not a concern 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

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-0011-205	Chromium Copper	<80 <20	20 10
SEP-4-SED	EPRI-0011-207	Chromium	<80	20
SEP-9-SED	EPRI-0011-210	Chromium	<80	20
SEP-10-SED	EPRI-0011-211	Copper	<20	10
SEP-13-SED	EPRI-0011-214	Chromium	<80	20

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%).

  _X_ Yes

___ No

8. LABORATORY DUPLICATES

- Laboratory duplicate samples were analyzed at the proper frequency.

  _X_ 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, 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 the PDLG for water matrix, within plus or minus two times the PDLG for sediment or soil matrix.

  _X_ Yes
  ___ No

9. LABORATORY CONTROL STANDARDS

- LCSs were prepared and analyzed at the proper frequency.

  _X_ Yes
  ___ No

- LCS recoveries were within the required control limits (80-120% for water, 75-125% for arsenic and lead analyzed by XRF).

  ___ Yes
  _X_ No

  Notes: Following is a table showing LCS exceedances. Associated samples were flagged with **"UJ4" or "J4"** to indicate a possible low bias. Associated samples were samples analyzed in the same batch as the LCS.

LCS	Laboratory Batch	Analyte	Recovery	# of Flags
WG001171	L001820	Calcium	75%	20
		Iron	78%	20
		Zinc	76%	20

10. INTERPARAMETER RELATIONSHIPS

- The following relationships have been checked:

  _X_ Lab pH vs. field pH.
  _X_ Lab SC vs. field SC
  _X_ TDS vs. SC

Lab pH vs. field pH: This relationship was generally in order. Samples for which both lab and field pH were measured, all had percent differences equal to or less than 15%. Rounded off to the nearest percent, the percent differences were distributed as follows:

equal to or less than 10%.....95 samples
11 to 15%.....19 sample

Lab SC vs. field SC: This relationship was generally in order except for one sample. Sample EPRI-0011-185 (SEP-3) had a field SC value of 923 umohs/cm and a laboratory value of 1784 umohs/cm. The laboratory value was in line with historical data and the TDS value for this sample, therefore, the field SC value was rejected (flagged with "R"). Rounded to the nearest percent, the distribution of the percent differences was as follows:

less than 10% .....62 samples
11 to 20%.....31 samples
21%-23%.....20 samples
greater than 23% (48%) .....1 sample(EPRI-0011-185)

TDS vs. SC: The ratio of TDS to 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 SC measurements. (It should be noted that these measurements are less accurate in dilute waters.)

This relationship was generally in order except for samples two samples whose ratios were greater than 100%. The ratios were distributed as follows:

less than 55% ..... 3 samples
56 to 75%..... 87 samples
76 to 100%..... 22 samples*
>100%..... 2 samples**

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

**On the following page is a table showing the two samples with TDS/SC ratios greater than 100%.

TDS/SC Ratios Greater Than 100%

Site	Sample	Field SC Result (umohs/cm)	TDS Result (mg/L)	Ratio	Action
Pond 1	EPRI-0011-201	35600	38326	108%	None – Sulfate value was extremely high (22838 mg/L)
SEP-3	EPRI-0011-185	923	1208	131%	Field SC value was rejected (see lab/field SC comparison)

11. Historical Comparison

The data for the Fall 2000 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

12. 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 give 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 is evaluated by recoveries on laboratory matrix spikes and LCS' for higher analyte concentrations, and by blanks for analyte concentrations less than five times the PDLG.

  - For laboratory matrix spike samples, 100% of the results were within control limits.
  - For LCS', 98.3% of the results were within control limits (3 out of 181 results were out of control limits). Six LCS' were analyzed, of these, calcium, iron and zinc results were out of control limits for 1 LCS.
  - For laboratory blanks, 100% of the results were less than the detection limit.
  - For field blanks, 92.5% of the results were less than the detection limits (19 out of 252 results were above the detection limit). Following is a

summary of individual analyte results for field blanks. Analytes not listed in the table were not detected in any of the field blank samples.

Analyte	# Field Blank Samples	# of Detections	% Without Detections
Nitrate+Nitrite	12	3	75.0%
Potassium	12	2	83.3%
SC	12	1	91.7%
TDS	12	5	58.3%
Zinc	12	8	33.3%

Accuracy for sediment is evaluated by recoveries on laboratory reference standards, which in this case included calibration standards and laboratory control standards for arsenic and lead only since these were analyzed using a matrix-specific calibration. Recoveries on these QC samples were all within control limits. No information was provided for evaluation of accuracy for the other parameters analyzed by XRF (cadmium, chromium, copper, iron, selenium, and zinc).

Precision

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

Precision for water:

- For laboratory duplicates, 100% of the results were within control limits.
- For field duplicates 96.2% results were within control limits (12 out of 314 results were out of control limits). Following is 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	13	1	92.3%
Chromium	13	1	92.3%
Iron (tot)	13	3	23.1%
Lead (tot)	13	1	92.3%
Nitrate+Nitrite	13	3	23.1%
Potassium (dis)	13	1	92.3%
TSS	13	1	92.3%
Zinc (tot)	13	1	92.3%

Precision for sediment:

- For laboratory duplicates sample, 100% of the results were within control limits.
- For field duplicate samples, 75% were within control limits (4 out of 16 results were out of control limits). Two field duplicate samples were submitted, of these, copper, lead, selenium and zinc results were out of control limits for 1 sample.

Completeness (water and sediment are evaluated together)

Completeness is quantitatively measured by the number of valid samples per number of planned samples. Completeness for the Fall 2000 sampling event was measured at 99.3% (3521 valid measurements per 3545 planned measurements)

- One SC result was rejected.
- One field duplicate sample for surface water was not submitted as required by the work plan. This omission resulted in a deficiency of 23 results.

Completeness can also be measured by the number of flagged results per number of measurements. This was calculated as 94.6% (190 flagged results out of 3522 measurements). Following is a summary of the overall completeness of the data, broke down by parameter.

Parameter	# of Measurements	# Valid Results	Percent of Valid Results	# of Results Not Flagged	% of Results Not Flagged
DTWL	87	87	100%	87	100%
Oxygen	114	114	100%	114	86%
pH(field)	114	114	100%	114	100%
SC(field)	114	113	99.1%	113	99%
Turbidity		97	100%	97	100%
Water Temp.	114	114	100%	114	100%
pH(lab)	126	126	100%	126	100%
SC(lab)	126	126	100%	126	100%
TDS	126	126	100%	126	100%
TSS	126	126	100%	118	93.7%
Calcium	126	126	100%	106	84.1%
Magnesium	126	126	100%	126	100%
Sodium	126	126	100%	126	100%
Potassium	126	126	100%	120	95.2%
Bicarbonate	126	126	100%	126	100%
Carbonate	126	126	100%	126	92%
Sulfate	126	126	100%	126	93%
Chloride	126	126	100%	115	91.3%
Fluoride	126	126	100%	126	19%

Continued on following page

Completeness per Parameter

Parameter	# of Measurements	# Valid Results	Percent of Valid Results	# of Results Not Flagged	% of Results Not Flagged
NO_3+NO_2 as N	126	126	100%	104	82.5%
Arsenic	126	126	100%	126	95%
Cadmium	126	126	100%	126	126
Chromium	139	139	100%	128	92.1%
Copper	139	139	100%	139	100%
Iron	139	139	100%	102	73.4%
Lead	139	139	100%	132	95.0%
Selenium	139	139	100%	126	100%
Zinc	139	139	100%	80	57.6%

In conclusion, the data for the Asarco El Paso Copper Smelter Remedial Investigation Fall 2000 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 Reviewed by: **Linda Tangen**

Report Reviewed by: **Harold Kutz**

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U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

U.S. Environmental Protection Agency, 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. February 1994.

APPENDIX 1

TABLES

TABLE 1.

DATA VALIDATION CODES AND DEFINITIONS

CODE		DEFINITION
J	-	The associated numerical value is an estimated quantity because quality control criteria were not met. Subscripts for the "J" qualifier: 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
UJ	-	The material was analyzed for, but was not detected above the associated value. Subscripts for the "UJ" qualifier: 1 - Blank contamination. Indicates possible high bias and/or false positive. 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
R	-	Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis is necessary for verification.
E	-	Estimated. (Not an EPA code.)
A	-	Anomalous data.. No apparent explanation for discrepancy in data. (Not an EPA code.)

TABLE 2. SUMMARY OF FLAGGED DATA
El Paso, EPRI Quarterly Monitoring
Fall 2000

Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
GROUNDWATER AND SURFACE WATER SAMPLES								
DI BLANK	EPRI-0011-220	L001820008	30-Oct-00	CALCIUM (CA) DIS	<1	UJ4	LCS	75% Recovery
				IRON (FE) TOT	<0.1	UJ4	LCS	78% Recovery
				ZINC (ZN) TOT	0.042	J4	LCS	76% Recovery
EM-1	EPRI-0011-195	L001895011	14-Nov-00	ZINC (ZN) TOT	0.031	UJ1	Field Blank	Result (0.033) mg/L)>PDLG
						J4	Field Duplicate	23.3% RPD
EM-2	EPRI-0011-196	L001839007	01-Nov-00	POTASSIUM (K) DIS	14	J4	Field Duplicate	23.5% RPD
				ZINC (ZN) TOT	0.049	UJ1	Field Blank	Result (0.046)>PDLG
EM-4	EPRI-0011-197	L001839006	01-Nov-00	NITRATE + NITRITE	0.18	UJ1	Field Blank	Result (0.029)>PDLG
				ZINC (ZN) TOT	0.057	UJ1	Field Blank	Result (0.046)>PDLG
EM-5	EPRI-0011-198	L001857005	03-Nov-00	TSS	3	J4	Field Duplicate	87.8% RPD
				ZINC (ZN) TOT	0.076	UJ1	Field Blank	Result (0.030 mg/L)>PDLG
EM-6	EPRI-0011-199	L001857006	03-Nov-00	TSS	1.6	J4	Field Duplicate	87.8% RPD
				ZINC (ZN) TOT	0.035	UJ1	Field Blank	Result (0.030 mg/L)>PDLG
EP-100	EPRI-0011-164	L001857013	07-Nov-00	CHROMIUM (CR) TOT	<0.01	UJ4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	0.79	J4	Field Duplicate	38.2% RPD
EP-101	EPRI-0011-165	L001839017	02-Nov-00	IRON (FE) TOT	1.8	J4	Field Duplicate	40.0% RPD
EP-102	EPRI-0011-166	L001857001	03-Nov-00	TSS	14	J4	Field Duplicate	87.8% RPD
				ZINC (ZN) TOT	0.063	UJ1	Field Blank	Result (0.030 mg/L)>PDLG
EP-103	EPRI-0011-167	L001839013	02-Nov-00	IRON (FE) TOT	0.33	J4	Field Duplicate	40.0% RPD
				ZINC (ZN) TOT	0.029	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
EP-104	EPRI-0011-168	L001839009	01-Nov-00	ZINC (ZN) TOT	0.066	UJ1	Field Blank	Result (0.046)>PDLG
EP-105	EPRI-0011-169	L001839008	01-Nov-00	POTASSIUM (K) DIS	16	J4	Field Duplicate	23.5% RPD
				ZINC (ZN) TOT	0.083	UJ1	Field Blank	Result (0.046)>PDLG
EP-106	EPRI-0011-170	L001839010	02-Nov-00	IRON (FE) TOT	0.83	J4	Field Duplicate	40.0% RPD
				ZINC (ZN) TOT	0.041	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
EP-107	EPRI-0011-171	L001857021	03-Nov-00	TSS	<1	UJ4	Field Duplicate	87.8% RPD
				ZINC (ZN) TOT	0.035	UJ1	Field Blank	Result (0.030 mg/L)>PDLG
EP-108	EPRI-0011-172	L001874022	09-Nov-00	NITRATE + NITRITE	5.6	J4	Field Duplicate	21.5% RPD
EP-109	EPRI-0011-173	L001874020	09-Nov-00	NITRATE + NITRITE	7.5	J4	Field Duplicate	21.5% RPD
EP-110	EPRI-0011-174	L001820016	31-Oct-00	CALCIUM (CA) DIS	147	J4	LCS	75% Recovery
				IRON (FE) TOT	0.15	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.047	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-111	EPRI-0011-175	L001894001	10-Nov-00	CHLORIDE (CL)	521	J4	Field Duplicate	23.4% RPD
				NITRATE + NITRITE	0.11	J4	Field Duplicate	Diff (10 mg/L) > PDLG
EP-111 (DUP)	EPRI-0011-235	L001894002	10-Nov-00	CHLORIDE (CL)	412	J4	Field Duplicate	23.4% RPD
				NITRATE + NITRITE	0.21	J4	Field Duplicate	Diff (10 mg/L) > PDLG
EP-112	EPRI-0011-176	L001894003	10-Nov-00	NITRATE + NITRITE	0.21	J4	Field Duplicate	Diff (10 mg/L) > PDLG
EP-113	EPRI-0011-177	L001894004	10-Nov-00	CHLORIDE (CL)	205	J4	Field Duplicate	23.4% RPD
				NITRATE + NITRITE	0.14	J4	Field Duplicate	Diff (10 mg/L) > PDLG
EP-114	EPRI-0011-178	L001894010	10-Nov-00	NITRATE + NITRITE	0.19	J4	Field Duplicate	Diff (10 mg/L) > PDLG
EP-115	EPRI-0011-179	L001894011	10-Nov-00	CHLORIDE (CL)	358	J4	Field Duplicate	23.4% RPD
EP-116	EPRI-0011-180	L001894012	10-Nov-00	CHLORIDE (CL)	373	J4	Field Duplicate	23.4% RPD
EP-117	EPRI-0011-181	L001894013	10-Nov-00	CHLORIDE (CL)	334	J4	Field Duplicate	23.4% RPD
EP-118	EPRI-0011-182	L001894014	10-Nov-00	CHLORIDE (CL)	129	J4	Field Duplicate	23.4% RPD
EP-12	EPRI-0011-104	L001895009	14-Nov-00	ZINC (ZN) TOT	0.038	UJ1	Field Blank	Result (0.033) mg/L)>PDLG
						J4	Field Duplicate	23.3% RPD
EP-13	EPRI-0011-105	L001839016	02-Nov-00	IRON (FE) TOT	0.25	J4	Field Duplicate	40.0% RPD
				ZINC (ZN) TOT	0.05	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
EP-14	EPRI-0011-106	L001839015	02-Nov-00	IRON (FE) TOT	0.41	J4	Field Duplicate	40.0% RPD
				ZINC (ZN) TOT	0.035	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
EP-15	EPRI-0011-107	L001839011	02-Nov-00	IRON (FE) TOT	2.1	J4	Field Duplicate	40.0% RPD
				ZINC (ZN) TOT	0.041	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
EP-15 (DUP)	EPRI-0011-225	L001839012	02-Nov-00	IRON (FE) TOT	1.4	J4	Field Duplicate	40.0% RPD
				ZINC (ZN) TOT	0.033	UJ1	Field Blank	Result (0.042 mg/L)>PDLG

TABLE 2. SUMMARY OF FLAGGED DATA
El Paso, EPRI Quarterly Monitoring
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Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
EP-20	EPRI-0011-108	L001820001	30-Oct-00	CALCIUM (CA) DIS	443	J4	LCS	75% Recovery
				IRON (FE) TOT	0.5	J4	Field Duplicate	33.3% RPD
						J4	LCS	78% Recovery
				LEAD (PB) TOT	<0.003	UJ4	Field Duplicate	30.0% RPD
				ZINC (ZN) TOT	0.093	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-21	EPRI-0011-109	L001895004	14-Nov-00	ZINC (ZN) TOT	0.19	J4	Field Duplicate	23.3% RPD
EP-21 (DUP)	EPRI-0011-239	L001895005	14-Nov-00	ZINC (ZN) TOT	0.24	J4	Field Duplicate	23.3% RPD
EP-22	EPRI-0011-110	L001857007	03-Nov-00	TSS	101	J4	Field Duplicate	87.8% RPD
EP-23	EPRI-0011-111	L001895001	13-Nov-00	NITRATE + NITRITE	0.1	UJ1	Field Blank,	Result (0.054) mg/L)>PDLG
						J4	Field Duplicate	20.7% RPD
				ZINC (ZN) TOT	0.074	UJ1	Field Blank	Result (0.025) mg/L)>PDLG
EP-24	EPRI-0011-112	L001895006	14-Nov-00	ZINC (ZN) TOT	0.024	UJ1	Field Blank	Result (0.033) mg/L)>PDLG
						J4	Field Duplicate	23.3% RPD
EP-25	EPRI-0011-113	L001895007	14-Nov-00	ZINC (ZN) TOT	0.025	UJ1	Field Blank	Result (0.033) mg/L)>PDLG
						J4	Field Duplicate	23.3% RPD
EP-26	EPRI-0011-114	L001857020	07-Nov-00	CHROMIUM (CR) TOT	<0.01	UJ4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	1.2	J4	Field Duplicate	38.2% RPD
EP-29	EPRI-0011-115	L001820003	30-Oct-00	CALCIUM (CA) DIS	51	J4	LCS	75% Recovery
				IRON (FE) TOT	4.3	J4	Field Duplicate	33.3% RPD
						J4	LCS	78% Recovery
				LEAD (PB) TOT	0.007	J4	Field Duplicate	30.0% RPD
				ZINC (ZN) TOT	0.041	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-35	EPRI-0011-116	L001820002	30-Oct-00	CALCIUM (CA) DIS	361	J4	LCS	75% Recovery
				IRON (FE) TOT	1.1	J4	Field Duplicate	33.3% RPD
						J4	LCS	78% Recovery
				LEAD (PB) TOT	0.007	J4	Field Duplicate	30.0% RPD
				ZINC (ZN) TOT	0.047	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-4	EPRI-0011-100	L001820004	30-Oct-00	CALCIUM (CA) DIS	53	J4	LCS	75% Recovery
				IRON (FE) TOT	2.8	J4	Field Duplicate	33.3% RPD
						J4	LCS	78% Recovery
				LEAD (PB) TOT	0.023	J4	Field Duplicate	30.0% RPD
				ZINC (ZN) TOT	0.068	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-4 (DUP)	EPRI-0011-219	L001820005	30-Oct-00	CALCIUM (CA) DIS	56	J4	LCS	75% Recovery
				IRON (FE) TOT	2	J4	Field Duplicate	33.3% RPD
						J4	LCS	78% Recovery
				LEAD (PB) TOT	0.017	J4	Field Duplicate	30.0% RPD
				ZINC (ZN) TOT	0.062	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-43	EPRI-0011-117	L001895010	14-Nov-00	ZINC (ZN) TOT	0.028	UJ1	Field Blank	Result (0.033) mg/L)>PDLG
						J4	Field Duplicate	23.3% RPD
EP-49	EPRI-0011-118	L001857018	07-Nov-00	CHROMIUM (CR) TOT	<0.01	UJ4	Field Duplicate	40.0% RPD
EP-5	EPRI-0011-101	L001820015	31-Oct-00	CALCIUM (CA) DIS	106	J4	LCS	75% Recovery
				IRON (FE) TOT	3.1	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.078	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-51	EPRI-0011-119	L001857011	07-Nov-00	CHROMIUM (CR) TOT	2.1	J4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	8.1	J4	Field Duplicate	38.2% RPD
EP-51 (DUP)	EPRI-0011-229	L001857012	07-Nov-00	CHROMIUM (CR) TOT	1.4	J4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	5.5	J4	Field Duplicate	38.2% RPD
EP-52	EPRI-0011-120	L001857014	07-Nov-00	CHROMIUM (CR) TOT	0.19	J4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	6.4	J4	Field Duplicate	38.2% RPD

TABLE 2. SUMMARY OF FLAGGED DATA
El Paso, EPRI Quarterly Monitoring
Fall 2000

Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
EP-53	EPRI-0011-121	L001894020	13-Nov-00	NITRATE + NITRITE	82	J4	Field Duplicate	20.7% RPD
EP-54	EPRI-0011-122	L001857019	07-Nov-00	CHROMIUM (CR) TOT	0.019	J4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	13	J4	Field Duplicate	38.2% RPD
EP-56	EPRI-0011-124	L001895002	13-Nov-00	NITRATE + NITRITE	0.73	J4	Field Duplicate	20.7% RPD
				ZINC (ZN) TOT	0.053	UJ1	Field Blank	Result (0.025) mg/L)>PDLG
EP-57	EPRI-0011-125	L001894019	13-Nov-00	NITRATE + NITRITE	0.15	UJ1	Field Blank	Result (0.054) mg/L)>PDLG
						J4	Field Duplicate	20.7% RPD
EP-58	EPRI-0011-126	L001894015	13-Nov-00	NITRATE + NITRITE	0.19	UJ1	Field Blank	Result (0.054) mg/L)>PDLG
						J4	Field Duplicate	20.7% RPD
EP-59	EPRI-0011-127	L001820009	31-Oct-00	CALCIUM (CA) DIS	180	J4	LCS	75% Recovery
				IRON (FE) TOT	0.44	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.041	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-6	EPRI-0011-102	L001820007	30-Oct-00	CALCIUM (CA) DIS	112	J4	LCS	75% Recovery
				IRON (FE) TOT	<0.1	UJ4	Field Duplicate	33.3% RPD
						UJ4	LCS	78% Recovery
				LEAD (PB) TOT	<0.003	UJ4	Field Duplicate	30.0% RPD
				NITRATE + NITRITE	0.52	J3	Holding Time	Exceeded by 2 Days
				ZINC (ZN) TOT	0.047	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-60	EPRI-0011-128	L001820013	31-Oct-00	CALCIUM (CA) DIS	472	J4	LCS	75% Recovery
				IRON (FE) TOT	3.9	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.038	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-61	EPRI-0011-129	L001894016	13-Nov-00	NITRATE + NITRITE	108	J4	Field Duplicate	20.7% RPD
EP-61 (DUP)	EPRI-0011-237	L001894017	13-Nov-00	NITRATE + NITRITE	133	J4	Field Duplicate	20.7% RPD
EP-62	EPRI-0011-130	L001820011	31-Oct-00	CALCIUM (CA) DIS	155	J4	LCS	75% Recovery
				IRON (FE) TOT	0.28	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.038	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-63	EPRI-0011-131	L001820012	31-Oct-00	CALCIUM (CA) DIS	221	J4	LCS	75% Recovery
				IRON (FE) TOT	1	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.089	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-64	EPRI-0011-132	L001820010	31-Oct-00	CALCIUM (CA) DIS	355	J4	LCS	75% Recovery
				IRON (FE) TOT	0.19	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.052	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-65	EPRI-0011-133	L001894018	13-Nov-00	NITRATE + NITRITE	19	J4	Field Duplicate	20.7% RPD
EP-66	EPRI-0011-134	L001820014	31-Oct-00	CALCIUM (CA) DIS	483	J4	LCS	75% Recovery
				IRON (FE) TOT	0.54	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.065	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-67	EPRI-0011-135	L001820019	31-Oct-00	CALCIUM (CA) DIS	434	J4	LCS	75% Recovery
				IRON (FE) TOT	0.21	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.057	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-68	EPRI-0011-136	L001820020	31-Oct-00	CALCIUM (CA) DIS	201	J4	LCS	75% Recovery
				IRON (FE) TOT	0.51	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.057	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-7	EPRI-0011-103	L001820006	30-Oct-00	CALCIUM (CA) DIS	60	J4	LCS	75% Recovery
				IRON (FE) TOT	1.3	J4	Field Duplicate	33.3% RPD
						J4	LCS	78% Recovery
				LEAD (PB) TOT	<0.003	UJ4	Field Duplicate	30.0% RPD

TABLE 2. SUMMARY OF FLAGGED DATA
El Paso, EPRI Quarterly Monitoring
Fall 2000

Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
EP-7 (Cont.)	EPRI-0011-103	L001820006	30-Oct-00	ZINC (ZN) TOT	0.045	UJ1	Field Blank	Result (0.042 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-70	EPRI-0011-137	L001839003	01-Nov-00	POTASSIUM (K) DIS	19	J4	Field Duplicate	23.5% RPD
				ZINC (ZN) TOT	0.15	UJ1	Field Blank	Result (0.046)>PDLG
EP-70 (DUP)	EPRI-0011-224	L001839004	01-Nov-00	POTASSIUM (K) DIS	15	J4	Field Duplicate	23.5% RPD
				ZINC (ZN) TOT	0.16	UJ1	Field Blank	Result (0.046)>PDLG
EP-71	EPRI-0011-138	L001839002	01-Nov-00	POTASSIUM (K) DIS	16	J4	Field Duplicate	23.5% RPD
				ZINC (ZN) TOT	0.035	UJ1	Field Blank	Result (0.046)>PDLG
EP-72	EPRI-0011-139	L001839005	01-Nov-00	POTASSIUM (K) DIS	15	J4	Field Duplicate	23.5% RPD
				ZINC (ZN) TOT	0.068	UJ1	Field Blank	Result (0.046)>PDLG
EP-73	EPRI-0011-140	L001857017	07-Nov-00	CHROMIUM (CR) TOT	<0.01	UJ4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	0.38	J4	Field Duplicate	38.2% RPD
EP-75	EPRI-0011-141	L001857009	07-Nov-00	CHROMIUM (CR) TOT	<0.01	UJ4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	0.63	J4	Field Duplicate	38.2% RPD
				NITRATE + NITRITE	172	J3	Holding Time	Exceeded by 1 Day
EP-76	EPRI-0011-142	L001857010	07-Nov-00	CHROMIUM (CR) TOT	<0.01	UJ4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	0.17	J4	Field Duplicate	38.2% RPD
EP-77	EPRI-0011-143	L001857004	03-Nov-00	TSS	14	J4	Field Duplicate	87.8% RPD
				ZINC (ZN) TOT	0.025	UJ1	Field Blank	Result (0.030 mg/L)>PDLG
EP-80	EPRI-0011-146	L001874012	09-Nov-00	NITRATE + NITRITE	3.1	J4	Field Duplicate	21.5% RPD
EP-83	EPRI-0011-149	L001874004	08-Nov-00	ZINC (ZN) TOT	0.027	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-83 (DUP)	EPRI-0011-232	L001874005	08-Nov-00	ZINC (ZN) TOT	0.028	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-84	EPRI-0011-150	L001874003	08-Nov-00	ZINC (ZN) TOT	0.062	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-85	EPRI-0011-151	L001874014	09-Nov-00	NITRATE + NITRITE	5.4	J4	Field Duplicate	21.5% RPD
EP-85 (DUP)	EPRI-0011-233	L001874015	09-Nov-00	NITRATE + NITRITE	6.7	J4	Field Duplicate	21.5% RPD
EP-86	EPRI-0011-152	L001874017	09-Nov-00	NITRATE + NITRITE	6.4	J4	Field Duplicate	21.5% RPD
EP-88	EPRI-0011-154	L001857015	07-Nov-00	CHROMIUM (CR) TOT	<0.01	UJ4	Field Duplicate	40.0% RPD
				IRON (FE) TOT	0.16	J4	Field Duplicate	38.2% RPD
EP-89	EPRI-0011-155	L001820017	31-Oct-00	CALCIUM (CA) DIS	148	J4	LCS	75% Recovery
				IRON (FE) TOT	0.16	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.038	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-89 (DUP)	EPRI-0011-221	L001820018	31-Oct-00	CALCIUM (CA) DIS	167	J4	LCS	75% Recovery
				IRON (FE) TOT	0.11	J4	LCS	78% Recovery
				ZINC (ZN) TOT	0.049	UJ1	Field Blank	Result (0.029 mg/L)>PDLG
						J4	LCS	76% Recovery
EP-90	EPRI-0011-156	L001857002	03-Nov-00	TSS	39	J4	Field Duplicate	87.8% RPD
				ZINC (ZN) TOT	0.027	UJ1	Field Blank	Result (0.030 mg/L)>PDLG
EP-90 (DUP)	EPRI-0011-227	L001857003	03-Nov-00	TSS	100	J4	Field Duplicate	87.8% RPD
				ZINC (ZN) TOT	0.025	UJ1	Field Blank	Result (0.030 mg/L)>PDLG
EP-93	EPRI-0011-157	L001874009	08-Nov-00	ZINC (ZN) TOT	0.038	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-94	EPRI-0011-158	L001874007	08-Nov-00	ZINC (ZN) TOT	0.033	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-96	EPRI-0011-160	L001874008	08-Nov-00	ZINC (ZN) TOT	0.032	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-97	EPRI-0011-161	L001874010	08-Nov-00	ZINC (ZN) TOT	0.13	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-98	EPRI-0011-162	L001874011	08-Nov-00	ZINC (ZN) TOT	0.026	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
EP-99	EPRI-0011-163	L001874001	08-Nov-00	ZINC (ZN) TOT	0.062	UJ1	Field Blank	Result (0.039 mg/L)>PDLG
SEP-1	EPRI-0011-183	L001894006	10-Nov-00	CHLORIDE (CL)	206	J4	Field Duplicate	23.4% RPD
SEP-3	EPRI-0011-185	L001894007	10-Nov-00	CHLORIDE (CL)	222	J4	Field Duplicate	23.4% RPD
				Field SC (umohs/cm)	923	R	Interparameter Comparison	TDS/SC = 131% Lab SC-Fld SC = 48% Diff
SEP-6	EPRI-0011-187	L001894008	10-Nov-00	CHLORIDE (CL)	204	J4	Field Duplicate	23.4% RPD
SEP-7	EPRI-0011-188	L001894005	10-Nov-00	CHLORIDE (CL)	205	J4	Field Duplicate	23.4% RPD

TABLE 2. SUMMARY OF FLAGGED DATA
El Paso, EPRI Quarterly Monitoring
Fall 2000

Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
				SEDIMENT SAMPLES				
POND 5-SED	EPRI-0011-217	L001909002	14-Nov-00	COPPER (CU)	49000	J4	Field Duplicate	84% RPD
				LEAD (PB)	28000	J4	Field Duplicate	55% RPD
				SELENIUM (SE)	220	J4	Field Duplicate	44% RPD
				ZINC (ZN)	31000	J4	Field Duplicate	82% RPD
POND 5-SED (DUP)	EPRI-0011-241	L001909003	14-Nov-00	COPPER (CU)	20000	J4	Field Duplicate	84% RPD
				LEAD (PB)	16000	J4	Field Duplicate	55% RPD
				SELENIUM (SE)	140	J4	Field Duplicate	44% RPD
				ZINC (ZN)	13000	J4	Field Duplicate	82% RPD

TABLE 3. Historical Comparison
El Paso Quarterly Montitoring Project
Fall 2000

Site	Sample Date	Result (mg/L)	Parameter	Comparison Period	# of Samp	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Dev from Mean	Relation to Comparison Period
EM-4	11/1/00	2.4	TURBIDITY (NTU)	08/06/1999-08/03/2000	4	0.5	0.7675	0.95	7.76	HIGHEST
		0.057	ZINC (ZN) TOT	08/06/1999-08/03/2000	5	<0.020	0.0246	0.037	4.61	HIGHEST
EM-5	11/3/00	16.52	DEPTH TO WATER LEVEL (FEET)	08/11/1997-08/04/2000	14	14.34	14.607	16.1	4.02	HIGHEST
		3.4	TURBIDITY (NTU)	08/06/1999-08/04/2000	5	0.75	1.234	2.25	3.42	HIGHEST
EP-5 DUP	10/31/00	0.75	NITRATE + NITRITE AS N	08/06/1997-08/01/2000	12	<0.050	0.1271	0.36	6.03	HIGHEST
		3.1	IRON (FE) TOT	08/02/1999-08/01/2000	4	0.19	0.645	1.5	4.21	HIGHEST
		0.039	LEAD (PB) TOT	08/02/1999-08/01/2000	4	0.009	0.0143	0.018	6.02	HIGHEST
		0.078	ZINC (ZN) TOT	08/02/1999-08/01/2000	4	0.03	0.0393	0.057	3.04	HIGHEST
EP-6	10/30/00	3730	SC (UMHOS/CM AT 25 C)	08/06/1997-08/01/2000	13	5810	7029.2	8070	4.64	LOWEST
		2531	TDS (MEASURED AT 180 C)	08/06/1997-08/01/2000	13	4263	5492.7	6252	4.36	LOWEST
		112	CALCIUM (CA) DIS	08/06/1997-08/01/2000	13	225	347.38	415	3.24	LOWEST
		612	SODIUM (NA) DIS	08/06/1997-08/01/2000	13	1000	1277	1462	4.59	LOWEST
		878	SULFATE (SO4)	08/06/1997-08/01/2000	13	1664	2513.4	3357	3.42	LOWEST
		264	CHLORIDE (CL)	08/06/1997-08/01/2000	13	593	863.08	1013	5.87	LOWEST
		2.6	FLUORIDE (F)	08/06/1997-08/01/2000	13	1.2	1.4769	1.9	6.46	HIGHEST
		0.047	ZINC (ZN) TOT	08/02/1999-08/01/2000	5	<0.020	0.0238	0.03	4.45	HIGHEST
EP-7	10/30/00	0.045	ZINC (ZN) TOT	08/02/1999-08/01/2000	5	<0.020	0.022	0.03	5.14	HIGHEST
EP-15	11/2/00	38	NITRATE + NITRITE AS N	08/07/1997-08/03/2000	13	12	20.462	32	3.15	HIGHEST
		0.31	SELENIUM (SE) TOT	08/03/1999-08/03/2000	5	0.12	0.136	0.15	> 10	HIGHEST
EP-15 DUP	11/2/00	41	NITRATE + NITRITE AS N	08/07/1997-08/03/2000	13	12	20.462	32	3.69	HIGHEST
		0.32	SELENIUM (SE) TOT	08/03/1999-08/03/2000	5	0.12	0.136	0.15	> 10	HIGHEST
EP-20	10/30/00	471	CHLORIDE (CL)	08/07/1997-08/02/2000	13	621	740.92	890	3.52	LOWEST
		0.093	ZINC (ZN) TOT	08/02/1999-08/02/2000	5	0.036	0.0448	0.06	5.22	HIGHEST
EP-21	11/14/00	4	OXYGEN (O) (FLD) DIS	02/18/1998-08/16/2000	10	0.2	0.637	1.4	7.86	HIGHEST
		21.2	TURBIDITY (NTU)	05/08/2000-08/16/2000	2	24.8	25.05	25.3	> 10	LOWEST
EP-21	11/14/00	3.8	OXYGEN (O) (FLD) DIS	02/18/1998-08/16/2000	10	0.2	0.637	1.4	7.39	HIGHEST
EP-22	11/3/00	2.6	ARSENIC (AS) TOT	01/26/2000-08/07/2000	3	1.2	1.3	1.5	7.51	HIGHEST
		1.1	SELENIUM (SE) TOT	01/26/2000-08/07/2000	3	0.11	0.2833	0.53	3.72	HIGHEST
EP-43	11/14/00	0.4	IRON (FE) TOT	08/11/1999-08/16/2000	4	1.7	1.975	2.4	4.63	LOWEST
EP-49	11/7/00	11620	SC (UMHOS/CM AT 25 C) (FLD)	01/29/2000-08/07/2000	3	9400	9550	9720	> 10	HIGHEST
		398	CALCIUM (CA) DIS	11/19/1997-08/07/2000	11	448	477.55	515	4.33	LOWEST
EP-52	11/7/00	72.9	TURBIDITY (NTU)	08/05/1999-08/07/2000	5	14.8	22.222	36	6.05	HIGHEST
		1018	CHLORIDE (CL)	11/06/1997-08/07/2000	11	1255	1338.3	1468	4.52	LOWEST
		6.4	IRON (FE) TOT	08/05/1999-08/07/2000	5	1.2	2.28	3.1	5.62	HIGHEST
		1.5	LEAD (PB) TOT	08/05/1999-08/07/2000	5	0.44	0.698	0.96	3.67	HIGHEST
EP-54	11/7/00	35	TURBIDITY (NTU)	08/04/1999-08/07/2000	3	69	75.667	88	3.8	LOWEST
EP-55	11/14/00	8900	SC (UMHOS/CM AT 25 C)	08/15/1997-08/16/2000	13	9300	10162	10550	3.27	LOWEST
		232	MAGNESIUM (MG) DIS	08/15/1997-08/16/2000	13	260	326.23	374	3.05	LOWEST

TABLE 3. Historical Comparison
El Paso Quarterly Montitoring Project
Fall 2000

Site	Sample Date	Result (mg/L)	Parameter	Comparison Period	# of Samp	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Dev from Mean	Relation to Comparison Period
EP-56	11/13/00	4140	SC (UMHOS/CM AT 25 C)	08/26/1997-08/16/2000	13	4510	5350	5600	3.52	LOWEST
		2937	TDS (MEASURED AT 180 C)	08/26/1997-08/16/2000	13	3262	3982.1	4474	3.05	LOWEST
		39	MAGNESIUM (MG) DIS	08/26/1997-08/16/2000	13	55	63.308	68	6.6	LOWEST
		707	SODIUM (NA) DIS	08/26/1997-08/16/2000	13	801	998.62	1125	3.02	LOWEST
EP-57	11/13/00	4820	SC (UMHOS/CM AT 25 C)	08/16/1997-08/15/2000	13	2070	2980.8	4180	3.56	HIGHEST
		5310	SC (UMHOS/CM AT 25 C) (FLD)	08/16/1997-08/15/2000	13	1913	2941.8	3810	4.02	HIGHEST
		3607	TDS (MEASURED AT 180 C)	08/16/1997-08/15/2000	13	1323	1996.9	2882	3.75	HIGHEST
		213	CALCIUM (CA) DIS	08/16/1997-08/15/2000	13	41	100.31	162	3.29	HIGHEST
		757	SODIUM (NA) DIS	08/16/1997-08/15/2000	13	335	470.38	614	3.12	HIGHEST
		379	CHLORIDE (CL)	08/16/1997-08/15/2000	13	142	233.85	284	3.34	HIGHEST
EP-58	11/13/00	11643	SULFATE (SO4)	08/16/1997-08/15/2000	13	3585	4593.4	5590	> 10	HIGHEST
		2509	CHLORIDE (CL)	08/16/1997-08/15/2000	13	573	869.92	990	> 10	HIGHEST
EP-59	10/31/00	6.2	OXYGEN (O) (FLD) DIS	08/09/1997-08/10/2000	13	0.2	1.2554	3.9	4.52	HIGHEST
EP-60	10/31/00	44.4	TURBIDITY (NTU)	10/27/1999-08/10/2000	4	9.8	15.753	20.3	6.55	HIGHEST
		357	BICARBONATE (HCO3)	08/08/1997-08/10/2000	13	288	306.38	321	4.24	HIGHEST
EP-61	11/13/00	5608	SULFATE (SO4)	08/16/1997-08/15/2000	13	2761	3191.9	3860	7.65	HIGHEST
EP-61	11/13/00	5747	SULFATE (SO4)	08/16/1997-08/15/2000	13	2761	3191.9	3860	8.09	HIGHEST
EP-63	10/31/00	0.028	ARSENIC (AS) TOT	08/03/1999-08/10/2000	5	0.021	0.0228	0.025	3.16	HIGHEST
		0.089	ZINC (ZN) TOT	08/03/1999-08/10/2000	5	0.02	0.0258	0.041	7.04	HIGHEST
EP-65	11/13/00	3.52	TURBIDITY (NTU)	02/07/2000-08/15/2000	3	6.2	6.3667	6.7	9.86	LOWEST
EP-66	10/31/00	0.065	ZINC (ZN) TOT	08/04/1999-08/10/2000	5	<0.020	0.0276	0.045	3.56	HIGHEST
EP-67	10/31/00	275	CHLORIDE (CL)	08/12/1997-08/02/2000	13	324	371.38	415	3.87	LOWEST
EP-70	11/1/00	0.16	ZINC (ZN) TOT	08/05/1999-08/03/2000	5	0.12	0.126	0.14	3.8	HIGHEST
EP-72	11/1/00	386	CHLORIDE (CL)	08/12/1997-08/03/2000	9	464	551.78	608	3.8	LOWEST
		0.14	ARSENIC (AS) TOT	01/24/2000-08/03/2000	3	<0.0500	0.0613	0.069	7.85	HIGHEST
EP-73	11/7/00	199	CALCIUM (CA) DIS	08/12/1997-08/07/2000	13	218	265.23	292	3.13	LOWEST
		0.38	IRON (FE) TOT	08/05/1999-08/07/2000	5	<0.10	0.146	0.28	3	HIGHEST
EP-75	11/7/00	13680	SC (UMHOS/CM AT 25 C)	08/12/1997-08/07/2000	12	14850	18423	20000	3.14	LOWEST
		0.009	CADMIUM (CD) TOT	08/06/1999-08/07/2000	4	0.005	0.0055	0.007	3.5	HIGHEST
EP-76	11/7/00	4.25	TURBIDITY (NTU)	01/26/2000-08/07/2000	3	1.61	2.13	2.45	4.67	HIGHEST
		0.21	SELENIUM (SE) TOT	01/26/2000-08/07/2000	3	0.15	0.1633	0.18	3.06	HIGHEST
EP-77	11/3/00	4.3	FLUORIDE (F)	08/12/1997-08/04/2000	13	2.1	2.8692	3.5	3.16	HIGHEST
		0.003	LEAD (PB) TOT	08/05/1999-08/04/2000	5	0.008	0.0112	0.015	3.17	LOWEST
EP-78	11/9/00	0.013	LEAD (PB) TOT	08/09/1999-08/09/2000	5	<0.003	0.0058	0.009	3.02	HIGHEST
EP-79	11/9/00	8.5	PH	08/13/1997-08/09/2000	13	7.8	7.9923	8.3	3.16	HIGHEST
		0.014	ARSENIC (AS) TOT	08/09/1999-08/09/2000	5	0.006	0.0074	0.009	5.79	HIGHEST
		0.094	SELENIUM (SE) TOT	08/09/1999-08/09/2000	5	0.11	0.116	0.12	4.02	LOWEST

TABLE 3. Historical Comparison
El Paso Quarterly Montitoring Project
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Site	Sample Date	Result (mg/L)	Parameter	Comparison Period	# of Samp	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Dev from Mean	Relation to Comparison Period
EP-80	11/9/00	0.02	ARSENIC (AS) TOT	08/09/1999-08/10/2000	5	0.013	0.0152	0.017	3.24	HIGHEST
EP-83	11/8/00	0.017	ARSENIC (AS) TOT	08/09/1999-08/09/2000	5	0.005	0.0062	0.008	8.28	HIGHEST
EP-83 DUP	11/8/00	0.016	ARSENIC (AS) TOT	08/09/1999-08/09/2000	5	0.005	0.0062	0.008	7.52	HIGHEST
EP-84	11/8/00	1058	TDS (MEASURED AT 180 C)	08/13/1997-08/09/2000	13	1288	2067.7	2317	3.25	LOWEST
		82	CALCIUM (CA) DIS	08/13/1997-08/09/2000	13	126	193.23	223	3.69	LOWEST
		37	MAGNESIUM (MG) DIS	08/13/1997-08/09/2000	13	56	91.539	117	3.17	LOWEST
		223	BICARBONATE (HCO3)	08/13/1997-08/09/2000	13	229	294.23	318	3.12	LOWEST
EP-88	11/7/00	13	NITRATE + NITRITE AS N	08/12/1997-08/04/2000	13	0.51	1.7054	3.1	> 10	HIGHEST
EP-90	11/3/00	1.5	SELENIUM (SE) TOT	08/05/1999-08/04/2000	5	1	1.14	1.2	4.02	HIGHEST
EP-90 DUP	11/3/00	1.5	SELENIUM (SE) TOT	08/05/1999-08/04/2000	5	1	1.14	1.2	4.02	HIGHEST
EP-94	11/8/00	5770	SC (UMHOS/CM AT 25 C) (FLD)	10/13/1999-08/09/2000	4	4580	4840	5110	4.26	HIGHEST
EP-95	11/8/00	3820	SC (UMHOS/CM AT 25 C) (FLD)	10/26/1999-08/09/2000	4	3110	3200	3250	9.72	HIGHEST
EP-96	11/8/00	5750	SC (UMHOS/CM AT 25 C) (FLD)	10/13/1999-08/09/2000	4	4680	4790	5090	4.8	HIGHEST
		0.019	ARSENIC (AS) TOT	10/13/1999-08/09/2000	4	0.005	0.008	0.012	3.74	HIGHEST
EP-97	11/8/00	3440	SC (UMHOS/CM AT 25 C) (FLD)	10/18/1999-08/09/2000	4	4190	4817.5	5170	3.17	LOWEST
		510	BICARBONATE (HCO3)	10/18/1999-08/09/2000	4	599	632.25	659	4.75	LOWEST
		0.34	COPPER (CU) TOT	10/18/1999-08/09/2000	4	0.11	0.18	0.23	3.18	HIGHEST
EP-99	11/8/00	7.25	PH (FLD)	10/18/1999-08/09/2000	2	7.03	7.05	7.07	7.07	HIGHEST
		6500	SC (UMHOS/CM AT 25 C) (FLD)	10/18/1999-08/09/2000	2	5660	5750	5840	5.89	HIGHEST
		4541	TDS (MEASURED AT 180 C)	10/18/1999-08/09/2000	2	4758	4770.5	4783	> 10	LOWEST
		304	CHLORIDE (CL)	10/18/1999-08/09/2000	2	354	356	358	> 10	LOWEST
EP-100	11/7/00	12190	SC (UMHOS/CM AT 25 C) (FLD)	10/20/1999-08/07/2000	4	9230	9582.5	9960	8.01	HIGHEST
		0.085	NITRATE + NITRITE AS N	10/20/1999-08/07/2000	4	142	220	250	4.22	LOWEST
EP-101	11/2/00	0.34	ZINC (ZN) TOT	10/21/1999-08/04/2000	4	0.048	0.1095	0.16	4.83	HIGHEST
EP-102	11/3/00	1556	TDS (MEASURED AT 180 C)	10/21/1999-08/04/2000	4	1738	1876.8	1954	3.28	LOWEST
		111	CHLORIDE (CL)	10/21/1999-08/04/2000	4	171	199.25	216	4.28	LOWEST
EP-103	11/2/00	5.6	OXYGEN (O) (FLD) DIS	10/21/1999-08/04/2000	4	3.2	3.875	4.6	3.01	HIGHEST
EP-104	11/1/00	28	TURBIDITY (NTU)	01/24/2000-08/03/2000	3	15	15.877	16.33	> 10	HIGHEST
		695	SODIUM (NA) DIS	10/21/1999-08/03/2000	4	744	770.5	788	3.86	LOWEST
		0.066	ZINC (ZN) TOT	10/21/1999-08/03/2000	4	<0.020	0.028	0.043	3.69	HIGHEST

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El Paso Quarterly Montitoring Project
Fall 2000

Site	Sample Date	Result (mg/L)	Parameter	Comparison Period	# of Samp	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Dev from Mean	Relation to Comparison Period
EP-108	11/9/00	4330	SC (UMHOS/CM AT 25 C) (FLD)	10/26/1999-08/09/2000	4	2850	3290	3500	3.48	HIGHEST
EP-111	11/10/00	6620	SC (UMHOS/CM AT 25 C) (FLD)	10/28/1999-08/14/2000	4	5110	5215	5410	> 10	HIGHEST
		2.9	FLUORIDE (F)	10/28/1999-08/14/2000	4	2.4	2.5	2.6	3.46	HIGHEST
EP-111 DUP	11/10/00	6620	SC (UMHOS/CM AT 25 C) (FLD)	10/28/1999-08/14/2000	4	5110	5215	5410	> 10	HIGHEST
		412	CHLORIDE (CL)	10/28/1999-08/14/2000	4	491	526.25	562	3.55	LOWEST
		2.9	FLUORIDE (F)	10/28/1999-08/14/2000	4	2.4	2.5	2.6	3.46	HIGHEST
EP-112	11/10/00	2	FLUORIDE (F)	10/28/1999-08/14/2000	4	1.4	1.525	1.7	3.77	HIGHEST
		0.03	ARSENIC (AS) TOT	10/28/1999-08/14/2000	4	0.012	0.0133	0.015	> 10	HIGHEST
EP-113	11/10/00	1048	SULFATE (SO4)	10/28/1999-08/14/2000	4	1221	1312.3	1399	3.27	LOWEST
		0.015	ARSENIC (AS) TOT	10/28/1999-08/14/2000	4	0.005	0.0053	0.006	> 10	HIGHEST
EP-115	11/10/00	10.82	DEPTH TO WATER LEVEL (FEET)	11/22/1999-08/14/2000	4	12.26	13.09	13.58	3.95	LOWEST
		3191	SULFATE (SO4)	11/22/1999-08/14/2000	4	4050	4237	4440	5.63	LOWEST
		0.45	ARSENIC (AS) TOT	11/22/1999-08/14/2000	4	0.25	0.26	0.28	> 10	HIGHEST
		1.7	SELENIUM (SE) TOT	11/22/1999-08/14/2000	4	0.11	0.305	0.42	> 10	HIGHEST
EP-116	11/10/00	5400	SC (UMHOS/CM AT 25 C)	11/18/1999-08/14/2000	4	6180	6335	6480	7.08	LOWEST
		4104	TDS (MEASURED AT 180 C)	11/18/1999-08/14/2000	4	4396	4574.5	4700	3.5	LOWEST
		1838	SULFATE (SO4)	11/18/1999-08/14/2000	4	2202	2381.3	2515	3.95	LOWEST
		373	CHLORIDE (CL)	11/18/1999-08/14/2000	4	481	516.75	563	3.72	LOWEST
		4.2	FLUORIDE (F)	11/18/1999-08/14/2000	4	4.9	5.425	5.8	3.17	LOWEST
		15	COPPER (CU) TOT	11/18/1999-08/14/2000	4	1.9	4.525	6.9	4.79	HIGHEST
EP-117	11/10/00	4420	SC (UMHOS/CM AT 25 C) (FLD)	11/18/1999-08/14/2000	4	2590	2997.5	3380	3.93	HIGHEST
		458	SODIUM (NA) DIS	11/18/1999-08/14/2000	4	351	374.25	400	4.16	HIGHEST
EP-118	11/10/00	129	CHLORIDE (CL)	11/18/1999-08/14/2000	4	251	313	376	3.28	LOWEST
		2.5	FLUORIDE (F)	11/18/1999-08/14/2000	4	1.5	1.675	1.9	4	HIGHEST
		19	NITRATE + NITRITE AS N	11/18/1999-08/14/2000	4	13	13.5	15	5.5	HIGHEST
		3	ARSENIC (AS) TOT	11/18/1999-08/14/2000	4	0.21	0.27	0.43	> 10	HIGHEST
		0.87	SELENIUM (SE) TOT	11/18/1999-08/14/2000	4	0.25	0.28	0.3	> 10	HIGHEST
POND 5-SED	11/14/00	16000	LEAD (PB) TOT	08/11/1999-08/21/2000	4	27000	32750	37000	3.61	LOWEST
POND 6	11/14/00	<200.0	TURBIDITY (NTU)	11/02/1999-08/21/2000	2	9.72	11.815	13.91	> 10	HIGHEST
SEP-1	11/10/00	0.014	LEAD (PB) TOT	11/01/1999-08/14/2000	4	<0.003	0.0053	0.007	5.12	HIGHEST
SEP-2	11/15/00	7.9	PH	08/15/1997-08/21/2000	13	8.3	8.4077	8.7	4.04	LOWEST
		342	BICARBONATE (HCO3)	08/15/1997-08/21/2000	13	192	242	295	3.18	HIGHEST
SEP-4-SED	11/15/00	210	ZINC (ZN) TOT	08/20/1999-08/21/2000	5	20	50.4	130	3.53	HIGHEST

TABLE 3. Historical Comparison
El Paso Quarterly Montitoring Project
Fall 2000

Site	Sample Date	Result (mg/L)	Parameter	Comparison Period	# of Samp	Min (mg/L)	Mean (mg/L)	Max (mg/L)	Std Dev from Mean	Relation to Comparison Period
SEP-6	11/10/00	1275	TDS (MEASURED AT 180 C)	08/18/1997-08/14/2000	6	566	706	861	4.83	HIGHEST
		334	BICARBONATE (HCO3)	08/18/1997-08/14/2000	6	207	234.17	271	4.4	HIGHEST
		2.2	NITRATE + NITRITE AS N	08/18/1997-08/14/2000	6	0.57	0.875	1.4	3.53	HIGHEST
SEP-7	11/10/00	342	BICARBONATE (HCO3)	08/18/1997-08/14/2000	13	204	240.23	289	3.37	HIGHEST
SEP-9-SED	11/15/00	190	COPPER (CU) TOT	08/20/1999-08/21/2000	5	<20	55.4	110	3.62	HIGHEST
		280	LEAD (PB) TOT	08/20/1999-08/21/2000	5	20	45.4	64	> 10	HIGHEST
		210	ZINC (ZN) TOT	08/20/1999-08/21/2000	5	29	63	90	5.82	HIGHEST
SEP-13-SED	11/15/00	33	ARSENIC (AS) TOT	08/20/1999-08/21/2000	5	<10	13	21	4.17	HIGHEST
SEP-14	11/14/00	10.2	OXYGEN (O) (FLD) DIS	08/11/1999-08/21/2000	2	5.9	6.15	6.4	> 10	HIGHEST
SEP-14 DUP	11/14/00	10.2	OXYGEN (O) (FLD) DIS	08/11/1999-08/21/2000	2	5.9	6.15	6.4	> 10	HIGHEST
		43	TOTAL SUSPENDED SOLIDS	11/12/1998-08/21/2000	3	49	50.667	53	3.68	LOWEST
SEP-14-SED	11/14/00	89	CADMIUM (CD) TOT	08/11/1999-08/21/2000	5	32	40.2	51	6.82	HIGHEST

APPENDIX 2

DATABASE

TABLE OF CONTENTS BY SITE TYPE

TABLE OF CONTENTS BY SITE TYPE

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EM-1	EM-2	EM-4
SAMPLE DATE	11/14/2000	11/01/2000	11/01/2000
SAMPLE TIME	12:45	15:30	14:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001895011	L001839007	L001839006
SAMPLE NUMBER	EPRI-0011-195	EPRI-0011-196	EPRI-0011-197
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	64.81	65.14	61.73
OXYGEN (O) (FLD) DIS	3.6	1.4	0.7
PH (FLD)	7.65	6.98	7.24
PH	7.9	7.6	7.7
SC (UMHOS/CM AT 25 C)	5600.0	3980.0	11220.0
SC (UMHOS/CM AT 25 C) (FLD)	5380.0	4160.0	10840.0
TDS (MEASURED AT 180 C)	4153.0	2934.0	6920.0
TOTAL SUSPENDED SOLIDS	6.8	24.0	<1.0
TURBIDITY (NTU)	4.51	5.1	2.4
WATER TEMPERATURE (C) (FLD)	20.1	22.9	23.1
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	180.0	173.0	390.0
MAGNESIUM (MG) DIS	104.0	63.0	174.0
SODIUM (NA) DIS	814.0	632.0	1378.0
POTASSIUM (K) DIS	23.0	14.0 J4	28.0
BICARBONATE (HCO3)	226.0	296.0	163.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1791.0	1144.0	531.0
CHLORIDE (CL)	806.0	347.0	3521.0
FLUORIDE (F)	0.8	1.3	1.3
-- NUTRIENTS --			
NITRATE + NITRITE AS N	0.11	24.0	0.18 UJ1
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	<0.005	0.56	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	2.2	0.94	<0.1
LEAD (PB) TOT	0.009	0.004	<0.003
SELENIUM (SE) TOT	0.007	0.1	0.006
ZINC (ZN) TOT	0.031 J4 UJ1	0.049 UJ1	0.057 UJ1

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		EP-4	
SAMPLE DATE	11/03/2000		11/03/2000		10/30/2000		10/30/2000	
SAMPLE TIME	13:40		14:00		14:30		14:40	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001857005		L001857006		L001820004		L001820005	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0011-198		EPRI-0011-199		EPRI-0011-100		EPRI-0011-219	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	16.52		37.98		8.26			
OXYGEN (O) (FLD) DIS	0.7		0.6		1.6		1.6	
PH (FLD)	7.56		7.23		7.7		7.7	
PH	8.0		7.8		8.3		8.3	
SC (UMHOS/CM AT 25 C)	3030.0		4280.0		1552.0		1549.0	
SC (UMHOS/CM AT 25 C) (FLD)	3360.0		4680.0		1451.0		1451.0	
TDS (MEASURED AT 180 C)	1998.0		2937.0		953.0		941.0	
TOTAL SUSPENDED SOLIDS	3.0	J4	1.6	J4	96.0		85.0	
TURBIDITY (NTU)	3.4		2.0		16.2		16.2	
WATER TEMPERATURE (C) (FLD)	24.5		24.0		23.4		23.4	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	75.0		106.0		53.0	J4	56.0	J4
MAGNESIUM (MG) DIS	18.0		62.0		14.0		15.0	
SODIUM (NA) DIS	550.0		731.0		205.0		209.0	
POTASSIUM (K) DIS	34.0		16.0		9.9		11.0	
BICARBONATE (HCO3)	171.0		403.0		417.0		409.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	839.0		1198.0		232.0		241.0	
CHLORIDE (CL)	335.0		443.0		128.0		145.0	
FLUORIDE (F)	4.7		2.0		1.1		1.1	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	0.067		6.5		0.087		0.091	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	1.7		0.024		0.13		0.14	
CADMIUM (CD) TOT	0.008		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		0.039		0.029	
IRON (FE) TOT	0.94		0.12		2.8	J4	2.0	J4
LEAD (PB) TOT	0.006		0.004		0.023	J4	0.017	J4
SELENIUM (SE) TOT	<0.005		0.076		<0.005		<0.005	
ZINC (ZN) TOT	0.076	UJ1	0.035	UJ1	0.068	UJ1 J4	0.062	UJ1 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-5		EP-6		EP-7	
SAMPLE DATE	10/31/2000		10/30/2000		10/30/2000	
SAMPLE TIME	15:30		15:40		15:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001820015		L001820007		L001820006	
SAMPLE NUMBER	EPRI-0011-101		EPRI-0011-102		EPRI-0011-103	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	7.12		7.74		7.33	
OXYGEN (O) (FLD) DIS	2.6		2.7		3.3	
PH (FLD)	7.49		7.5		7.52	
PH	8.2		8.1		8.1	
SC (UMHOS/CM AT 25 C)	4410.0		3730.0		2520.0	
SC (UMHOS/CM AT 25 C) (FLD)	4290.0		3660.0		2450.0	
TDS (MEASURED AT 180 C)	2833.0		2531.0		1613.0	
TOTAL SUSPENDED SOLIDS	95.0		9.3		4.9	
TURBIDITY (NTU)	6.69		3.03		5.31	
WATER TEMPERATURE (C) (FLD)	21.4		24.6		23.8	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	106.0	J4	112.0	J4	60.0	J4
MAGNESIUM (MG) DIS	42.0		38.0		20.0	
SODIUM (NA) DIS	881.0		612.0		442.0	
POTASSIUM (K) DIS	12.0		13.0		6.4	
BICARBONATE (HCO3)	1030.0		511.0		293.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	720.0		878.0		657.0	
CHLORIDE (CL)	592.0		264.0		213.0	
FLUORIDE (F)	2.7		2.6		2.2	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.75		0.52	J3	0.1	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.08		0.032		0.077	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.055		<0.025		<0.025	
IRON (FE) TOT	3.1	J4	<0.1	UJ4	1.3	J4
LEAD (PB) TOT	0.039		<0.003	UJ4	<0.003	UJ4
SELENIUM (SE) TOT	0.019		0.038		0.006	
ZINC (ZN) TOT	0.078	UJ1 J4	0.047	UJ1 J4	0.045	UJ1 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-12	EP-13	EP-14
SAMPLE DATE	11/14/2000	11/02/2000	11/02/2000
SAMPLE TIME	10:20	15:10	14:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001895009	L001839016	L001839015
SAMPLE NUMBER	EPRI-0011-104	EPRI-0011-105	EPRI-0011-106
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	62.0	61.43	60.05
OXYGEN (O) (FLD) DIS	2.0	1.8	.5
PH (FLD)	7.12	7.1	6.93
PH	7.8	7.7	7.5
SC (UMHOS/CM AT 25 C)	5760.0	9700.0	5040.0
SC (UMHOS/CM AT 25 C) (FLD)	5540.0	9980.0	5890.0
TDS (MEASURED AT 180 C)	4446.0	7754.0	3979.0
TOTAL SUSPENDED SOLIDS	302.0	5.4	4.0
TURBIDITY (NTU)	<200.0	7.0	6.7
WATER TEMPERATURE (C) (FLD)	19.2	24.1	25.5
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	243.0	281.0	300.0
MAGNESIUM (MG) DIS	96.0	47.0	76.0
SODIUM (NA) DIS	875.0	2292.0	644.0
POTASSIUM (K) DIS	12.0	61.0	43.0
BICARBONATE (HCO3)	1074.0	367.0	390.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1786.0	4033.0	1800.0
CHLORIDE (CL)	565.0	630.0	413.0
FLUORIDE (F)	0.99	1.5	1.6
-- NUTRIENTS --			
NITRATE + NITRITE AS N	5.4	91.0	16.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	2.1	29.0	1.4
CADMIUM (CD) TOT	<0.005	0.56	<0.005
CHROMIUM (CR) TOT	0.011	<0.01	<0.01
COPPER (CU) TOT	0.045	<0.025	<0.025
IRON (FE) TOT	3.6	0.25 J4	0.41 J4
LEAD (PB) TOT	0.028	0.009	0.004
SELENIUM (SE) TOT	0.43	5.3	0.2
ZINC (ZN) TOT	0.038 J4 UJ1	0.05 UJ1	0.035 UJ1

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-15	EP-20	EP-21
SAMPLE DATE	11/02/2000	11/02/2000	10/30/2000	11/14/2000
SAMPLE TIME	10:30	10:35	13:00	08:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001839011	L001839012	L001820001	L001895004
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0011-107	EPRI-0011-225	EPRI-0011-108	EPRI-0011-109
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	59.63		14.94	26.62
OXYGEN (O) (FLD) DIS	1.1	1.1	1.9	4.0
PH (FLD)	7.11	7.1	6.91	7.22
PH	7.7	7.6	7.7	7.8
SC (UMHOS/CM AT 25 C)	4460.0	4480.0	9260.0	5200.0
SC (UMHOS/CM AT 25 C) (FLD)	4950.0	4940.0	8870.0	5160.0
TDS (MEASURED AT 180 C)	3351.0	3342.0	7826.0	2916.0
TOTAL SUSPENDED SOLIDS	61.0	59.0	32.0	78.0
TURBIDITY (NTU)	58.1		19.5	21.2
WATER TEMPERATURE (C) (FLD)	23.1	23.0	23.8	20.1
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	195.0	182.0	443.0 J4	36.0
MAGNESIUM (MG) DIS	68.0	66.0	238.0	31.0
SODIUM (NA) DIS	702.0	680.0	1454.0	714.0
POTASSIUM (K) DIS	9.2	8.8	46.0	195.0
BICARBONATE (HCO3)	361.0	351.0	349.0	1696.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	1323.0	1354.0	3870.0	186.0
CHLORIDE (CL)	373.0	377.0	471.0	727.0
FLUORIDE (F)	0.87	0.85	1.9	5.5
-- NUTRIENTS --				
NITRATE + NITRITE AS N	38.0	41.0	100.0	0.15
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.008	0.009	0.86	0.036
CADMIUM (CD) TOT	<0.005	<0.005	0.07	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	0.026
IRON (FE) TOT	2.1 J4	1.4 J4	0.5 J4	0.83
LEAD (PB) TOT	0.003	<0.003	<0.003 UJ4	0.005
SELENIUM (SE) TOT	0.31	0.32	0.34	0.013
ZINC (ZN) TOT	0.041 UJ1	0.033 UJ1	0.093 UJ1 J4	0.19 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-21		EP-22		EP-23	
SAMPLE DATE	11/14/2000		11/03/2000		11/13/2000	
SAMPLE TIME	08:30		14:30		15:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001895005		L001857007		L001895001	
REMARKS	DUPLICATE					
SAMPLE NUMBER	EPRI-0011-239		EPRI-0011-110		EPRI-0011-111	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)			53.04		23.39	
OXYGEN (O) (FLD) DIS	3.8		2.1		1.8	
PH (FLD)	7.23		7.12		7.61	
PH	7.8		7.7		7.9	
SC (UMHOS/CM AT 25 C)	5200.0		10850.0		5200.0	
SC (UMHOS/CM AT 25 C) (FLD)	5170.0		10620.0		4730.0	
TDS (MEASURED AT 180 C)	2938.0		7323.0		2740.0	
TOTAL SUSPENDED SOLIDS	64.0		101.0	J4	14.0	
TURBIDITY (NTU)			3.9		7.65	
WATER TEMPERATURE (C) (FLD)	20.0		25.5		22.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	40.0		441.0		84.0	
MAGNESIUM (MG) DIS	32.0		198.0		49.0	
SODIUM (NA) DIS	711.0		1632.0		637.0	
POTASSIUM (K) DIS	183.0		106.0		45.0	
BICARBONATE (HCO3)	1745.0		609.0		622.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	198.0		4130.0		1286.0	
CHLORIDE (CL)	745.0		534.0		398.0	
FLUORIDE (F)	5.5		2.5		3.0	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.17		32.0		0.1	J4 UJ1
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.038		2.6		7.0	
CADMIUM (CD) TOT	<0.005		0.009		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		0.026		0.15	
IRON (FE) TOT	1.0		0.19		1.1	
LEAD (PB) TOT	0.004		<0.003		0.043	
SELENIUM (SE) TOT	0.012		1.1		0.011	
ZINC (ZN) TOT	0.24	J4	0.23		0.074	UJ1

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-24	EP-25	EP-26
SAMPLE DATE	11/14/2000	11/14/2000	11/07/2000
SAMPLE TIME	08:50	09:10	15:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001895006	L001895007	L001857020
SAMPLE NUMBER	EPRI-0011-112	EPRI-0011-113	EPRI-0011-114
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	33.95	49.3	61.09
OXYGEN (O) (FLD) DIS	1.6	1.2	0.4
PH (FLD)	7.05	7.04	7.03
PH	7.7	7.5	7.7
SC (UMHOS/CM AT 25 C)	5300.0	6020.0	4640.0
SC (UMHOS/CM AT 25 C) (FLD)	5200.0	5450.0	5360.0
TDS (MEASURED AT 180 C)	3412.0	3496.0	3341.0
TOTAL SUSPENDED SOLIDS	14.0	146.0	40.0
TURBIDITY (NTU)	6.8	<200.0	16.0
WATER TEMPERATURE (C) (FLD)	22.1	20.9	23.8
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	138.0	96.0	196.0
MAGNESIUM (MG) DIS	44.0	25.0	58.0
SODIUM (NA) DIS	843.0	899.0	793.0
POTASSIUM (K) DIS	20.0	172.0	53.0
BICARBONATE (HCO3)	1122.0	1743.0	320.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	536.0	221.0	1466.0
CHLORIDE (CL)	1038.0	1100.0	410.0
FLUORIDE (F)	2.3	1.8	1.9
-- NUTRIENTS --			
NITRATE + NITRITE AS N	0.3	0.27	13.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.01	12.0	0.3
CADMIUM (CD) TOT	<0.005	<0.005	0.26
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01 UJ4
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	0.53	1.0	1.2 J4
LEAD (PB) TOT	0.004	0.011	0.01
SELENIUM (SE) TOT	<0.005	0.18	0.92
ZINC (ZN) TOT	0.024 J4 UJ1	0.025 J4 UJ1	1.0

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-29		EP-35		EP-43	
SAMPLE DATE	10/30/2000		10/30/2000		11/14/2000	
SAMPLE TIME	14:00		13:30		10:45	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001820003		L001820002		L001895010	
SAMPLE NUMBER	EPRI-0011-115		EPRI-0011-116		EPRI-0011-117	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	15.04		15.19		59.12	
OXYGEN (O) (FLD) DIS	4.1		2.9		0.7	
PH (FLD)	7.58		6.99		7.02	
PH	8.0		7.8		7.5	
SC (UMHOS/CM AT 25 C)	3250.0		6320.0		3600.0	
SC (UMHOS/CM AT 25 C) (FLD)	3260.0		6140.0		3550.0	
TDS (MEASURED AT 180 C)	2100.0		5176.0		2325.0	
TOTAL SUSPENDED SOLIDS	754.0		57.0		51.0	
TURBIDITY (NTU)	200+		24.2		13.8	
WATER TEMPERATURE (C) (FLD)	24.6		24.4		20.6	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	51.0	J4	361.0	J4	107.0	
MAGNESIUM (MG) DIS	18.0		123.0		27.0	
SODIUM (NA) DIS	566.0		892.0		612.0	
POTASSIUM (K) DIS	16.0		14.0		31.0	
BICARBONATE (HCO3)	342.0		617.0		1118.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	912.0		2525.0		407.0	
CHLORIDE (CL)	303.0		440.0		459.0	
FLUORIDE (F)	3.2		1.1		2.4	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	5.6		45.0		0.51	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.28		0.73		1.1	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		0.012		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	4.3	J4	1.1	J4	0.4	
LEAD (PB) TOT	0.007	J4	0.007	J4	0.006	
SELENIUM (SE) TOT	0.15		1.2		0.05	
ZINC (ZN) TOT	0.041	UJ1 J4	0.047	UJ1 J4	0.028	J4 UJ1

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-49		EP-51		EP-51		EP-52	
SAMPLE DATE	11/07/2000		11/07/2000		11/07/2000		11/07/2000	
SAMPLE TIME	14:15		09:50		10:00		10:50	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001857018		L001857011		L001857012		L001857014	
REMARKS					DUPLICATE			
SAMPLE NUMBER	EPRI-0011-118		EPRI-0011-119		EPRI-0011-229		EPRI-0011-120	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	68.98		51.56				53.31	
OXYGEN (O) (FLD) DIS	0.2		.8		0.7		1.0	
PH (FLD)	6.76		6.71		6.73		6.38	
PH	7.3		7.4		6.73		7.0	
SC (UMHOS/CM AT 25 C)	9800.0		12030.0		12390.0		11640.0	
SC (UMHOS/CM AT 25 C) (FLD)	11620.0		13490.0		13850.0		12890.0	
TDS (MEASURED AT 180 C)	7400.0		8473.0		8687.0		9888.0	
TOTAL SUSPENDED SOLIDS	114.0		39.0		36.0		29.0	
TURBIDITY (NTU)	16.5		35.0				72.9	
WATER TEMPERATURE (C) (FLD)	25.5		24.1		23.9		22.3	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	398.0		639.0		580.0		433.0	
MAGNESIUM (MG) DIS	116.0		434.0		400.0		244.0	
SODIUM (NA) DIS	1528.0		1296.0		1271.0		2126.0	
POTASSIUM (K) DIS	244.0		41.0		40.0		25.0	
BICARBONATE (HCO3)	869.0		222.0		231.0		732.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	3961.0		2130.0		1984.0		4254.0	
CHLORIDE (CL)	607.0		2879.0		3031.0		1018.0	
FLUORIDE (F)	7.4		0.92		0.91		6.0	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	10.0		173.0		173.0		95.0	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	33.0		0.48		0.42		1.7	
CADMIUM (CD) TOT	0.038		0.038		0.038		0.45	
CHROMIUM (CR) TOT	<0.01	UJ4	2.1	J4	1.4	J4	0.19	J4
COPPER (CU) TOT	<0.025		0.17		0.16		0.57	
IRON (FE) TOT	25.0		8.1	J4	5.5	J4	6.4	J4
LEAD (PB) TOT	<0.003		0.031		0.032		1.5	
SELENIUM (SE) TOT	0.051		0.2		0.2		0.18	
ZINC (ZN) TOT	30.0		0.45		0.45		2.8	

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-53		EP-54		EP-55
SAMPLE DATE	11/13/2000		11/07/2000		11/14/2000
SAMPLE TIME	14:30		14:40		09:45
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L001894020		L001857019		L001895008
SAMPLE NUMBER	EPRI-0011-121		EPRI-0011-122		EPRI-0011-123
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	67.57		71.13		57.65
OXYGEN (O) (FLD) DIS	2.0		2.8		1.9
PH (FLD)	6.83		6.58		6.53
PH	7.2		7.3		6.8
SC (UMHOS/CM AT 25 C)	7610.0		10110.0		8900.0
SC (UMHOS/CM AT 25 C) (FLD)	8570.0		11040.0		8300.0
TDS (MEASURED AT 180 C)	6538.0		7939.0		7258.0
TOTAL SUSPENDED SOLIDS	471.0		60.0		638.0
TURBIDITY (NTU)	162.0		35.0		<200.0
WATER TEMPERATURE (C) (FLD)	24.6		19.2		20.7
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	412.0		418.0		457.0
MAGNESIUM (MG) DIS	89.0		198.0		232.0
SODIUM (NA) DIS	1170.0		1652.0		989.0
POTASSIUM (K) DIS	71.0		269.0		111.0
BICARBONATE (HCO3)	329.0		1188.0		903.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	2872.0		3916.0		3402.0
CHLORIDE (CL)	441.0		760.0		755.0
FLUORIDE (F)	6.2		8.8		14.0
-- NUTRIENTS --					
NITRATE + NITRITE AS N	82.0	J4	10.0		0.21
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	49.0		37.0		51.0
CADMIUM (CD) TOT	1.4		0.7		0.38
CHROMIUM (CR) TOT	<0.01		0.019	J4	<0.01
COPPER (CU) TOT	0.027		0.49		0.027
IRON (FE) TOT	6.7		13.0	J4	31.0
LEAD (PB) TOT	0.006		0.015		0.08
SELENIUM (SE) TOT	1.2		0.12		0.11
ZINC (ZN) TOT	4.1		12.0		32.0

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-56	EP-57	EP-58
SAMPLE DATE	11/13/2000	11/13/2000	11/13/2000
SAMPLE TIME	15:30	14:00	13:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001895002	L001894019	L001894015
SAMPLE NUMBER	EPRI-0011-124	EPRI-0011-125	EPRI-0011-126
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	50.95	10.05	12.89
OXYGEN (O) (FLD) DIS	2.0	.3	1.0
PH (FLD)	7.4	7.22	6.54
PH	7.9	7.5	7.2
SC (UMHOS/CM AT 25 C)	4140.0	4820.0	11380.0
SC (UMHOS/CM AT 25 C) (FLD)	4520.0	5310.0	13680.0
TDS (MEASURED AT 180 C)	2937.0	3607.0	9180.0
TOTAL SUSPENDED SOLIDS	1292.0	272.0	64.0
TURBIDITY (NTU)	<200.0	15.5	28.5
WATER TEMPERATURE (C) (FLD)	22.9	24.4	23.9
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	182.0	213.0	451.0
MAGNESIUM (MG) DIS	39.0	130.0	208.0
SODIUM (NA) DIS	707.0	757.0	1773.0
POTASSIUM (K) DIS	22.0	18.0	200.0
BICARBONATE (HCO3)	551.0	1391.0	1303.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1280.0	858.0	11643.0
CHLORIDE (CL)	404.0	379.0	2509.0
FLUORIDE (F)	2.8	1.1	4.8
-- NUTRIENTS --			
NITRATE + NITRITE AS N	0.73 J4	0.15 J4 UJ1	0.19 J4 UJ1
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	2.5	0.25	3.4
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	0.021	<0.01	<0.01
COPPER (CU) TOT	0.033	<0.025	<0.025
IRON (FE) TOT	25.0	1.4	1.7
LEAD (PB) TOT	0.02	0.003	0.003
SELENIUM (SE) TOT	0.016	<0.005	0.027
ZINC (ZN) TOT	0.053 UJ1	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-59		EP-60		EP-61		EP-61	
SAMPLE DATE	10/31/2000		10/31/2000		11/13/2000		11/13/2000	
SAMPLE TIME	08:50		11:00		13:15		13:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001820009		L001820013		L001894016		L001894017	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0011-127		EPRI-0011-128		EPRI-0011-129		EPRI-0011-237	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	13.84		10.45		10.92			
OXYGEN (O) (FLD) DIS	6.2		1.1		1.1		0.9	
PH (FLD)	7.0		7.07		7.15		7.15	
PH	8.0		7.6		7.8		7.7	
SC (UMHOS/CM AT 25 C)	5320.0		8400.0		8660.0		8680.0	
SC (UMHOS/CM AT 25 C) (FLD)	5060.0		7850.0		10460.0		10420.0	
TDS (MEASURED AT 180 C)	3894.0		6772.0		7324.0		7232.0	
TOTAL SUSPENDED SOLIDS	7.7		19.0		2.9		2.7	
TURBIDITY (NTU)	11.83		44.4		1.7			
WATER TEMPERATURE (C) (FLD)	25.6		25.6		23.0		23.0	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	180.0	J4	472.0	J4	369.0		342.0	
MAGNESIUM (MG) DIS	91.0		182.0		161.0		150.0	
SODIUM (NA) DIS	915.0		1189.0		1461.0		1385.0	
POTASSIUM (K) DIS	89.0		11.0		17.0		15.0	
BICARBONATE (HCO3)	488.0		357.0		422.0		403.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	1768.0		3061.0		5608.0		5747.0	
CHLORIDE (CL)	449.0		934.0		802.0		774.0	
FLUORIDE (F)	4.8		1.7		1.7		1.7	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	3.6		55.0		108.0	J4	133.0	J4
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	2.5		0.012		0.01		0.009	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	0.031		0.97		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.44	J4	3.9	J4	<0.1		<0.1	
LEAD (PB) TOT	0.004		<0.003		0.004		<0.003	
SELENIUM (SE) TOT	0.28		0.2		0.32		0.33	
ZINC (ZN) TOT	0.041	UJ1 J4	0.038	UJ1 J4	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-62		EP-63		EP-64	
SAMPLE DATE	10/31/2000		10/31/2000		10/31/2000	
SAMPLE TIME	09:45		10:30		09:20	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001820011		L001820012		L001820010	
SAMPLE NUMBER	EPRI-0011-130		EPRI-0011-131		EPRI-0011-132	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	8.62		7.94		11.38	
OXYGEN (O) (FLD) DIS	3.3		1.2		2.7	
PH (FLD)	7.24		7.18		7.63	
PH	7.9		7.8		8.1	
SC (UMHOS/CM AT 25 C)	4260.0		7490.0		9200.0	
SC (UMHOS/CM AT 25 C) (FLD)	4030.0		7150.0		8880.0	
TDS (MEASURED AT 180 C)	3030.0		5442.0		7467.0	
TOTAL SUSPENDED SOLIDS	3.0		23.0		3.6	
TURBIDITY (NTU)	4.85		16.41		3.01	
WATER TEMPERATURE (C) (FLD)	21.6		24.6		22.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	155.0	J4	221.0	J4	355.0	J4
MAGNESIUM (MG) DIS	63.0		134.0		107.0	
SODIUM (NA) DIS	763.0		1434.0		1968.0	
POTASSIUM (K) DIS	42.0		28.0		17.0	
BICARBONATE (HCO3)	393.0		637.0		284.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1339.0		2505.0		3585.0	
CHLORIDE (CL)	345.0		844.0		634.0	
FLUORIDE (F)	3.1		2.2		1.9	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	3.7		0.67		79.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	1.4		0.028		0.051	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		0.027		<0.01	
COPPER (CU) TOT	<0.025		0.026		<0.025	
IRON (FE) TOT	0.28	J4	1.0	J4	0.19	J4
LEAD (PB) TOT	<0.003		0.013		<0.003	
SELENIUM (SE) TOT	0.29		0.17		0.53	
ZINC (ZN) TOT	0.038	UJ1 J4	0.089	UJ1 J4	0.052	UJ1 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-65		EP-66		EP-67	
SAMPLE DATE	11/13/2000		10/31/2000		10/31/2000	
SAMPLE TIME	13:40		11:30		14:10	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001894018		L001820014		L001820019	
SAMPLE NUMBER	EPRI-0011-133		EPRI-0011-134		EPRI-0011-135	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	9.72		11.41		41.42	
OXYGEN (O) (FLD) DIS	1.3		3.8		1.3	
PH (FLD)	7.14		7.04		6.83	
PH	7.6		7.8		7.7	
SC (UMHOS/CM AT 25 C)	6340.0		7120.0		4300.0	
SC (UMHOS/CM AT 25 C) (FLD)	8060.0		7080.0		4150.0	
TDS (MEASURED AT 180 C)	5050.0		5852.0		3614.0	
TOTAL SUSPENDED SOLIDS	5.4		25.0		9.1	
TURBIDITY (NTU)	3.52		9.4		3.04	
WATER TEMPERATURE (C) (FLD)	24.8		23.9		24.6	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	254.0		483.0	J4	434.0	J4
MAGNESIUM (MG) DIS	107.0		111.0		124.0	
SODIUM (NA) DIS	1069.0		1332.0		440.0	
POTASSIUM (K) DIS	18.0		44.0		11.0	
BICARBONATE (HCO3)	605.0		455.0		251.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	2516.0		3170.0		1765.0	
CHLORIDE (CL)	524.0		415.0		275.0	
FLUORIDE (F)	2.0		3.2		0.78	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	19.0	J4	38.0		14.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<0.005		8.1		0.01	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		0.026		<0.025	
IRON (FE) TOT	0.1		0.54	J4	0.21	J4
LEAD (PB) TOT	<0.003		0.005		0.003	
SELENIUM (SE) TOT	0.22		0.31		0.1	
ZINC (ZN) TOT	<0.02		0.065	UJ1 J4	0.057	UJ1 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-68		EP-70		EP-70		EP-71	
SAMPLE DATE	10/31/2000		11/01/2000		11/01/2000		11/01/2000	
SAMPLE TIME	14:40		13:50		14:00		13:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001820020		L001839003		L001839004		L001839002	
REMARKS					DUPLICATE			
SAMPLE NUMBER	EPRI-0011-136		EPRI-0011-137		EPRI-0011-224		EPRI-0011-138	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	63.39		62.16				50.19	
OXYGEN (O) (FLD) DIS	6.1		0.4		0.3		0.5	
PH (FLD)	7.19		7.0		7.0		6.93	
PH	8.0		7.5		7.6		7.6	
SC (UMHOS/CM AT 25 C)	4150.0		5980.0		6010.0		5740.0	
SC (UMHOS/CM AT 25 C) (FLD)	3998.0		5750.0		5760.0		5550.0	
TDS (MEASURED AT 180 C)	2963.0		4643.0		4628.0		4566.0	
TOTAL SUSPENDED SOLIDS	18.0		2.8		2.7		1.2	
TURBIDITY (NTU)	7.14		1.85				1.0	
WATER TEMPERATURE (C) (FLD)	23.7		23.9		23.8		24.0	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	201.0	J4	266.0		248.0		299.0	
MAGNESIUM (MG) DIS	86.0		133.0		123.0		135.0	
SODIUM (NA) DIS	581.0		869.0		808.0		744.0	
POTASSIUM (K) DIS	10.0		19.0	J4	15.0	J4	16.0	J4
BICARBONATE (HCO3)	271.0		293.0		295.0		276.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	1298.0		2308.0		2290.0		2260.0	
CHLORIDE (CL)	472.0		506.0		487.0		421.0	
FLUORIDE (F)	0.73		1.1		1.0		0.9	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	40.0		41.0		48.0		67.0	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	<0.005		0.57		0.58		0.11	
CADMIUM (CD) TOT	<0.005		0.006		0.006		<0.005	
CHROMIUM (CR) TOT	0.011		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.51	J4	<0.1		<0.1		<0.1	
LEAD (PB) TOT	<0.003		<0.003		<0.003		<0.003	
SELENIUM (SE) TOT	0.21		0.21		0.22		0.23	
ZINC (ZN) TOT	0.057	UJ1 J4	0.15	UJ1	0.16	UJ1	0.035	UJ1

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-72		EP-73		EP-75	
SAMPLE DATE	11/01/2000		11/07/2000		11/07/2000	
SAMPLE TIME	14:20		13:45		08:45	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001839005		L001857017		L001857009	
SAMPLE NUMBER	EPRI-0011-139		EPRI-0011-140		EPRI-0011-141	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	62.61		71.26		69.39	
OXYGEN (O) (FLD) DIS	1.5		0.4		2.6	
PH (FLD)	7.11		7.02		6.98	
PH	7.6		7.8		7.5	
SC (UMHOS/CM AT 25 C)	6990.0		6350.0		13680.0	
SC (UMHOS/CM AT 25 C) (FLD)	6770.0		7730.0		15280.0	
TDS (MEASURED AT 180 C)	5901.0		4736.0		11913.0	
TOTAL SUSPENDED SOLIDS	4.6		8.2		14.0	
TURBIDITY (NTU)	4.8		8.46		8.2	
WATER TEMPERATURE (C) (FLD)	22.9		26.8		20.7	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	244.0		199.0		309.0	
MAGNESIUM (MG) DIS	215.0		97.0		276.0	
SODIUM (NA) DIS	1081.0		941.0		2818.0	
POTASSIUM (K) DIS	15.0	J4	303.0		411.0	
BICARBONATE (HCO3)	342.0		329.0		454.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	3957.0		2325.0		6898.0	
CHLORIDE (CL)	386.0		450.0		167.0	
FLUORIDE (F)	1.2		2.7		1.3	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	34.0		17.0		172.0	J3
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.14		0.023		9.4	
CADMIUM (CD) TOT	<0.005		<0.005		0.009	
CHROMIUM (CR) TOT	<0.01		<0.01	UJ4	<0.01	UJ4
COPPER (CU) TOT	<0.025		<0.025		0.062	
IRON (FE) TOT	0.22		0.38	J4	0.63	J4
LEAD (PB) TOT	0.007		<0.003		0.018	
SELENIUM (SE) TOT	5.2		0.87		2.7	
ZINC (ZN) TOT	0.068	UJ1	0.028		0.1	

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: GROUNDWATER --

SITE CODE	EP-76		EP-77		EP-78	
SAMPLE DATE	11/07/2000		11/03/2000		11/09/2000	
SAMPLE TIME	09:10		13:00		14:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001857010		L001857004		L001874019	
SAMPLE NUMBER	EPRI-0011-142		EPRI-0011-143		EPRI-0011-144	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	68.88		44.89		29.99	
OXYGEN (O) (FLD) DIS	0.6		0.6		0.4	
PH (FLD)	7.35		7.24		7.57	
PH	7.9		7.8		7.9	
SC (UMHOS/CM AT 25 C)	5220.0		4320.0		3400.0	
SC (UMHOS/CM AT 25 C) (FLD)	5740.0		4380.0		4240.0	
TDS (MEASURED AT 180 C)	3829.0		2604.0		2254.0	
TOTAL SUSPENDED SOLIDS	6.3		14.0	J4	4.0	
TURBIDITY (NTU)	4.25		14.33		3.65	
WATER TEMPERATURE (C) (FLD)	21.2		24.9		22.9	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	159.0		101.0		68.0	
MAGNESIUM (MG) DIS	74.0		26.0		33.0	
SODIUM (NA) DIS	871.0		706.0		495.0	
POTASSIUM (K) DIS	134.0		22.0		48.0	
BICARBONATE (HCO3)	484.0		367.0		366.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1812.0		1055.0		898.0	
CHLORIDE (CL)	406.0		369.0		305.0	
FLUORIDE (F)	2.2		4.3		3.5	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	3.8		0.67		9.5	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	1.4		6.2		3.8	
CADMIUM (CD) TOT	<0.005		0.008		<0.005	
CHROMIUM (CR) TOT	<0.01	UJ4	<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.17	J4	0.46		<0.1	
LEAD (PB) TOT	0.01		0.003		0.013	
SELENIUM (SE) TOT	0.21		0.021		0.22	
ZINC (ZN) TOT	0.055		0.025	UJ1	<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-79	EP-80	EP-81
SAMPLE DATE	11/09/2000	11/09/2000	11/09/2000
SAMPLE TIME	09:15	08:00	08:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001874016	L001874012	L001874013
SAMPLE NUMBER	EPRI-0011-145	EPRI-0011-146	EPRI-0011-147
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	46.16	11.49	18.76
OXYGEN (O) (FLD) DIS	0.5	0.5	2.4
PH (FLD)	7.52	7.14	7.06
PH	8.5	7.9	7.5
SC (UMHOS/CM AT 25 C)	4320.0	5300.0	2800.0
SC (UMHOS/CM AT 25 C) (FLD)	5600.0	6730.0	3120.0
TDS (MEASURED AT 180 C)	3034.0	4033.0	2154.0
TOTAL SUSPENDED SOLIDS	12.0	4.3	6.7
TURBIDITY (NTU)	7.1	4.15	4.42
WATER TEMPERATURE (C) (FLD)	24.6	24.0	16.5
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	38.0	194.0	156.0
MAGNESIUM (MG) DIS	45.0	77.0	72.0
SODIUM (NA) DIS	813.0	916.0	323.0
POTASSIUM (K) DIS	6.4	14.0	18.0
BICARBONATE (HCO3)	426.0	547.0	473.0
CARBONATE AS CO3	16.0	<1.0	<1.0
SULFATE (SO4)	1191.0	1927.0	965.0
CHLORIDE (CL)	366.0	319.0	113.0
FLUORIDE (F)	4.8	1.4	2.0
-- NUTRIENTS --			
NITRATE + NITRITE AS N	7.7	3.1 J4	10.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.014	0.02	0.31
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	0.19	0.15	0.59
LEAD (PB) TOT	0.003	<0.003	<0.003
SELENIUM (SE) TOT	0.094	0.021	0.26
ZINC (ZN) TOT	<0.02	0.024	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)
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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: GROUNDWATER --

SITE CODE	EP-82	EP-83	EP-83	EP-84
SAMPLE DATE	11/09/2000	11/08/2000	11/08/2000	11/08/2000
SAMPLE TIME	14:45	11:20	11:30	10:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001874021	L001874004	L001874005	L001874003
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0011-148	EPRI-0011-149	EPRI-0011-232	EPRI-0011-150
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	15.36	26.94		6.17
OXYGEN (O) (FLD) DIS	0.9	4.9	4.9	2.4
PH (FLD)	7.11	7.52	7.52	7.48
PH	7.6	8.0	8.0	7.8
SC (UMHOS/CM AT 25 C)	4240.0	3850.0	3840.0	1546.0
SC (UMHOS/CM AT 25 C) (FLD)	5290.0	4580.0	4570.0	1774.0
TDS (MEASURED AT 180 C)	3019.0	2704.0	2699.0	1058.0
TOTAL SUSPENDED SOLIDS	2.5	1.4	1.2	14.0
TURBIDITY (NTU)	2.1	2.6		9.8
WATER TEMPERATURE (C) (FLD)	22.6	21.6	21.4	19.4
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	135.0	62.0	63.0	82.0
MAGNESIUM (MG) DIS	79.0	56.0	58.0	37.0
SODIUM (NA) DIS	626.0	670.0	679.0	161.0
POTASSIUM (K) DIS	23.0	8.3	8.4	4.3
BICARBONATE (HCO3)	422.0	383.0	371.0	223.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	1210.0	1073.0	1124.0	373.0
CHLORIDE (CL)	447.0	369.0	346.0	109.0
FLUORIDE (F)	2.4	3.0	3.0	0.91
-- NUTRIENTS --				
NITRATE + NITRITE AS N	8.6	8.7	8.5	4.8
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.008	0.017	0.016	0.079
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	0.01
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	0.054
IRON (FE) TOT	<0.1	<0.1	<0.1	0.42
LEAD (PB) TOT	<0.003	<0.003	0.004	0.067
SELENIUM (SE) TOT	0.11	0.043	0.041	0.011
ZINC (ZN) TOT	<0.02	0.027 UJ1	0.028 UJ1	0.062 UJ1

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-85	EP-85	EP-86	EP-88
SAMPLE DATE	11/09/2000	11/09/2000	11/09/2000	11/07/2000
SAMPLE TIME	08:50	08:50	09:45	13:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001874014	L001874015	L001874017	L001857015
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0011-151	EPRI-0011-233	EPRI-0011-152	EPRI-0011-154
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	14.15		49.88	30.15
OXYGEN (O) (FLD) DIS	0.6	0.6	7.5	0.3
PH (FLD)	7.33	7.33	7.58	7.32
PH	8.0	8.4	8.5	8.0
SC (UMHOS/CM AT 25 C)	2590.0	2580.0	2640.0	5240.0
SC (UMHOS/CM AT 25 C) (FLD)	3250.0	3260.0	3160.0	6010.0
TDS (MEASURED AT 180 C)	1803.0	1805.0	1745.0	3643.0
TOTAL SUSPENDED SOLIDS	3.1	3.2	8.2	6.4
TURBIDITY (NTU)	2.3		7.6	5.35
WATER TEMPERATURE (C) (FLD)	22.9	23.2	20.9	23.1
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	73.0	70.0	35.0	56.0
MAGNESIUM (MG) DIS	35.0	34.0	26.0	35.0
SODIUM (NA) DIS	413.0	387.0	454.0	1029.0
POTASSIUM (K) DIS	24.0	23.0	7.6	8.2
BICARBONATE (HCO3)	366.0	355.0	322.0	628.0
CARBONATE AS CO3	<1.0	1.2	17.0	<1.0
SULFATE (SO4)	697.0	761.0	645.0	1509.0
CHLORIDE (CL)	146.0	157.0	275.0	434.0
FLUORIDE (F)	3.7	3.7	2.7	2.1
-- NUTRIENTS --				
NITRATE + NITRITE AS N	5.4 J4	6.7 J4	6.4 J4	13.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	2.2	2.2	0.007	0.025
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01 UJ4
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	<0.1	<0.1	0.2	0.16 J4
LEAD (PB) TOT	<0.003	<0.003	<0.003	0.004
SELENIUM (SE) TOT	0.17	0.17	0.027	0.045
ZINC (ZN) TOT	<0.02	<0.02	<0.02	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: GROUNDWATER --

SITE CODE	EP-89	EP-89	EP-90	EP-90
SAMPLE DATE	10/31/2000	10/31/2000	11/03/2000	11/03/2000
SAMPLE TIME	13:45	13:50	11:15	11:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001820017	L001820018	L001857002	L001857003
REMARKS		DUPLICATE		DUPLICATE
SAMPLE NUMBER	EPRI-0011-155	EPRI-0011-221	EPRI-0011-156	EPRI-0011-227
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	14.57		57.78	
OXYGEN (O) (FLD) DIS	3.2	3.1	0.4	0.5
PH (FLD)	7.17	7.17	7.11	7.1
PH	8.0	8.0	7.6	7.7
SC (UMHOS/CM AT 25 C)	2910.0	2910.0	5330.0	5360.0
SC (UMHOS/CM AT 25 C) (FLD)	2810.0	2820.0	5990.0	5990.0
TDS (MEASURED AT 180 C)	1984.0	1973.0	4138.0	4143.0
TOTAL SUSPENDED SOLIDS	2.0	2.5	39.0 J4	100.0 J4
TURBIDITY (NTU)	2.1	2.1	19.5	
WATER TEMPERATURE (C) (FLD)	24.2	24.2	25.1	25.1
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	148.0 J4	167.0 J4	242.0	232.0
MAGNESIUM (MG) DIS	57.0	65.0	116.0	113.0
SODIUM (NA) DIS	414.0	381.0	832.0	884.0
POTASSIUM (K) DIS	16.0	17.0	14.0	14.0
BICARBONATE (HCO3)	272.0	272.0	338.0	336.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	900.0	883.0	1594.0	1727.0
CHLORIDE (CL)	337.0	336.0	469.0	486.0
FLUORIDE (F)	0.78	0.75	0.49	0.5
-- NUTRIENTS --				
NITRATE + NITRITE AS N	7.8	8.6	38.0	33.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	<0.005	0.007	0.14	0.14
CADMIUM (CD) TOT	<0.005	<0.005	0.008	0.008
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	0.16 J4	0.11 J4	0.97	0.98
LEAD (PB) TOT	0.006	0.007	<0.003	<0.003
SELENIUM (SE) TOT	0.019	0.024	1.5	1.5
ZINC (ZN) TOT	0.038 UJ1 J4	0.049 UJ1 J4	0.027 UJ1	0.025 UJ1

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-93	EP-94	EP-95
SAMPLE DATE	11/08/2000	11/08/2000	11/08/2000
SAMPLE TIME	14:15	13:20	13:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001874009	L001874007	L001874006
SAMPLE NUMBER	EPRI-0011-157	EPRI-0011-158	EPRI-0011-159
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	47.93	49.8	21.48
OXYGEN (O) (FLD) DIS	3.5	4.1	4.7
PH (FLD)	7.28	7.3	7.7
PH	7.7	7.9	8.1
SC (UMHOS/CM AT 25 C)	4900.0	4800.0	3240.0
SC (UMHOS/CM AT 25 C) (FLD)	5746.0	5770.0	3820.0
TDS (MEASURED AT 180 C)	3449.0	3410.0	2192.0
TOTAL SUSPENDED SOLIDS	232.0	3.0	<1.0
TURBIDITY (NTU)	112.0	2.45	1.6
WATER TEMPERATURE (C) (FLD)	20.7	21.9	21.3
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	91.0	98.0	34.0
MAGNESIUM (MG) DIS	67.0	98.0	58.0
SODIUM (NA) DIS	895.0	799.0	554.0
POTASSIUM (K) DIS	8.8	12.0	2.4
BICARBONATE (HCO3)	712.0	390.0	386.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1225.0	1254.0	813.0
CHLORIDE (CL)	469.0	577.0	355.0
FLUORIDE (F)	1.8	1.3	3.7
-- NUTRIENTS --			
NITRATE + NITRITE AS N	8.1	13.0	8.9
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.022	0.015	0.015
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	0.026	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	5.2	0.18	<0.1
LEAD (PB) TOT	0.006	0.003	<0.003
SELENIUM (SE) TOT	0.031	0.025	0.029
ZINC (ZN) TOT	0.038 UJ1	0.033 UJ1	<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-96	EP-97	EP-98
SAMPLE DATE	11/08/2000	11/08/2000	11/08/2000
SAMPLE TIME	13:45	15:00	15:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001874008	L001874010	L001874011
SAMPLE NUMBER	EPRI-0011-160	EPRI-0011-161	EPRI-0011-162
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	59.19	4.42	10.65
OXYGEN (O) (FLD) DIS	4.1	1.2	4.5
PH (FLD)	7.24	7.55	7.5
PH	7.8	7.9	8.0
SC (UMHOS/CM AT 25 C)	4780.0	3480.0	5880.0
SC (UMHOS/CM AT 25 C) (FLD)	5750.0	3440.0	7120.0
TDS (MEASURED AT 180 C)	3436.0	2458.0	4212.0
TOTAL SUSPENDED SOLIDS	217.0	208.0	6.1
TURBIDITY (NTU)	72.0	52.0	5.26
WATER TEMPERATURE (C) (FLD)	21.8	14.4	22.6
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	133.0	96.0	71.0
MAGNESIUM (MG) DIS	86.0	60.0	68.0
SODIUM (NA) DIS	792.0	548.0	1036.0
POTASSIUM (K) DIS	12.0	6.2	87.0
BICARBONATE (HCO3)	605.0	510.0	439.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1364.0	975.0	1841.0
CHLORIDE (CL)	455.0	284.0	580.0
FLUORIDE (F)	1.1	1.4	2.2
-- NUTRIENTS --			
NITRATE + NITRITE AS N	12.0	<0.05	12.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.019	0.16	0.027
CADMIUM (CD) TOT	<0.005	0.008	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	0.34	<0.025
IRON (FE) TOT	3.2	5.3	0.13
LEAD (PB) TOT	0.005	0.15	<0.003
SELENIUM (SE) TOT	0.015	<0.005	0.28
ZINC (ZN) TOT	0.032 UJ1	0.13 UJ1	0.026 UJ1

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-99		EP-100		EP-101	
SAMPLE DATE	11/08/2000		11/07/2000		11/02/2000	
SAMPLE TIME	10:15		10:20		15:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001874001		L001857013		L001839017	
SAMPLE NUMBER	EPRI-0011-163		EPRI-0011-164		EPRI-0011-165	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	72.37		41.64		63.35	
OXYGEN (O) (FLD) DIS	1.9		0.6		2.9	
PH (FLD)	7.25		6.77		7.05	
PH	7.7		7.4		7.6	
SC (UMHOS/CM AT 25 C)	5460.0		10660.0		9470.0	
SC (UMHOS/CM AT 25 C) (FLD)	6500.0		12190.0		10700.0	
TDS (MEASURED AT 180 C)	4541.0		8418.0		7030.0	
TOTAL SUSPENDED SOLIDS	43.0		34.0		63.0	
TURBIDITY (NTU)	5.96		27.1		11.0	
WATER TEMPERATURE (C) (FLD)	21.9		23.9		23.7	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	392.0		654.0		178.0	
MAGNESIUM (MG) DIS	139.0		338.0		56.0	
SODIUM (NA) DIS	727.0		1445.0		2052.0	
POTASSIUM (K) DIS	87.0		36.0		59.0	
BICARBONATE (HCO3)	370.0		342.0		289.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	2093.0		2747.0		3262.0	
CHLORIDE (CL)	304.0		1546.0		898.0	
FLUORIDE (F)	2.4		1.0		1.5	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	75.0		0.085		100.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	3.7		0.015		7.3	
CADMIUM (CD) TOT	<0.005		0.02		1.7	
CHROMIUM (CR) TOT	<0.01		<0.01	UJ4	<0.01	
COPPER (CU) TOT	0.032		<0.025		0.029	
IRON (FE) TOT	0.83		0.79	J4	1.8	J4
LEAD (PB) TOT	0.011		<0.003		0.011	
SELENIUM (SE) TOT	1.2		0.52		3.3	
ZINC (ZN) TOT	0.062	UJ1	0.12		0.34	

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-102		EP-103		EP-104	
SAMPLE DATE	11/03/2000		11/02/2000		11/01/2000	
SAMPLE TIME	10:45		11:10		16:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001857001		L001839013		L001839009	
SAMPLE NUMBER	EPRI-0011-166		EPRI-0011-167		EPRI-0011-168	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	57.48		61.06		66.92	
OXYGEN (O) (FLD) DIS	1.0		5.6		1.4	
PH (FLD)	7.14		7.3		7.22	
PH	7.7		7.8		7.8	
SC (UMHOS/CM AT 25 C)	2370.0		1564.0		4440.0	
SC (UMHOS/CM AT 25 C) (FLD)	2690.0		1666.0		4740.0	
TDS (MEASURED AT 180 C)	1556.0		1016.0		3155.0	
TOTAL SUSPENDED SOLIDS	14.0	J4	6.2		61.0	
TURBIDITY (NTU)	6.6		7.8		28.0	
WATER TEMPERATURE (C) (FLD)	25.3		21.4		23.9	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	93.0		62.0		114.0	
MAGNESIUM (MG) DIS	17.0		20.0		63.0	
SODIUM (NA) DIS	306.0		218.0		695.0	
POTASSIUM (K) DIS	127.0		3.4		22.0	
BICARBONATE (HCO3)	317.0		162.0		403.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	597.0		338.0		1230.0	
CHLORIDE (CL)	111.0		186.0		451.0	
FLUORIDE (F)	2.2		0.64		2.2	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	5.2		3.4		7.7	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.24		0.008		0.091	
CADMIUM (CD) TOT	0.053		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	1.1		0.33	J4	1.4	
LEAD (PB) TOT	0.007		<0.003		0.011	
SELENIUM (SE) TOT	2.4		0.27		0.097	
ZINC (ZN) TOT	0.063	UJ1	0.029	UJ1	0.066	UJ1

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-105		EP-106		EP-107		
SAMPLE DATE	11/01/2000		11/02/2000		11/03/2000		
SAMPLE TIME	16:00		10:00		10:00		
LAB	TSC-SLC		TSC-SLC		TSC-SLC		
LAB NUMBER	L001839008		L001839010		L001857021		
SAMPLE NUMBER	EPRI-0011-169		EPRI-0011-170		EPRI-0011-171		
-- PHYSICAL PARAMETERS --							
DEPTH TO WATER LEVEL (FEET)	65.37		60.73		63.71		
OXYGEN (O) (FLD) DIS	2.2		2.3		3.4		
PH (FLD)	7.64		7.0		7.02		
PH	8.1		7.6		7.8		
SC (UMHOS/CM AT 25 C)	3410.0		4710.0		6440.0		
SC (UMHOS/CM AT 25 C) (FLD)	3400.0		5420.0		7220.0		
TDS (MEASURED AT 180 C)	2455.0		3683.0		4874.0		
TOTAL SUSPENDED SOLIDS	3.6		24.0		<1.0	UJ4	
TURBIDITY (NTU)	9.8		9.66		2.0		
WATER TEMPERATURE (C) (FLD)	21.9		24.6		25.6		
-- MAJOR CONSTITUENTS --							
CALCIUM (CA) DIS	127.0		219.0		340.0		
MAGNESIUM (MG) DIS	46.0		96.0		156.0		
SODIUM (NA) DIS	472.0		653.0		855.0		
POTASSIUM (K) DIS	16.0	J4	17.0		22.0		
BICARBONATE (HCO3)	134.0		298.0		189.0		
CARBONATE AS CO3	<1.0		<1.0		<1.0		
SULFATE (SO4)	1075.0		1871.0		1870.0		
CHLORIDE (CL)	340.0		354.0		949.0		
FLUORIDE (F)	3.4		0.89		0.99		
-- NUTRIENTS --							
NITRATE + NITRITE AS N	0.72		12.0		69.0		
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	0.099		0.007		0.029		
CADMIUM (CD) TOT	<0.005		<0.005		0.029		
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		
COPPER (CU) TOT	0.036		<0.025		<0.025		
IRON (FE) TOT	0.59		0.83	J4	<0.1		
LEAD (PB) TOT	0.012		<0.003		<0.003		
SELENIUM (SE) TOT	0.024		0.12		0.42		
ZINC (ZN) TOT	0.083	UJ1	0.041	UJ1	0.035	UJ1	

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-108		EP-109		EP-110	
SAMPLE DATE	11/09/2000		11/09/2000		10/31/2000	
SAMPLE TIME	15:15		14:20		13:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001874022		L001874020		L001820016	
SAMPLE NUMBER	EPRI-0011-172		EPRI-0011-173		EPRI-0011-174	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	20.64		18.89		9.15	
OXYGEN (O) (FLD) DIS	2.2		3.0		3.0	
PH (FLD)	7.54		7.31		7.11	
PH	8.1		7.8		8.1	
SC (UMHOS/CM AT 25 C)	3360.0		4000.0		2920.0	
SC (UMHOS/CM AT 25 C) (FLD)	4330.0		5100.0		2810.0	
TDS (MEASURED AT 180 C)	2331.0		2822.0		2003.0	
TOTAL SUSPENDED SOLIDS	1.4		9.4		5.2	
TURBIDITY (NTU)	2.4		6.7		4.7	
WATER TEMPERATURE (C) (FLD)	23.9		23.8		25.0	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	44.0		83.0		147.0	J4
MAGNESIUM (MG) DIS	42.0		65.0		61.0	
SODIUM (NA) DIS	610.0		653.0		414.0	
POTASSIUM (K) DIS	10.0		15.0		18.0	
BICARBONATE (HCO3)	411.0		394.0		279.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	943.0		1246.0		900.0	
CHLORIDE (CL)	263.0		356.0		333.0	
FLUORIDE (F)	2.5		2.4		0.77	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	5.6	J4	7.5	J4	8.9	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	1.2		0.019		0.008	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.11		0.22		0.15	J4
LEAD (PB) TOT	<0.003		<0.003		<0.003	
SELENIUM (SE) TOT	0.05		0.064		0.016	
ZINC (ZN) TOT	<0.02		<0.02		0.047	UJ1 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-111		EP-111		EP-112		EP-113	
SAMPLE DATE	11/10/2000		11/10/2000		11/10/2000		11/10/2000	
SAMPLE TIME	08:15		08:20		08:45		09:10	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001894001		L001894002		L001894003		L001894004	
REMARKS			DUPLICATE					
SAMPLE NUMBER	EPRI-0011-175		EPRI-0011-235		EPRI-0011-176		EPRI-0011-177	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	6.19				7.51		7.28	
OXYGEN (O) (FLD) DIS	0.2		0.2		0.1		0.2	
PH (FLD)	7.06		7.06		7.0		7.22	
PH	7.5		7.6		7.8		7.7	
SC (UMHOS/CM AT 25 C)	5190.0		5190.0		7280.0		3620.0	
SC (UMHOS/CM AT 25 C) (FLD)	6620.0		6620.0		8820.0		4510.0	
TDS (MEASURED AT 180 C)	3889.0		3939.0		5169.0		2603.0	
TOTAL SUSPENDED SOLIDS	8.9		7.8		2.4		4.1	
TURBIDITY (NTU)	5.25				1.89		2.65	
WATER TEMPERATURE (C) (FLD)	24.2		24.2		22.4		23.1	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	212.0		187.0		193.0		109.0	
MAGNESIUM (MG) DIS	62.0		54.0		98.0		50.0	
SODIUM (NA) DIS	898.0		781.0		893.0		583.0	
POTASSIUM (K) DIS	62.0		53.0		80.0		36.0	
BICARBONATE (HCO3)	364.0		360.0		722.0		393.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	1518.0		1669.0		2495.0		1048.0	
CHLORIDE (CL)	521.0	J4	412.0	J4	662.0		205.0	J4
FLUORIDE (F)	2.9		2.9		2.0		3.0	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	0.11	J4	0.21	J4	0.21	J4	0.14	J4
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	1.1		1.1		0.03		0.015	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	1.6		1.4		0.29		0.72	
LEAD (PB) TOT	0.003		0.005		<0.003		<0.003	
SELENIUM (SE) TOT	0.007		0.007		0.012		<0.005	
ZINC (ZN) TOT	0.023		0.024		<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-114		EP-115		EP-116	
SAMPLE DATE	11/10/2000		11/10/2000		11/10/2000	
SAMPLE TIME	13:00		13:20		13:45	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001894010		L001894011		L001894012	
SAMPLE NUMBER	EPRI-0011-178		EPRI-0011-179		EPRI-0011-180	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	13.71		10.82		12.5	
OXYGEN (O) (FLD) DIS	0.7		2.2		1.5	
PH (FLD)	6.37		6.79		6.74	
PH	6.7		7.7		7.6	
SC (UMHOS/CM AT 25 C)	7800.0		7520.0		5400.0	
SC (UMHOS/CM AT 25 C) (FLD)	8810.0		9330.0		6770.0	
TDS (MEASURED AT 180 C)	6842.0		6445.0		4104.0	
TOTAL SUSPENDED SOLIDS	9284.0		42.0		423.0	
TURBIDITY (NTU)	<200.0		19.5		<200.0	
WATER TEMPERATURE (C) (FLD)	21.9		22.7		24.9	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	706.0		366.0		309.0	
MAGNESIUM (MG) DIS	252.0		77.0		64.0	
SODIUM (NA) DIS	876.0		1327.0		795.0	
POTASSIUM (K) DIS	182.0		47.0		40.0	
BICARBONATE (HCO3)	1318.0		490.0		451.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	3270.0		3191.0		1838.0	
CHLORIDE (CL)	703.0		358.0	J4	373.0	J4
FLUORIDE (F)	9.9		4.8		4.2	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.19	J4	92.0		13.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	250.0		0.45		1.5	
CADMIUM (CD) TOT	2.2		0.17		0.8	
CHROMIUM (CR) TOT	0.062		<0.01		<0.01	
COPPER (CU) TOT	0.96		0.42		15.0	
IRON (FE) TOT	172.0		0.93		17.0	
LEAD (PB) TOT	0.53		0.19		1.1	
SELENIUM (SE) TOT	<0.01		1.7		0.21	
ZINC (ZN) TOT	51.0		0.5		6.3	

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-117		EP-118	
SAMPLE DATE	11/10/2000		11/10/2000	
SAMPLE TIME	14:10		15:00	
LAB	TSC-SLC		TSC-SLC	
LAB NUMBER	L001894013		L001894014	
SAMPLE NUMBER	EPRI-0011-181		EPRI-0011-182	
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	15.12		11.31	
OXYGEN (O) (FLD) DIS	1.3		3.5	
PH (FLD)	7.25		7.58	
PH	7.9		8.2	
SC (UMHOS/CM AT 25 C)	3660.0		2780.0	
SC (UMHOS/CM AT 25 C) (FLD)	4420.0		3400.0	
TDS (MEASURED AT 180 C)	2864.0		2179.0	
TOTAL SUSPENDED SOLIDS	4334.0		2384.0	
TURBIDITY (NTU)	<200.0		<200.0	
WATER TEMPERATURE (C) (FLD)	22.5		22.7	
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	362.0		194.0	
MAGNESIUM (MG) DIS	57.0		71.0	
SODIUM (NA) DIS	458.0		435.0	
POTASSIUM (K) DIS	88.0		35.0	
BICARBONATE (HCO3)	598.0		377.0	
CARBONATE AS CO3	<1.0		<1.0	
SULFATE (SO4)	1260.0		997.0	
CHLORIDE (CL)	334.0	J4	129.0	J4
FLUORIDE (F)	4.1		2.5	
-- NUTRIENTS --				
NITRATE + NITRITE AS N	12.0		19.0	
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	6.1		3.0	
CADMIUM (CD) TOT	0.67		0.012	
CHROMIUM (CR) TOT	0.033		0.035	
COPPER (CU) TOT	0.47		0.3	
IRON (FE) TOT	42.0		103.0	
LEAD (PB) TOT	2.4		0.36	
SELENIUM (SE) TOT	0.87		0.87	
ZINC (ZN) TOT	0.85		0.2	

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	10/30/2000	10/31/2000	11/01/2000	11/02/2000	11/03/2000	11/07/2000
SAMPLE TIME	16:00	15:00	12:30	13:20	15:15	12:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001820008	L001820021	L001839001	L001839014	L001857008	L001857016
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
SAMPLE NUMBER	EPRI-0011-220	EPRI-0011-222	EPRI-0011-223	EPRI-0011-226	EPRI-0011-228	EPRI-0011-230
-- PHYSICAL PARAMETERS --						
PH	5.7	5.7	4.6	5.5	5.2	5.5
SC (UMHOS/CM AT 25 C)	<5.0	2240.0	<5.0	<5.0	<5.0	<5.0
TDS (MEASURED AT 180 C)	<10.0	<10.0	11.0	12.0	<10.0	<10.0
TOTAL SUSPENDED SOLIDS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	<1.0 UJ4	<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	2.2	<2.0	<2.0	2.3
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	<1.0	<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	0.09	0.09	<0.05	<0.05
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<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) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	<0.1 UJ4	<0.1	<0.1	<0.1	<0.1	<0.1
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) TOT	0.042 UJ4	0.029	0.046	0.042	0.03	<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: QUALITY CONTROL --

SITE CODE	DI	DI	DI	DI	DI	DI
SAMPLE DATE	11/08/2000	11/09/2000	11/10/2000	11/13/2000	11/14/2000	11/15/2000
SAMPLE TIME	08:00	13:00	11:15	16:00	12:15	11:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001874002	L001874018	L001894009	L001895003	L001906001	L001906014
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
SAMPLE NUMBER	EPRI-0011-231	EPRI-0011-234	EPRI-0011-236	EPRI-0011-238	EPRI-0011-240	EPRI-0011-245
-- PHYSICAL PARAMETERS --						
PH	5.1	5.1	5.4	5.4	5.4	5.1
SC (UMHOS/CM AT 25 C)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
TDS (MEASURED AT 180 C)	10.0	11.0	<10.0	<10.0	<10.0	10.0
TOTAL SUSPENDED SOLIDS	<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
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	<1.0	<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	0.054	<0.1	<0.1
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<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) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) TOT	0.039	<0.02	<0.02	0.025	0.033	<0.02

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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: SURFACE WATER --

SITE CODE	POND 1	POND 6	SEP-1	
SAMPLE DATE	11/14/2000	11/14/2000	11/10/2000	
SAMPLE TIME	13:20	14:00	10:00	
LAB	TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L001906003	L001906004	L001894006	
SAMPLE NUMBER	EPRI-0011-201	EPRI-0011-203	EPRI-0011-183	
-- PHYSICAL PARAMETERS --				
OXYGEN (O) (FLD) DIS	9.4	12.4	8.1	
PH (FLD)	7.86	9.12	8.14	
PH	7.7	8.9	8.2	
SC (UMHOS/CM AT 25 C)	38000.0	3450.0	1728.0	
SC (UMHOS/CM AT 25 C) (FLD)	35600.0	3350.0	1631.0	
TDS (MEASURED AT 180 C)	38326.0	2715.0	1177.0	
TOTAL SUSPENDED SOLIDS	21.0	21.0	307.0	
TURBIDITY (NTU)	9.5	<200.0	27.0	
WATER TEMPERATURE (C) (FLD)	15.3	16.4	10.8	
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	314.0	273.0	106.0	
MAGNESIUM (MG) DIS	132.0	58.0	26.0	
SODIUM (NA) DIS	12056.0	353.0	211.0	
POTASSIUM (K) DIS	194.0	19.0	11.0	
BICARBONATE (HCO3)	85.0	88.0	338.0	
CARBONATE AS CO3	<1.0	10.0	<1.0	
SULFATE (SO4)	22838.0	1321.0	310.0	
CHLORIDE (CL)	2158.0	369.0	206.0	J4
FLUORIDE (F)	20.0	4.7	0.68	
-- NUTRIENTS --				
NITRATE + NITRITE AS N	117.0	0.26	1.8	
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.7	1.3	<0.005	
CADMIUM (CD) TOT	17.0	0.7	<0.005	
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	
COPPER (CU) TOT	1.0	0.78	<0.025	
IRON (FE) TOT	0.66	0.32	7.7	
LEAD (PB) TOT	0.25	0.28	0.014	
SELENIUM (SE) TOT	1.5	0.1	<0.005	
ZINC (ZN) TOT	9.8	1.4	0.025	

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-2	SEP-3		SEP-4
SAMPLE DATE	11/15/2000	11/10/2000		11/15/2000
SAMPLE TIME	09:40	10:15		08:45
LAB	TSC-SLC	TSC-SLC		TSC-SLC
LAB NUMBER	L001906009	L001894007		L001906006
SAMPLE NUMBER	EPRI-0011-184	EPRI-0011-185		EPRI-0011-186
-- PHYSICAL PARAMETERS --				
OXYGEN (O) (FLD) DIS	10.4	8.1		9.6
PH (FLD)	8.53	8.2		8.24
PH	7.9	8.2		8.2
SC (UMHOS/CM AT 25 C)	2070.0	1784.0		2160.0
SC (UMHOS/CM AT 25 C) (FLD)	2040.0	923.0	R	2130.0
TDS (MEASURED AT 180 C)	1363.0	1208.0		1448.0
TOTAL SUSPENDED SOLIDS	50.0	294.0		55.0
TURBIDITY (NTU)	17.8	28.0		40.0
WATER TEMPERATURE (C) (FLD)	11.6	10.9		10.2
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	107.0	113.0		113.0
MAGNESIUM (MG) DIS	26.0	29.0		28.0
SODIUM (NA) DIS	261.0	225.0		287.0
POTASSIUM (K) DIS	11.0	11.0		11.0
BICARBONATE (HCO3)	342.0	342.0		320.0
CARBONATE AS CO3	<1.0	<1.0		<1.0
SULFATE (SO4)	443.0	335.0		492.0
CHLORIDE (CL)	210.0	222.0	J4	247.0
FLUORIDE (F)	0.82	0.7		0.81
-- NUTRIENTS --				
NITRATE + NITRITE AS N	1.3	2.2		1.3
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.014	<0.005		0.019
CADMIUM (CD) TOT	<0.005	<0.005		<0.005
CHROMIUM (CR) TOT	<0.01	<0.01		<0.01
COPPER (CU) TOT	<0.025	<0.025		<0.025
IRON (FE) TOT	1.4	8.4		1.5
LEAD (PB) TOT	0.004	0.005		0.008
SELENIUM (SE) TOT	0.006	<0.005		0.005
ZINC (ZN) TOT	0.043	0.028		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: SURFACE WATER --

SITE CODE	SEP-6		SEP-7		SEP-9	
SAMPLE DATE	11/10/2000		11/10/2000		11/15/2000	
SAMPLE TIME	10:30		09:45		10:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L001894008		L001894005		L001906013	
SAMPLE NUMBER	EPRI-0011-187		EPRI-0011-188		EPRI-0011-189	
-- PHYSICAL PARAMETERS --						
OXYGEN (O) (FLD) DIS	7.9		8.1		7.2	
PH (FLD)	8.19		7.49		8.32	
PH	8.2		8.2		7.9	
SC (UMHOS/CM AT 25 C)	1880.0		1771.0		1960.0	
SC (UMHOS/CM AT 25 C) (FLD)	1777.0		1642.0		1919.0	
TDS (MEASURED AT 180 C)	1275.0		1202.0		1275.0	
TOTAL SUSPENDED SOLIDS	296.0		311.0		29.0	
TURBIDITY (NTU)	29.0		28.0		11.8	
WATER TEMPERATURE (C) (FLD)	11.0		10.9		15.3	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	106.0		114.0		87.0	
MAGNESIUM (MG) DIS	27.0		27.0		19.0	
SODIUM (NA) DIS	221.0		218.0		268.0	
POTASSIUM (K) DIS	10.0		12.0		9.8	
BICARBONATE (HCO3)	334.0		342.0		259.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	360.0		292.0		348.0	
CHLORIDE (CL)	204.0	J4	205.0	J4	245.0	
FLUORIDE (F)	0.7		0.68		0.8	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	2.2		1.7		3.4	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<0.005		<0.005		0.01	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	7.0		8.7		0.53	
LEAD (PB) TOT	0.005		0.006		<0.003	
SELENIUM (SE) TOT	<0.005		<0.005		<0.005	
ZINC (ZN) TOT	0.03		0.028		0.05	

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-10	SEP-11	SEP-11	SEP-12
SAMPLE DATE	11/15/2000	11/15/2000	11/15/2000	11/15/2000
SAMPLE TIME	10:10	09:50	09:55	09:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001906012	L001906010	L001906011	L001906008
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0011-190	EPRI-0011-191	EPRI-0011-243	EPRI-0011-192
-- PHYSICAL PARAMETERS --				
OXYGEN (O) (FLD) DIS	11.5	10.7	10.9	10.2
PH (FLD)	8.62	8.6	8.61	8.44
PH	8.0	8.0	8.0	8.3
SC (UMHOS/CM AT 25 C)	2000.0	2060.0	2060.0	2060.0
SC (UMHOS/CM AT 25 C) (FLD)	1958.0	2010.0	2010.0	2040.0
TDS (MEASURED AT 180 C)	1326.0	1359.0	1371.0	1367.0
TOTAL SUSPENDED SOLIDS	32.0	30.0	32.0	29.0
TURBIDITY (NTU)	16.1	17.3		42.0
WATER TEMPERATURE (C) (FLD)	13.3	12.7	12.7	10.9
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	103.0	104.0	105.0	103.0
MAGNESIUM (MG) DIS	25.0	26.0	25.0	25.0
SODIUM (NA) DIS	257.0	267.0	261.0	257.0
POTASSIUM (K) DIS	11.0	11.0	11.0	10.0
BICARBONATE (HCO3)	310.0	311.0	312.0	314.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	423.0	450.0	395.0	456.0
CHLORIDE (CL)	237.0	251.0	243.0	245.0
FLUORIDE (F)	0.86	0.8	0.82	0.79
-- NUTRIENTS --				
NITRATE + NITRITE AS N	1.3	1.5	1.6	1.6
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.019	0.013	0.013	0.014
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	0.74	0.67	0.66	0.84
LEAD (PB) TOT	<0.003	<0.003	<0.003	0.004
SELENIUM (SE) TOT	0.008	0.007	0.007	<0.005
ZINC (ZN) TOT	0.039	0.035	0.04	0.034

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-13	SEP-14	SEP-14
SAMPLE DATE	11/15/2000	11/14/2000	11/14/2000
SAMPLE TIME	09:00	14:20	14:25
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001906007	L001906005	L001906002
REMARKS			DUPLICATE
SAMPLE NUMBER	EPRI-0011-193	EPRI-0011-194	EPRI-0011-242
-- PHYSICAL PARAMETERS --			
OXYGEN (O) (FLD) DIS	10.5	10.2	10.2
PH (FLD)	8.42	8.43	8.36
PH	8.3	7.6	7.8
SC (UMHOS/CM AT 25 C)	2100.0	152.0	151.0
SC (UMHOS/CM AT 25 C) (FLD)	2080.0	148.1	148.0
TDS (MEASURED AT 180 C)	1420.0	116.0	106.0
TOTAL SUSPENDED SOLIDS	52.0	51.0	43.0
TURBIDITY (NTU)	38.0	6.11	
WATER TEMPERATURE (C) (FLD)	11.0	13.2	13.2
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	106.0	15.0	14.0
MAGNESIUM (MG) DIS	27.0	2.9	2.7
SODIUM (NA) DIS	270.0	8.9	8.2
POTASSIUM (K) DIS	10.0	2.5	3.0
BICARBONATE (HCO3)	317.0	59.0	93.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	454.0	20.0	20.0
CHLORIDE (CL)	259.0	3.7	4.8
FLUORIDE (F)	0.82	0.16	0.16
-- NUTRIENTS --			
NITRATE + NITRITE AS N	1.6	0.55	0.39
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.015	0.038	0.035
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	0.39	0.32
IRON (FE) TOT	1.3	2.8	2.3
LEAD (PB) TOT	0.009	0.087	0.076
SELENIUM (SE) TOT	0.005	<0.005	<0.005
ZINC (ZN) TOT	0.043	0.23	0.19

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	POND 1-SED		POND 5-SED		POND 5-SED		POND 6-SED
SAMPLE DATE	11/14/2000		11/14/2000		11/14/2000		11/14/2000
SAMPLE TIME	13:25		13:40		13:45		14:05
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L001909001		L001909002		L001909003		L001909004
REMARKS					DUPLICATE		
SAMPLE NUMBER	EPRI-0011-216		EPRI-0011-217		EPRI-0011-241		EPRI-0011-218
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	5900.0		2900.0		2400.0		12000.0
CADMIUM (CD) TOT	2400.0		1600.0		1300.0		3200.0
CHROMIUM (CR) TOT	140.0		270.0		180.0		120.0
COPPER (CU) TOT	24000.0		49000.0	J4	20000.0	J4	99000.0
IRON (FE) TOT	26000.0		53000.0		39000.0		45000.0
LEAD (PB) TOT	3300.0		28000.0	J4	16000.0	J4	8200.0
SELENIUM (SE) TOT	89.0		220.0	J4	140.0	J4	190.0
ZINC (ZN) TOT	25000.0		31000.0	J4	13000.0	J4	42000.0

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: SEDIMENT/SOIL --

SITE CODE	SEP-2-SED	SEP-4-SED	SEP-9-SED
SAMPLE DATE	11/15/2000	11/15/2000	11/15/2000
SAMPLE TIME	09:40	08:45	10:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001909009	L001909006	L001909013
SAMPLE NUMBER	EPRI-0011-205	EPRI-0011-207	EPRI-0011-210
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	<10.0	23.0	15.0
CADMIUM (CD) TOT	<10.0	18.0	<10.0
CHROMIUM (CR) TOT	<80.0	<80.0	<80.0
COPPER (CU) TOT	<20.0	230.0	190.0
IRON (FE) TOT	13000.0	19000.0	22000.0
LEAD (PB) TOT	58.0	140.0	280.0
SELENIUM (SE) TOT	<10.0	<10.0	<10.0
ZINC (ZN) TOT	33.0	210.0	210.0

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: SEDIMENT/SOIL --

SITE CODE	SEP-10-SED	SEP-10-SED	SEP-11-SED	SEP-12-SED
SAMPLE DATE	11/15/2000	11/15/2000	11/15/2000	11/15/2000
SAMPLE TIME	10:10	10:15	09:50	09:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L001909011	L001909012	L001909010	L001909008
REMARKS		DUPLICATE		
SAMPLE NUMBER	EPRI-0011-211	EPRI-0011-244	EPRI-0011-212	EPRI-0011-213
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	28.0	<10.0	<10.0	<10.0
CADMIUM (CD) TOT	<10.0	<10.0	<10.0	<10.0
CHROMIUM (CR) TOT	170.0	140.0	110.0	89.0
COPPER (CU) TOT	<20.0	38.0	46.0	41.0
IRON (FE) TOT	22000.0	21000.0	22000.0	20000.0
LEAD (PB) TOT	39.0	39.0	42.0	24.0
SELENIUM (SE) TOT	<10.0	<10.0	<10.0	<10.0
ZINC (ZN) TOT	37.0	20.0	51.0	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: SEDIMENT/SOIL --

SITE CODE	SEP-13-SED	SEP-14-SED
SAMPLE DATE	11/15/2000	11/14/2000
SAMPLE TIME	09:00	14:30
LAB	TSC-SLC	TSC-SLC
LAB NUMBER	L001909007	L001909005
SAMPLE NUMBER	EPRI-0011-214	EPRI-0011-215
-- METALS & MINOR CONSTITUENTS --		
ARSENIC (AS) TOT	33.0	970.0
CADMIUM (CD) TOT	<10.0	89.0
CHROMIUM (CR) TOT	<80.0	230.0
COPPER (CU) TOT	80.0	14000.0
IRON (FE) TOT	15000.0	190000.0
LEAD (PB) TOT	100.0	4900.0
SELENIUM (SE) TOT	<10.0	<10.0
ZINC (ZN) TOT	100.0	16000.0

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.

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38	L001909001	EPRI-0011-216	11/14/2000	POND 1-SED
38	L001909002	EPRI-0011-217	11/14/2000	POND 5-SED
38	L001909003	EPRI-0011-241	11/14/2000	POND 5-SED
38	L001909004	EPRI-0011-218	11/14/2000	POND 6-SED
41	L001909005	EPRI-0011-215	11/14/2000	SEP-14-SED
39	L001909006	EPRI-0011-207	11/15/2000	SEP-4-SED
41	L001909007	EPRI-0011-214	11/15/2000	SEP-13-SED
40	L001909008	EPRI-0011-213	11/15/2000	SEP-12-SED
39	L001909009	EPRI-0011-205	11/15/2000	SEP-2-SED
40	L001909010	EPRI-0011-212	11/15/2000	SEP-11-SED
40	L001909011	EPRI-0011-211	11/15/2000	SEP-10-SED
40	L001909012	EPRI-0011-244	11/15/2000	SEP-10-SED
39	L001909013	EPRI-0011-210	11/15/2000	SEP-9-SED

SECTION H-4

REMEDIAL INVESTIGATION WATER SAMPLES, WINTER 2001

DATA VALIDATION REPORT
ASARCO EL PASO COPPER SMELTER
REMEDIAL INVESTIGATION
WATER SAMPLES
WINTER 2000-2001

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GLOSSARY OF TERMS

CCV .....Continuing Calibration Verification

CLP .....Contract Laboratory Program

CRDL.....Contract Required Detection Limit

Diff.....Difference

% Diff.....Percent difference

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

TSS.....Total Suspended Solids

SUMMARY

This report covers the validation of data for quarterly monitoring water and sediment samples collected during February of 2001 for the Asarco El Paso Copper Smelter Remediation Investigation. The validation has been carried out according to requirements spelled out in the work plan (Asarco El Paso Copper Smelter Remedial Investigation Work Plan, November 1996). 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)
Water	L010201	PH	Calcium	Arsenic
	L010192	Conductivity	Magnesium	Cadmium
	L010224	TDS	Sodium	Chromium
	L010236	TSS	Potassium	Copper
	L010244		Bicarbonate	Iron
	L010253		Carbonate	Lead
			Sulfate	Zinc
			Chloride	
			Fluoride	
			NO_3+NO_2 as N	
Sediment	L010274	Total Metals – XRF (same metals as for water)		

Note that both groundwater and surface water samples from the Winter 2000-2001 monitoring event were analyzed for total metals only. Turbidity was measured in the field. 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 statistics 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 eleven of the surface water sites, and were analyzed for the metals. The sediment samples were analyzed by XRF using a matrix-specific calibration for arsenic and lead, and using a fundamental parameters calibration for cadmium, chromium, copper, iron, selenium, and zinc. (The matrix-specific calibration, however, was for sandy soils from the Asarco site in Murray, Utah rather than being specific to soils from El Paso.)

Following is a summary of groundwater and surface water quality control results:

Laboratory quality control summary:

- All laboratory quality control samples were within control limits for water data.

Field quality control violations resulted in a total of 110 flags:

- One field specific conductivity result was rejected due to interparameter relationships.
- All results (21) for a field rinsate blank sample collected 2/12/01 were flagged as anomalous due to the excessive constituent concentrations. This sample could not be used for evaluation purposes.
- Analytes were detected in field deionized water (DI) blanks submitted 2/8/01, 2/16/01, 2/20/01, 2/21/01, 2/23/01, and 2/26/01, which resulted in a total of 36 flags to indicate possible high bias at low concentrations. Zinc contamination in field blanks continues to be a problem with this project. For the Winter 2000-2001 sampling event, 67% of the field DI blanks were contaminated with zinc. For this sampling event 46% of the field DI blanks were contaminated with zinc. The laboratory blanks did not show signs of zinc; therefore, the zinc contamination most likely occurred in the field and was systematic in nature.

Parameter	Number of Flags
Lead (tot)	4
Zinc (tot)	32

- Eight out of 14 field duplicate samples had measurements were out of control limits resulting in a total of 52 flags to indicate a possible lack of reproducibility. 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
Lead (tot)	6
Iron (tot)	7
Selenium (tot)	7
TSS	6
Carbonate	5
Nitrate+Nitrite	11
Chloride	5
Zinc (tot)	5

Following is a summary of sediment quality control results:

Laboratory quality control violations for the sediment XRF analyses resulted in a total of 13 flags:

- For arsenic and lead only, information was provided for calibration verification samples (at a frequency of 1 in 10) and laboratory control samples (1 in 20). Recoveries on these standards were all within control limits.
- Reference standards were not analyzed for the parameters analyzed using the fundamental parameters calibration.
- Information was provided for all analytes for laboratory duplicates, which were performed at a frequency of 1 in 20.
- One laboratory duplicate was out of control limits for chromium, which resulted in the flagging of 13 results.

Field quality control sample violations resulted in a total of 24 flags:

- A field duplicate collected 2/27/01 was out of control limits for arsenic, cadmium, iron, lead, selenium, and zinc; and a field duplicate collected 2/28/01 was out of control limits for zinc. Following is a summary of duplicate violation flags for each parameter:

Parameter	Number of Flags
Arsenic (tot)	4
Cadmium (tot)	5
Iron (tot)	3
Lead (tot)	4
Selenium (tot)	3
Zinc (tot)	5

Completeness for this project 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 divided by the total number of planned measurements, expressed as a percentage. Completeness was calculated at 99.4% (3433 valid measurements per 3455 planned measurements) for this sampling event. As there were enough valid measurements to satisfactorily address the important issues of the study, completeness for the Winter 2000-2001 sampling event was achieved.

- All sites were visited according to the work plan. Sites EP-87 and EP-114 were not sampled due to damaged wells; and sites EP-115 and EM-7 were not sampled due to dry wells.
- One sample result (field specific conductivity measurement) was rejected. It should be noted that the field specific conductivity measurement for this sample was deemed acceptable; therefore, the rejection of the laboratory measurement data does not affect the overall quality of the data set.
- One rinsate blank was not used for evaluation due to the excessive constituent concentrations.

A total of 147 quality control flags were applied to the data. For laboratory and field data, 95.7 percent of the data may be used without qualification (3307 out of 3454 results). Of the flagged data, 22 results were flagged as anomalous. In conclusion, with the exception of the anomalous data, the data for the Asarco El Paso Copper Smelter Remedial Investigation Winter 2000-2001 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 137 samples collected during February 2001 for the Asarco El Paso Copper Smelter Remedial Investigation. Sites EP-87 and EP114 were not sampled due to damaged wells; and sites EP-115 and EM-7 were not samples due to dry wells. The total number of samples submitted for analyses were:

  13 DI blanks
  1 Rinsate Blank
  16 Field duplicates (2 surface water, 12 groundwater, and 2 sediment)
  11 Surface water samples (not counting duplicate)
  85 Groundwater samples (not counting duplicates)
  11 Sediment samples (not counting dulicates)

- Validation procedures used are generally consistent with:
  (Check all that apply)
  X EPA CLP National Functional Guidelines for Inorganics Data Review
  X Asarco El Paso Copper Smelter Remedial Investigation Work Plan, El Paso, Texas (November 1996)
  ___ Other

- Overall level of validation:
  ___ Contract Laboratory Program (CLP)
  X Standard
  ___ 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.
  X Yes
  ___ No

- Field measurements and field documentation were complete.
  _X_ Yes
  ___ No

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.
  _X_ 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
  _X_ No

  Notes: When an analyte is detected in a blank, associated results up to 5 times the blank level are flagged with "**UJ1**" 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.

  Note that there was an unusual amount of zinc contamination in the field blanks. After reviewing the laboratory preparation blanks, it was determined that the zinc contamination took place in the field. This contamination appeared to be systematic in nature. Possible reasons for the contamination may have been the source of the DI water, container contamination or improper rinsing of equipment. However, improper rinsing of equipment usually does not cause a systematic error and other contaminants would also be present in the blank.

  The rinsate blank submitted 2/12/01 showed an excessive amount of contamination. Samples collected directly before the rinsate blank were

reviewed. In most cases, the metal concentrations for these samples were much less than the rinsate metal concentrations. Due to the unexplainable reasons for the rinsate constituent concentrations, the results were flagged anomalous and not used for evaluation purposes.

Summaries of DI and rinsate blank detections are on the following page.

DI Blank Detections

Sample	Sample Date	Analyte	Result (mg/L)	5 times Blank Result (mg/L)	PDLG (mg/L)	# of Flags
EPRI-0102-221	2/8/01	Zinc (tot)	0.035	0.175	0.020	4
EPRI-0102-233	2/16/01	Zinc (tot)	0.026	0.130	0.020	5
EPRI-0102-234	2/20/01	Zinc (tot)	0.021	0.105	0.020	0 *
EPRI-0102-237	2/21/01	Zinc (tot)	0.029	0.145	0.020	10
EPRI-0102-242	2/23/01	Lead (tot)	0.009	0.045	0.003	4
		Zinc (tot)	0.038	0.190	0.020	10
EPRI-0102-244	2/26/01	Zinc (tot)	0.032	0.160	0.020	3

* No associated sample results were less than 5 times the blank value.

Rinsate Blank Summary

All analytes for the rinsate blank were flagged as anomalous ("A")

Sample	Sample Date		Analyte	Result (mg/L)	PDLG (mg/L)	Analyte Flagged with "A"
EPRI-0102-227	2/12/01	**Detected Analytes**	Specific Conductivity (SC)	202	5	yes
			Total Dissolved Solids (TDS)	82	10	yes
			Calcium	9.2	1	yes
			Sodium	21	2	yes
			Bicarbonate	20	1	yes
			Sulfate	66	2	yes
			Chloride	6.4	1	yes
			Fluoride	0.19	0.05	yes
			Nitrate +Nitrite (NO3+NO2)	0.16	0.10	yes
			Arsenic (tot)	0.037	0.005	yes
			Cadmium (tot)	0.031	0.005	yes
			Copper (tot)	0.073	0.025	yes
			Iron (tot)	0.43	0.10	yes
			Lead (tot)	0.004	0.003	yes

Sample	Sample Date		Analyte	Result (mg/L)	PDLG (mg/L)	Analyte Flagged with "A"
			Zinc (tot)	0.071	0.020	yes
		Non-detected Analytes	Total Suspended Solids (TSS)	<1	1	yes
			Magnesium	<1	1	yes
			Potassium	<2	2	yes
			Carbonate	<1	1	yes
			Chromium (tot)	<0.01	0.01	yes
			Selenium (tot)	<0.005	0.005	yes

- **Field duplicates**

  Field duplicates have been collected at the proper frequency.

  _X_ 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 ± 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

  _X_ No

  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 for water samples:

Sample / Duplicate	Site	Sample Date	Analyte	Sample/ Duplicate Result (mg/L)	PDLG (mg/L)	RPD / Diff (mg/L)	# of Flags
EPRI-0102-103/219	EP-7	2/5/01	Zinc (tot)	0.049 / <0.020	0.020	0.029 Diff	5
EPRI-0102-138/223	EP-71	2/9/01	Selenium (tot)	0.19 / 0.024	0.005	23.3 RPD	7
EPRI-0102-118/235	EP-49	2/20/01	TSS	89 / 277	10	102.7 RPD	6
EPRI-0102-195/238	EM-1	2/22/01	Iron (tot)	0.37 / 0.48	0.1	0.11 Diff	2
EPRI-0102-126/240	EP-58	2/23/01	Iron (tot)	1.2 / 0.97	0.1	21.2 RPD	5

Sample / Duplicate	Site	Sample Date	Analyte	Sample/ Duplicate Result (mg/L)	PDLG (mg/L)	RPD / Diff (mg/L)	# of Flags
EPRI-0102-187/241	SEP-6	2/23/01	Carbonate	4.8 / 2.4	1.0	2.4 Diff	5
EPRI-0102-109/243	EP-21	2/26/01	Chloride	605 / 759	1.0	22.6 RPD	5
			Lead (tot)	0.029 / 0.023	0.003	23.1 RPD	6
			NO3+NO2	0.39 / 0.93	0.10	0.54 Diff	4
EPRI-0102-193/247	SEP-13	2/28/01	NO3+NO2	0.53 / 0.69	0.1	26.2 RPD	7

Sediment Field Duplicate Exceedances

Sample Number / Duplicate	Site	Sample Date	Analyte	Sample/ Duplicate Result (mg/L)	PDLG (mg/L)	RPD / Diff (mg/L)	# of Flags
EPRI-0102-216 / 245	POND 1-SED	2/27/01	Arsenic	1420 / 2080	10	37.7 RPD	4
			Cadmium	533 / 895	10	50.7 RPD	5
			Iron	12800 / 20100	20	44.4 RPD	3
			Lead	2680 / 4780	10	56.3 RPD	4
			Selenium	33 / 81	10	48 Diff	3
			Zinc	3760 / 5990	10	45.7 RPD	2
EPRI-0102-207 / 246	SEP-4-SED	2/28/01	Zinc	87 / 57	10	41.7 RPD	3

4. LABORATORY PROCEDURES

- **Laboratory procedures followed**

  ___ CLP-SOW
  _X_ SW-846
  _X_ Methods for Chemical Analysis of Water and Wastes
  _X_ XRF Standard Operating Procedures

- **Holding times met**

  _X_ Yes
  ___ No

- **Consistency with project requirements**

  Analyses were carried out as requested.
  _X_ Yes
  ___ No

  Project specified methods were used.
  _X_ Yes
  ___ No

5. DETECTION LIMITS

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

  ___ Yes
  _X_ No – notes on the following page

Detection Limit 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 and iron using the XRF method. Iron was not a concern 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

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)
POND 1-SED	EPRI-0102-216	Chromium	<80	20
SEP-2-SED	EPRI-0102-205	Chromium	<80	20
SEP-4-SED	EPRI-0102-207	Chromium	<80	20
SEP-9-SED	EPRI-0102-210	Chromium	<80	20
SEP-10-SED	EPRI-0102-211	Chromium Copper	<80 <20	20 10
SEP-13-SED	EPRI-0102-214	Chromium	<80	20

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%).

  _X_ Yes
  ___ No

8. LABORATORY DUPLICATES

- Laboratory duplicate samples were analyzed at the proper frequency.

  _X_ 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, 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 the PDLG for water matrix, within plus or minus two times the PDLG for sediment or soil matrix.

  ___ Yes
  _X_ No - notes

  Notes: All laboratory duplicates were within control limits for water samples. One laboratory duplicate was out of control limits for sediment samples. Chromium for laboratory duplicate L010274-20 had an RPD of 38%. Thirteen chromium results from XRF batch L010274 were flagged due to this violation.

9. LABORATORY CONTROL STANDARDS

- LCSs were prepared and analyzed at the proper frequency.

  _X_ Yes
  ___ No

- LCS recoveries were within the required control limits (80-120% for water, 75-125% for arsenic and lead analyzed by XRF).

  _X_ Yes
  ___ No

10. INTERPARAMETER RELATIONSHIPS

- The following relationships have been checked:

  X Lab pH vs. field pH.
  X Lab SC vs. field SC
  X TDS vs. SC

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

equal to or less than 10%.....95 samples

11 to 20%.....15 sample

Lab SC vs. Field SC: This relationship was generally in order except for one sample. Sample EPRI-0102-167 (EP-103) had a field SC value of 1518 umohs/cm and a lab value of 5620 umohs/cm. The field value was in line with historical data and the TDS value for this sample, therefore, the lab SC value was flagged as anomalous (flagged with "A").

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

less than 10% .....103 samples

11 to 20%.....6 samples

greater than 20% (73%) .....1 sample (Site EP-103)

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 generally in order except for sample EPRI-0102-167 (EP-103). The TDS/lab SC ratio for this site was 17%; however, the TDS/field SC ratio was 0.64, which is in line with historical data. As previously stated (Lab SC vs. Field SC), the lab SC result was flagged as anomalous.

The distribution for TDS vs. Lab SC ratios was as follows:

less than 55% ..... 1 sample (Site EP-103)

56 to 75%..... 74 samples

76 to 100%..... 34 samples*

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

11. HISTORICAL COMPARISON

The data for the Winter 2000-2001 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

12. 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, 100% of the results were within control limits.
  - For laboratory control samples, 100% of the results were within control limits.
  - For laboratory blanks, 100% of the results were less than the detection limit.
  - For field blanks, 92.8% of the results were less than the detection limits (22 out of 307 results were above the detection limit). On the following page is a summary of individual analyte results for field blanks. Analytes not listed in the table were not detected in any of the field blank samples.

Field Blank Summary

Analyte	# Field Blank Samples	# of Detections	% Without Detections
SC	14	1 (Rinsate)	92.9%
TDS	14	1 (Rinsate)	92.9%
Calcium	14	1 (Rinsate)	92.9%
Sodium	14	1 (Rinsate)	92.9%
Bicarbonate	14	1 (Rinsate)	92.9%
Sulfate	14	1 (Rinsate)	92.9%
Chloride	14	1 (Rinsate)	92.9%
Fluoride	14	1 (Rinsate)	92.9%
NO3+NO2	14	1 (Rinsate)	92.9%
Arsenic (tot)	14	1 (Rinsate)	92.9%
Cadmium (tot)	14	1 (Rinsate)	92.9%
Copper (tot)	14	1 (Rinsate)	92.9%
Iron (tot)	14	1 (Rinsate)	92.9%
Lead (tot)	14	2	85.7%
Zinc (tot)	14	7	50.0%

Accuracy for sediment samples is evaluated by recoveries on laboratory reference standards, which in this case included calibration standards and laboratory control standards for arsenic and lead only since these were analyzed using a matrix-specific calibration. Recoveries on these QC samples were all within control limits. No information was provided for evaluation of accuracy for the other parameters analyzed by XRF (cadmium, chromium, copper, iron, selenium, and zinc).

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 97.3% results were within control limits (10 out of 364 results were out of control limits). On the following page is 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
Carbonate	14	1	92.8%
Chloride	14	1	92.8%
Iron (tot)	14	2	85.7%
Lead (tot)	14	1	92.8%
Nitrate+Nitrite	14	2	85.7%
Selenium (tot)	14	1	92.8%
TSS	14	1	92.8%
Zinc (tot)	14	1	92.8%

Precision for sediment samples:

- For laboratory duplicates sample, 87.5% of the results were within control limits (1 out of 8 results was not in control limits). Only one laboratory duplicate was run for sediment samples and chromium was the only analyte out of control limits.
- For field duplicate samples, 56.3% were within control limits (7 out of 16 results were out of control limits). Two field duplicate samples were run for sediment samples. Arsenic, cadmium, iron, lead, and selenium were out of control limits for 1 field duplicate and zinc was out of control limits for both field duplicates.

Completeness (water and sediment are evaluated together)

The number of valid samples per number of planned samples quantitatively measures completeness. Completeness for the Winter 2000-2001 sampling event was measured at 99.4% (3432 valid measurements per 3454 planned measurements)

- One SC result was flagged as anomalous.
- The field rinsate blank sample results (21) were flagged as anomalous.

The number of flagged results per number of measurements can also measure completeness. This was calculated as 95.7% (147 flagged results out of 3454 measurements). On the following page is a summary of the overall completeness of the data, broke down by parameter.

Completeness Summary

Parameter	# of Measurements	# Valid Results	Percent of Valid Results	# of Results Not Flagged	% of Results Not Flagged
DTWL	87	87	100%	87	100%
Oxygen	110	110	100%	110	100%
pH(field)	110	110	100%	110	100%
SC(field)	110	110	100%	110	100%
Turbidity	96	96	100%	96	100%
Water Temp.	110	110	100%	110	100%
pH(lab)	123	123	100%	123	100%
SC(lab)	124	122	98.4%	122	98.4%
TDS	124	123	99.2%	124	99.2%
TSS	124	123	99.2%	117	94.4%
Calcium	124	123	99.2%	123	99.2%
Magnesium	124	123	99.2%	123	99.2%
Sodium	124	123	99.2%	123	99.2%
Potassium	124	123	99.2%	123	99.2%
Bicarbonate	124	123	99.2%	123	99.2%
Carbonate	124	123	99.2%	118	95.2%
Sulfate	124	123	99.2%	123	99.2%
Chloride	124	123	99.2%	118	95.2%
Fluoride	124	123	99.2%	123	99.2%
NO_3+NO_2 as N	124	123	99.2%	112	90.3%
Arsenic	137	136	99.3%	132	96.4%
Cadmium	137	136	99.3%	131	95.6%
Chromium	137	136	99.3%	123	89.8%
Copper	137	136	99.3%	136	99.3%
Iron	137	136	99.3%	126	92.0%
Lead	137	136	99.3%	122	89.1%
Selenium	137	136	99.3%	126	92.0%
Zinc	137	136	99.3%	94	68.6%

In conclusion, with the exception of anomalous data, the data for the Asarco El Paso Copper Smelter Remedial Investigation Winter 2000-2001 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 Reviewed by: **Linda Tangen**

Report Reviewed by: **Matthew Miles**

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APPENDIX 1

TABLES

TABLE 1.

DATA VALIDATION CODES AND DEFINITIONS

CODE		DEFINITION
J	-	The associated numerical value is an estimated quantity because quality control criteria were not met. Subscripts for the "J" qualifier: 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
UJ	-	The material was analyzed for, but was not detected above the associated value. Subscripts for the "UJ" qualifier: 1 - Blank contamination. Indicates possible high bias and/or false positive. 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
R	-	Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis are necessary for verification.
E	-	Estimated. (Not an EPA code.)
A	-	Anomalous data.. No apparent explanation for discrepancy in data. (Not an EPA code.)

TABLE 2. SUMMARY OF FLAGGED DATA
EL PASO, TEXAS - EPRI QUARTERLY MONITORING
WINTER 2000/2001

Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
GROUNDWATER AND SURFACE WATER SAMPLES								
EM-1	EPRI-0102-195	L010244021	02/22/2001	IRON (FE) TOT	0.37	J4	Field Duplicate	0.11 mg/L Diff
EM-1 DUP	EPRI-0102-238	L010244022	02/22/2001	IRON (FE) TOT	0.48	J4	Field Duplicate	0.11 mg/L Diff
EM-2	EPRI-0102-196	L010201006	02/09/2001	SELENIUM (SE) TOT	0.13	J4	Field Duplicate	23.3% RPD
EM-4	EPRI-0102-197	L010201007	02/09/2001	SELENIUM (SE) TOT	<0.005	UJ4	Field Duplicate	23.3% RPD
EP-4	EPRI-0102-100	L010192001	02/05/2001	ZINC (ZN) TOT	0.042	J4	Field Duplicate	0.029 mg/L Diff
EP-5	EPRI-0102-101	L010192002	02/05/2001	ZINC (ZN) TOT	0.044	J4	Field Duplicate	0.029 mg/L Diff
EP-6	EPRI-0102-102	L010192003	02/05/2001	ZINC (ZN) TOT	<0.02	UJ4	Field Duplicate	0.029 mg/L Diff
EP-7	EPRI-0102-103	L010192004	02/05/2001	ZINC (ZN) TOT	0.049	J4	Field Duplicate	0.029 mg/L Diff
EP-7 DUP	EPRI-0102-219	L010192005	02/05/2001	ZINC (ZN) TOT	<0.02	UJ4	Field Duplicate	0.029 mg/L Diff
EP-12	EPRI-0102-104	L010253014	02/26/2001	CHLORIDE (CL)	552.0	J4	Field Duplicate	22.6% RPD
				LEAD (PB) TOT	0.015	J4	Field Duplicate	23.1% RPD
				ZINC (ZN) TOT	0.032	UJ1	DI Blank	Result (0.032 mg/L)>PDLG
EP-13	EPRI-0102-105	L010201010	02/09/2001	SELENIUM (SE) TOT	0.32	J4	Field Duplicate	23.3% RPD
EP-21	EPRI-0102-109	L010253016	02/26/2001	CHLORIDE (CL)	605.0	J4	Field Duplicate	22.6% RPD
				LEAD (PB) TOT	0.029	J4	Field Duplicate	23.1% RPD
				NITRATE + NITRITE	0.39	J4	Field Duplicate	0.54 mg/L Diff
EP-21 DUP	EPRI-0102-243	L010253017	02/26/2001	CHLORIDE (CL)	759.0	J4	Field Duplicate	22.6% RPD
				LEAD (PB) TOT	0.023	J4	Field Duplicate	23.1% RPD
EP-24	EPRI-0102-112	L010253012	02/26/2001	CHLORIDE (CL)	806.0	J4	Field Duplicate	22.6% RPD
				LEAD (PB) TOT	0.01	J4	Field Duplicate	23.1% RPD
				NITRATE + NITRITE	0.36	J4	Field Duplicate	0.54 mg/L Diff
EP-25	EPRI-0102-113	L010253013	02/26/2001	CHLORIDE (CL)	961.0	J4	Field Duplicate	22.6% RPD
				LEAD (PB) TOT	0.009	J4	Field Duplicate	23.1% RPD
				NITRATE + NITRITE	0.13	J4	Field Duplicate	0.54 mg/L Diff
				ZINC (ZN) TOT	0.064	UJ1	DI Blank	Result (0.032 mg/L)>PDLG
EP-26	EPRI-0102-114	L010236014	02/20/2001	TSS	18.0	J4	Field Duplicate	102.7% RPD
P-43	EPRI-0102-117	L010253015	02/26/2001	LEAD (PB) TOT	0.004	J4	Field Duplicate	23.1% RPD
				NITRATE + NITRITE	0.13	J4	Field Duplicate	0.54 mg/L Diff
				ZINC (ZN) TOT	0.022	UJ1	DI Blank	Result (0.032 mg/L)>PDLG
EP-49	EPRI-0102-118	L010236011	02/20/2001	TSS	89.0	J4	Field Duplicate	102.7% RPD
EP-49 DUP	EPRI-0102-235	L010236012	02/20/2001	TSS	277.0	J4	Field Duplicate	102.7% RPD
EP-52	EPRI-0102-120	L010236009	02/20/2001	TSS	37.0	J4	Field Duplicate	102.7% RPD
EP-54	EPRI-0102-122	L010236013	02/20/2001	TSS	16.0	J4	Field Duplicate	102.7% RPD
EP-57	EPRI-0102-125	L010253005	02/23/2001	IRON (FE) TOT	2.8	J4	Field Duplicate	21.2 RPD
				LEAD (PB) TOT	0.003	UJ1	DI Blank	Result (0.009 mg/L)>PDLG
				ZINC (ZN) TOT	0.034	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
EP-58	EPRI-0102-126	L010253001	02/23/2001	IRON (FE) TOT	1.2	J4	Field Duplicate	21.2 RPD
				ZINC (ZN) TOT	0.033	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
EP-58 DUP	EPRI-0102-240	L010253002	02/23/2001	IRON (FE) TOT	0.97	J4	Field Duplicate	21.2 RPD
				ZINC (ZN) TOT	0.038	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
EP-59	EPRI-0102-127	L010244001	02/21/2001	ZINC (ZN) TOT	0.11	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-59 DUP	EPRI-0102-236	L010244002	02/21/2001	ZINC (ZN) TOT	0.1	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-60	EPRI-0102-128	L010244006	02/21/2001	ZINC (ZN) TOT	0.083	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-61	EPRI-0102-129	L010253003	02/23/2001	IRON (FE) TOT	0.38	J4	Field Duplicate	21.2 RPD
				ZINC (ZN) TOT	0.036	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
EP-62	EPRI-0102-130	L010244004	02/21/2001	ZINC (ZN) TOT	0.11	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-63	EPRI-0102-131	L010244005	02/21/2001	ZINC (ZN) TOT	0.15	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-64	EPRI-0102-132	L010244003	02/21/2001	ZINC (ZN) TOT	0.088	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-65	EPRI-0102-133	L010253004	02/23/2001	IRON (FE) TOT	0.21	J4	Field Duplicate	21.2 RPD
				ZINC (ZN) TOT	0.038	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
EP-66	EPRI-0102-134	L010244007	02/21/2001	ZINC (ZN) TOT	0.093	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-67	EPRI-0102-135	L010192010	02/08/2001	ZINC (ZN) TOT	0.03	UJ1	DI Blank	Result (0.035 mg/L)>PDLG
EP-67 DUP	EPRI-0102-222	L010192011	02/08/2001	ZINC (ZN) TOT	0.039	UJ1	DI Blank	Result (0.035 mg/L)>PDLG
P-68	EPRI-0102-136	L010201001	02/09/2001	SELENIUM (SE) TOT	0.33	J4	Field Duplicate	23.3% RPD
-70	EPRI-0102-137	L010201004	02/09/2001	SELENIUM (SE) TOT	0.22	J4	Field Duplicate	23.3% RPD
EP-71	EPRI-0102-138	L010201002	02/09/2001	SELENIUM (SE) TOT	0.19	J4	Field Duplicate	23.3% RPD

TABLE 2. SUMMARY OF FLAGGED DATA
EL PASO, TEXAS - EPRI QUARTERLY MONITORING
WINTER 2000/2001

Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
EP-71 DUP	EPRI-0102-223	L010201003	02/09/2001	SELENIUM (SE) TOT	0.24	J4	Field Duplicate	23.3% RPD
EP-73	EPRI-0102-140	L010236006	02/16/2001	ZINC (ZN) TOT	0.06	UJ1	DI Blank	Result (0.026 mg/L)>PDLG
EP-80	EPRI-0102-146	L010236005	02/16/2001	ZINC (ZN) TOT	0.082	UJ1	DI Blank	Result (0.026 mg/L)>PDLG
EP-81	EPRI-0102-147	L010236004	02/16/2001	ZINC (ZN) TOT	0.11	UJ1	DI Blank	Result (0.026 mg/L)>PDLG
EP-85	EPRI-0102-151	L010236002	02/16/2001	ZINC (ZN) TOT	0.039	UJ1	DI Blank	Result (0.026 mg/L)>PDLG
EP-85 DUP	EPRI-0102-232	L010236003	02/16/2001	ZINC (ZN) TOT	0.051	UJ1	DI Blank	Result (0.026 mg/L)>PDLG
EP-89	EPRI-0102-155	L010192009	02/08/2001	ZINC (ZN) TOT	0.046	UJ1	DI Blank	Result (0.035 mg/L)>PDLG
EP-100	EPRI-0102-164	L010236008	02/20/2001	TSS	76.0	J4	Field Duplicate	102.7% RPD
EP-103	EPRI-0102-167	L010201019	02/12/2001	SC (UMHOS/CM)	5620	A	TDS/SC Ratio and Lab/Field SC % Diff	0.17 Ratio and 73% Diff
EP-110	EPRI-0102-174	L010192008	02/08/2001	ZINC (ZN) TOT	0.037	UJ1	DI Blank	Result (0.035 mg/L)>PDLG
EP-111	EPRI-0102-175	L010244008	02/21/2001	ZINC (ZN) TOT	0.047	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-112	EPRI-0102-176	L010244009	02/21/2001	ZINC (ZN) TOT	0.046	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
EP-113	EPRI-0102-177	L010244010	02/21/2001	ZINC (ZN) TOT	0.045	UJ1	DI Blank	Result (0.029 mg/L)>PDLG
SEP-1	EPRI-0102-183	L010253006	02/23/2001	CARBONATE AS CO3	4.8	J4	Field Duplicate	2.4 mg/L Diff
				ZINC (ZN) TOT	0.033	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
SEP-2	EPRI-0102-184	L010267007	02/28/2001	NITRATE + NITRITE	0.59	J4	Field Duplicate	26.2% RPD
SEP-3	EPRI-0102-185	L010253008	02/23/2001	CARBONATE AS CO3	7.0	J4	Field Duplicate	2.4 mg/L Diff
				LEAD (PB) TOT	0.003	UJ1	DI Blank	Result (0.009 mg/L)>PDLG
				ZINC (ZN) TOT	0.028	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
SEP-4	EPRI-0102-186	L010267003	02/28/2001	NITRATE + NITRITE	0.67	J4	Field Duplicate	26.2% RPD
SEP-6	EPRI-0102-187	L010253009	02/23/2001	CARBONATE AS CO3	4.8	J4	Field Duplicate	2.4 mg/L Diff
				ZINC (ZN) TOT	0.041	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
SEP-6 DUP	EPRI-0102-241	L010253010	02/23/2001	CARBONATE AS CO3	2.4	J4	Field Duplicate	2.4 mg/L Diff
				LEAD (PB) TOT	0.003	UJ1	DI Blank	Result (0.009 mg/L)>PDLG
				ZINC (ZN) TOT	0.035	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
SEP-7	EPRI-0102-188	L010253007	02/23/2001	CARBONATE AS CO3	4.8	J4	Field Duplicate	2.4 mg/L Diff
				LEAD (PB) TOT	0.004	UJ1	DI Blank	Result (0.009 mg/L)>PDLG
				ZINC (ZN) TOT	0.037	UJ1	DI Blank	Result (0.038 mg/L)>PDLG
SEP-10	EPRI-0102-190	L010267009	02/28/2001	NITRATE + NITRITE	0.49	J4	Field Duplicate	26.2% RPD
SEP-11	EPRI-0102-191	L010267008	02/28/2001	NITRATE + NITRITE	0.56	J4	Field Duplicate	26.2% RPD
SEP-12	EPRI-0102-192	L010267006	02/28/2001	NITRATE + NITRITE	0.57	J4	Field Duplicate	26.2% RPD
SEP-13	EPRI-0102-193	L010267004	02/28/2001	NITRATE + NITRITE	0.53	J4	Field Duplicate	26.2% RPD
SEP-13 DUP	EPRI-0102-247	L010267005	02/28/2001	NITRATE + NITRITE	0.69	J4	Field Duplicate	26.2% RPD
RINSATE	EPRI-0102-227	L010201022	02/12/2001	ARSENIC (AS) TOT	0.037	A	Rinsate Blank	Results > PDLG
				BICARBONATE (HCO3)	20.0	A	Rinsate Blank	Results > PDLG
				CADMIUM (CD) TOT	0.031	A	Rinsate Blank	Results > PDLG
				CALCIUM (CA) DIS	9.2	A	Rinsate Blank	Results > PDLG
				CARBONATE AS CO3	<1.0	A	Rinsate Blank	Results > PDLG
				CHLORIDE (CL)	6.4	A	Rinsate Blank	Results > PDLG
				CHROMIUM (CR) TOT	<0.01	A	Rinsate Blank	Results > PDLG
				COPPER (CU) TOT	0.073	A	Rinsate Blank	Results > PDLG
				FLUORIDE (F)	0.19	A	Rinsate Blank	Results > PDLG
				IRON (FE) TOT	0.43	A	Rinsate Blank	Results > PDLG
				LEAD (PB) TOT	0.004	A	Rinsate Blank	Results > PDLG
				MAGNESIUM (MG) DIS	<1.0	A	Rinsate Blank	Results > PDLG
				NITRATE + NITRITE	0.16	A	Rinsate Blank	Results > PDLG
				POTASSIUM (K) DIS	<2.0	A	Rinsate Blank	Results > PDLG
				SC (UMHOS/CM)	202.0	A	Rinsate Blank	Results > PDLG
				SELENIUM (SE) TOT	<0.005	A	Rinsate Blank	Results > PDLG
				SODIUM (NA) DIS	21.0	A	Rinsate Blank	Results > PDLG
				SULFATE (SO4)	66.0	A	Rinsate Blank	Results > PDLG
				TDS	82.0	A	Rinsate Blank	Results > PDLG
				TSS	<1.0	A	Rinsate Blank	Results > PDLG
				ZINC (ZN) TOT	0.071	A	Rinsate Blank	Results > PDLG

TABLE 2. SUMMARY OF FLAGGED DATA
EL PASO, TEXAS - EPRI QUARTERLY MONITORING
WINTER 2000/2001

Site	Sample Code	Lab Code	Sample Date	Parameter	Result (mg/L)	Flag	QC Type	Violation
				SEDIMENT SAMPLES				
POND 1-SED	EPRI-0102-216	L010274001	02/27/2001	ARSENIC (AS) TOT	1420.0	J4	Field Duplicate	37.7% RPD
				CADMIUM (CD) TOT	533.0	J4	Field Duplicate	50.7% RPD
				CHROMIUM (CR) TOT	<80.0	UJ4	Lab Duplicate	38% RPD
				IRON (FE) TOT	12800.0	J4	Field Duplicate	44.4% RPD
				LEAD (PB) TOT	2680.0	J4	Field Duplicate	56.3% RPD
				SELENIUM (SE) TOT	33.0	J4	Field Duplicate	48 mg/L Diff
				ZINC (ZN) TOT	3760.0	J4	Field Duplicate	45.7% RPD
POND 1-SED DUP	EPRI-0102-245	L010274002	02/27/2001	ARSENIC (AS) TOT	2080.0	J4	Field Duplicate	37.7% RPD
				CADMIUM (CD) TOT	895.0	J4	Field Duplicate	50.7% RPD
				CHROMIUM (CR) TOT	105.0	J4	Lab Duplicate	38% RPD
				IRON (FE) TOT	20100.0	J4	Field Duplicate	44.4% RPD
				LEAD (PB) TOT	4780.0	J4	Field Duplicate	56.3% RPD
				SELENIUM (SE) TOT	81.0	J4	Field Duplicate	48 mg/L Diff
				ZINC (ZN) TOT	5990.0	J4	Field Duplicate	45.7% RPD
POND 5-SED	EPRI-0102-217	L010274003	02/27/2001	ARSENIC (AS) TOT	3590.0	J4	Field Duplicate	37.7% RPD
				CADMIUM (CD) TOT	828.0	J4	Field Duplicate	50.7% RPD
				CHROMIUM (CR) TOT	157.0	J4	Lab Duplicate	38% RPD
				LEAD (PB) TOT	38400.0	J4	Field Duplicate	56.3% RPD
POND 6-SED	EPRI-0102-218	L010274004	02/27/2001	CADMIUM (CD) TOT	1110.0	J4	Field Duplicate	50.7% RPD
				CHROMIUM (CR) TOT	86.0	J4	Lab Duplicate	38% RPD
				IRON (FE) TOT	20000.0	J4	Field Duplicate	44.4% RPD
SEP-14-SED	EPRI-0102-215	L010274005	02/27/2001	ARSENIC (AS) TOT	846.0	J4	Field Duplicate	37.7% RPD
				CADMIUM (CD) TOT	17.0	J4	Field Duplicate	50.7% RPD
				CHROMIUM (CR) TOT	124.0	J4	Lab Duplicate	38% RPD
				LEAD (PB) TOT	3930.0	J4	Field Duplicate	56.3% RPD
				SELENIUM (SE) TOT	<10.0	UJ4	Field Duplicate	48 mg/L Diff
SEP-9-SED	EPRI-0102-210	L010274006	02/28/2001	CHROMIUM (CR) TOT	146.0	J4	Field Duplicate	38% RPD
SEP-4-SED	EPRI-0102-207	L010274007	02/28/2001	CHROMIUM (CR) TOT	<80.0	UJ4	Field Duplicate	38% RPD
				ZINC (ZN) TOT	87.0	J4	Field Duplicate	41.7% RPD
SEP-4-SED	EPRI-0102-246	L010274008	02/28/2001	CHROMIUM (CR) TOT	98.0	J4	Field Duplicate	38% RPD
				ZINC (ZN) TOT	57.0	J4	Field Duplicate	41.7% RPD
SEP-13-SED	EPRI-0102-214	L010274009	02/28/2001	CHROMIUM (CR) TOT	<80.0	UJ4	Field Duplicate	38% RPD
SEP-12-SED	EPRI-0102-213	L010274010	02/28/2001	CHROMIUM (CR) TOT	284.0	J4	Field Duplicate	38% RPD
SEP-2-SED	EPRI-0102-205	L010274011	02/28/2001	CHROMIUM (CR) TOT	<80.0	UJ4	Field Duplicate	38% RPD
				ZINC (ZN) TOT	<10.0	UJ4	Field Duplicate	41.7% RPD
SEP-11-SED	EPRI-0102-212	L010274012	02/28/2001	CHROMIUM (CR) TOT	167.0	J4	Field Duplicate	38% RPD
SEP-10-SED	EPRI-0102-211	L010274013	02/28/2001	CHROMIUM (CR) TOT	<80.0	UJ4	Field Duplicate	38% RPD

TABLE 3. SUMMARY OF HISTORICAL COMPARISONS
EL PASO, TEXAS - EPRI QUARTERLY MONITORING
WINTER 2000-2001

Site	Sample Date	Result (ppm)	Parameter	Comparison Period	N	Min (ppm)	Mean (ppm)	Max (ppm)	Standard Deviaton from the Mean	Relation to Database
EM-5	2/14/01	16.86	DEPTH TO WATER LEVEL (FEET)	08/11/1997-11/03/2000	15	14.34	14.7347	16.52	3.16	HIGHEST
		5.7	OXYGEN (O) (FLD) DIS	08/11/1997-11/03/2000	14	0.18	1.27	4.1	3.82	HIGHEST
EM-7	2/14/01	DRY.0	DEPTH TO WATER LEVEL (FEET)	11/17/1997-01/31/2000	10	8.38	8.726	9.59	> 10	LOWEST
EP-4	2/5/01	0.072	ARSENIC (AS) TOT	08/02/1999-10/30/2000	6	0.12	0.135	0.16	4.57	LOWEST
EP-6	2/5/01	7.91	PH (FLD)	08/06/1997-10/30/2000	14	7.15	7.4164	7.62	4.09	HIGHEST
		3170	SC (UMHOS/CM AT 25 C)	08/06/1997-10/30/2000	14	3730	6793.571	8070	3.25	LOWEST
		2080	TDS (MEASURED AT 180 C)	08/06/1997-10/30/2000	14	2531	5281.143	6252	3.12	LOWEST
		8.53	TURBIDITY (NTU)	08/02/1999-10/30/2000	5	2.2	3.62	6.2	3.09	HIGHEST
		2.6	FLUORIDE (F)	08/06/1997-10/30/2000	14	1.2	1.5571	2.6	3.04	HIGHEST
EP-13	2/9/01	744	SODIUM (NA) DIS	08/07/1997-11/02/2000	14	1300	2366.286	3087	3.08	LOWEST
		246	BICARBONATE (HCO3)	08/07/1997-11/02/2000	14	288	390.4286	429	3.56	LOWEST
		1	FLUORIDE (F)	08/07/1997-11/02/2000	14	1.3	1.4429	1.6	5.2	LOWEST
		1.6	ARSENIC (AS) TOT	08/03/1999-11/02/2000	6	17	30.1667	38	4	LOWEST
		<0.005	CADMIUM (CD) TOT	08/03/1999-11/02/2000	6	0.36	0.51	0.66	4.32	LOWEST
		0.32	SELENIUM (SE) TOT	08/03/1999-11/02/2000	6	3.1	4.7167	5.7	4.68	LOWEST
EP-14	2/9/01	1502	SODIUM (NA) DIS	11/05/1997-11/02/2000	13	550	667.7692	730	> 10	HIGHEST
		2680	SULFATE (SO4)	11/05/1997-11/02/2000	13	1229	1737.615	2223	3.16	HIGHEST
		23	ARSENIC (AS) TOT	08/03/1999-11/02/2000	6	1.3	1.5	2.1	> 10	HIGHEST
		4.1	SELENIUM (SE) TOT	08/03/1999-11/02/2000	6	0.19	0.1967	0.21	> 10	HIGHEST
		0.091	ZINC (ZN) TOT	08/03/1999-11/02/2000	6	0.01	0.028	0.055	4.02	HIGHEST
EP-15	2/12/01	0.06	ZINC (ZN) TOT	08/03/1999-11/02/2000	6	<0.020	0.0252	0.041	4.09	HIGHEST
EP-20	2/22/01	3.7	OXYGEN (O) (FLD) DIS	08/07/1997-10/30/2000	14	1.6	2.2486	3.49	3.1	HIGHEST
		120	TURBIDITY (NTU)	08/02/1999-10/30/2000	5	9.52	24.784	38	8.3	HIGHEST
		3.4	IRON (FE) TOT	08/02/1999-10/30/2000	6	0.46	0.98	1.7	4.45	HIGHEST
EP-21	2/26/01	70.1	TURBIDITY (NTU)	05/08/2000-11/14/2000	3	21.2	23.7667	25.3	> 10	HIGHEST
EP-23	2/21/01	0.55	NITRATE + NITRITE AS N	08/11/1997-11/13/2000	15	<0.050	0.1572	0.42	3.54	HIGHEST
		0.016	CADMIUM (CD) TOT	08/04/1999-11/13/2000	6	<0.005	0.006	0.008	7.91	HIGHEST
		0.45	COPPER (CU) TOT	08/04/1999-11/13/2000	6	0.039	0.1632	0.26	3.61	HIGHEST
		0.16	LEAD (PB) TOT	08/04/1999-11/13/2000	6	0.02	0.0615	0.088	3.78	HIGHEST
		0.33	ZINC (ZN) TOT	08/04/1999-11/13/2000	6	0.074	0.098	0.14	9.67	HIGHEST
EP-24	2/26/01	8	OXYGEN (O) (FLD) DIS	08/15/1997-11/14/2000	11	0.3	0.881	1.6	> 10	HIGHEST
		0.36	NITRATE + NITRITE AS N	08/15/1997-11/14/2000	14	<0.050	0.1114	0.3	3.47	HIGHEST
EP-25	2/26/01	7.3	PH (FLD)	08/15/1997-11/14/2000	5	6.87	7.018	7.13	3.01	HIGHEST
EP-29	2/22/01	0.089	CHROMIUM (CR) TOT	08/02/1999-10/30/2000	6	<0.010	0.0252	0.057	3.52	HIGHEST
EP-49	2/20/01	22	NITRATE + NITRITE AS N	11/19/1997-11/07/2000	12	<0.050	3.1792	11	4.26	HIGHEST
EP-49	2/20/01	20	NITRATE + NITRITE AS N	11/19/1997-11/07/2000	12	<0.050	3.1792	11	3.81	HIGHEST
EP-51	2/16/01	0.69	ZINC (ZN) TOT	08/04/1999-11/07/2000	6	0.35	0.4367	0.5	5.1	HIGHEST
EP-53	2/21/01	176	TURBIDITY (NTU)	08/04/1999-11/13/2000	3	157	160.6667	163	4.77	HIGHEST
EP-55	2/22/01	602	CHLORIDE (CL)	08/15/1997-11/14/2000	14	755	866.5714	998	3.41	LOWEST
EP-56	2/22/01	3.2	OXYGEN (O) (FLD) DIS	08/11/1997-11/13/2000	13	0.77	1.4192	2.51	3.32	HIGHEST
		1110	BICARBONATE (HCO3)	08/26/1997-11/13/2000	14	289	512.9286	817	3.01	HIGHEST
		0.23	ZINC (ZN) TOT	08/04/1999-11/13/2000	6	0.045	0.0603	0.11	6.9	HIGHEST
EP-58	2/23/01	4.5	TURBIDITY (NTU)	02/07/2000-11/13/2000	4	24	28.625	38	3.66	LOWEST

TABLE 3. SUMMARY OF HISTORICAL COMPARISONS
EL PASO, TEXAS - EPRI QUARTERLY MONITORING
WINTER 2000-2001

Site	Sample Date	Result (ppm)	Parameter	Comparison Period	N	Min (ppm)	Mean (ppm)	Max (ppm)	Standard Deviaton from the Mean	Relation to Database
EP-59	2/21/01	5660	SC (UMHOS/CM AT 25 C)	08/09/1997-10/31/2000	14	4640	4941.429	5320	3.39	HIGHEST
		4282	TDS (MEASURED AT 180 C)	08/09/1997-10/31/2000	14	3474	3733.929	4083	3.77	HIGHEST
		2060	SULFATE (SO4)	08/09/1997-10/31/2000	14	1498	1676	1874	3.26	HIGHEST
		671	CHLORIDE (CL)	08/09/1997-10/31/2000	14	369	446.6429	522	5.44	HIGHEST
		0.11	ZINC (ZN) TOT	08/03/1999-10/31/2000	6	<0.020	0.0317	0.05	5.89	HIGHEST
EP-59	2/21/01	5650	SC (UMHOS/CM AT 25 C)	08/09/1997-10/31/2000	14	4640	4941.429	5320	3.34	HIGHEST
		4272	TDS (MEASURED AT 180 C)	08/09/1997-10/31/2000	14	3474	3733.929	4083	3.7	HIGHEST
		0.1	ZINC (ZN) TOT	08/03/1999-10/31/2000	6	<0.020	0.0317	0.05	5.14	HIGHEST
EP-60	2/21/01	0.021	ARSENIC (AS) TOT	08/03/1999-10/31/2000	6	0.008	0.0098	0.012	6.09	HIGHEST
		0.083	ZINC (ZN) TOT	08/03/1999-10/31/2000	6	<0.020	0.0247	0.038	7.86	HIGHEST
EP-62	2/21/01	0.11	ZINC (ZN) TOT	08/03/1999-10/31/2000	6	<0.020	0.0248	0.038	> 10	HIGHEST
EP-63	2/21/01	44.5	TURBIDITY (NTU)	10/27/1999-10/31/2000	5	1.8	11.346	17	5.09	HIGHEST
		0.041	ARSENIC (AS) TOT	08/03/1999-10/31/2000	6	0.021	0.0237	0.028	6.71	HIGHEST
		0.057	CHROMIUM (CR) TOT	08/03/1999-10/31/2000	6	<0.010	0.0167	0.027	5.32	HIGHEST
		2.6	IRON (FE) TOT	08/03/1999-10/31/2000	6	<0.10	0.5833	1	5.95	HIGHEST
		0.027	LEAD (PB) TOT	08/03/1999-10/31/2000	6	0.003	0.0082	0.013	5.59	HIGHEST
		0.15	ZINC (ZN) TOT	08/03/1999-10/31/2000	6	<0.020	0.0363	0.089	4.21	HIGHEST
EP-64	2/21/01	29	TURBIDITY (NTU)	08/03/1999-10/31/2000	6	2.75	5.2067	8.51	9.1	HIGHEST
		1.6	FLUORIDE (F)	08/09/1997-10/31/2000	14	1.8	1.8786	2	4.81	LOWEST
		0.096	ARSENIC (AS) TOT	08/03/1999-10/31/2000	6	0.038	0.047	0.052	9.07	HIGHEST
		1.5	IRON (FE) TOT	08/03/1999-10/31/2000	6	0.14	0.36	0.76	4.68	HIGHEST
		0.088	ZINC (ZN) TOT	08/03/1999-10/31/2000	6	<0.020	0.0265	0.052	4.8	HIGHEST
EP-66	2/21/01	2.6	FLUORIDE (F)	08/08/1997-10/31/2000	14	3	3.2071	3.7	3.2	LOWEST
		0.093	ZINC (ZN) TOT	08/04/1999-10/31/2000	6	<0.020	0.0338	0.065	3.3	HIGHEST
EP-68	2/9/01	64.11	DEPTH TO WATER LEVEL (FEET)	08/14/1997-10/31/2000	14	62.85	63.305	63.64	3.61	HIGHEST
EP-71	2/9/01	0.093	ARSENIC (AS) TOT	08/05/1999-11/01/2000	6	0.11	0.1133	0.12	3.94	LOWEST
EP-72	2/9/01	5.5	OXYGEN (O) (FLD) DIS	08/12/1997-11/01/2000	10	0.21	1.154	2.7	5.39	HIGHEST
		0.11	ZINC (ZN) TOT	01/24/2000-11/01/2000	4	0.044	0.0553	0.068	5.52	HIGHEST
EP-75	2/14/01	0.025	COPPER (CU) TOT	08/06/1999-11/07/2000	5	0.049	0.0594	0.069	3.84	LOWEST
EP-76	2/14/01	0.12	ZINC (ZN) TOT	01/26/2000-11/07/2000	4	0.052	0.067	0.084	3.33	HIGHEST
EP-77	2/12/01	586	BICARBONATE (HCO3)	08/12/1997-11/03/2000	14	230	331.4286	500	4.11	HIGHEST
		3.3	ARSENIC (AS) TOT	08/05/1999-11/03/2000	6	5.8	6.4333	7.7	4.67	LOWEST
EP-78	2/15/01	7	PH	08/13/1997-11/09/2000	14	7.3	7.8714	8.1	4.03	LOWEST
		0.048	ZINC (ZN) TOT	08/09/1999-11/09/2000	6	<0.020	0.0268	0.036	3	HIGHEST
EP-80	2/16/01	0.025	ARSENIC (AS) TOT	08/09/1999-11/09/2000	6	0.013	0.016	0.02	3.8	HIGHEST
EP-81	2/16/01	0.11	ZINC (ZN) TOT	08/09/1999-11/09/2000	6	<0.020	0.0367	0.067	4.27	HIGHEST
EP-86	2/15/01	2530	SC (UMHOS/CM AT 25 C)	08/13/1997-11/09/2000	14	2570	2627.143	2660	3.9	LOWEST
EP-94	2/14/01	569	BICARBONATE (HCO3)	10/13/1999-11/08/2000	5	387	403.8	436	8.45	HIGHEST
EP-95	2/14/01	7.4	PH	10/26/1999-11/08/2000	5	8.1	8.26	8.3	9.62	LOWEST
		2065	TDS (MEASURED AT 180 C)	10/26/1999-11/08/2000	5	2127	2187	2229	3.27	LOWEST
EP-96	2/14/01	0.025	SELENIUM (SE) TOT	10/13/1999-11/08/2000	5	0.015	0.017	0.019	4	HIGHEST
		0.095	ZINC (ZN) TOT	10/13/1999-11/08/2000	5	0.032	0.0434	0.056	4.75	HIGHEST

TABLE 3. SUMMARY OF HISTORICAL COMPARISONS
EL PASO, TEXAS - EPRI QUARTERLY MONITORING
WINTER 2000-2001

Site	Sample Date	Result (ppm)	Parameter	Comparison Period	N	Min (ppm)	Mean (ppm)	Max (ppm)	Standard Deviaton from the Mean	Relation to Database
EP-97	2/14/01	11.7	DEPTH TO WATER LEVEL (FEET)	10/18/1999-11/08/2000	5	4.42	5.608	6.89	5.67	HIGHEST
EP-98	2/14/01	6160	SC (UMHOS/CM AT 25 C) (FLD)	10/18/1999-11/08/2000	5	6930	7166	7680	3.33	LOWEST
		0.07	ZINC (ZN) TOT	10/18/1999-11/08/2000	5	0.026	0.0382	0.048	3.53	HIGHEST
EP-99	2/22/01	73.8	DEPTH TO WATER LEVEL (FEET)	10/18/1999-11/08/2000	3	71.55	72.14	72.5	3.22	HIGHEST
		7.9	PH	10/18/1999-11/08/2000	3	7.6	7.6333	7.7	4.62	HIGHEST
		4192	TDS (MEASURED AT 180 C)	10/18/1999-11/08/2000	3	4541	4694	4783	3.77	LOWEST
		0.36	COPPER (CU) TOT	10/18/1999-11/08/2000	3	0.032	0.044	0.058	> 10	HIGHEST
		0.3	LEAD (PB) TOT	10/18/1999-11/08/2000	3	0.011	0.0657	0.15	3.16	HIGHEST
		0.73	ZINC (ZN) TOT	10/18/1999-11/08/2000	3	0.062	0.149	0.29	4.72	HIGHEST
EP-100	2/20/01	325	BICARBONATE (HCO3)	10/20/1999-11/07/2000	5	336	342.4	346	4.52	LOWEST
EP-102	2/9/01	2200	SC (UMHOS/CM AT 25 C) (FLD)	10/21/1999-11/03/2000	5	2610	2730	2860	5.18	LOWEST
		0.38	ARSENIC (AS) TOT	10/21/1999-11/03/2000	5	0.21	0.24	0.28	4.54	HIGHEST
EP-103	2/12/01	5620	SC (UMHOS/CM AT 25 C)	10/21/1999-11/02/2000	5	1498	1548.8	1590	> 10	HIGHEST
		0.51	FLUORIDE (F)	10/21/1999-11/02/2000	5	0.6	0.626	0.65	5.59	LOWEST
		0.047	ZINC (ZN) TOT	10/21/1999-11/02/2000	5	0.02	0.0264	0.036	3.06	HIGHEST
EP-105	2/14/01	7.7	PH	10/21/1999-11/01/2000	5	8	8.12	8.3	3.22	LOWEST
		5.5	TURBIDITY (NTU)	01/25/2000-11/01/2000	4	8.8	10.1	12	3.4	LOWEST
EP-106	2/12/01	29	TURBIDITY (NTU)	01/25/2000-11/02/2000	4	4.6	9.9975	17.3	3.57	HIGHEST
		0.017	ARSENIC (AS) TOT	10/21/1999-11/02/2000	5	<0.005	0.006	0.007	> 10	HIGHEST
EP-107	2/12/01	64.02	DEPTH TO WATER LEVEL (FEET)	10/21/1999-11/03/2000	5	63.39	63.62	63.71	3.07	HIGHEST
		0.074	ZINC (ZN) TOT	10/21/1999-11/03/2000	5	<0.020	0.027	0.035	8.37	HIGHEST
EP-108	2/15/01	9.72	TURBIDITY (NTU)	05/02/2000-11/09/2000	3	2.2	2.9667	4.3	5.83	HIGHEST
EP-109	2/15/01	30	TURBIDITY (NTU)	05/02/2000-11/09/2000	3	3.45	8.6167	15.7	3.37	HIGHEST
		0.078	SELENIUM (SE) TOT	10/26/1999-11/09/2000	5	0.056	0.062	0.064	4.72	HIGHEST
		0.069	ZINC (ZN) TOT	10/26/1999-11/09/2000	5	0.02	0.0228	0.026	> 10	HIGHEST
EP-110	2/8/01	5.4	OXYGEN (O) (FLD) DIS	10/29/1999-10/31/2000	5	2.4	3.2	4	3.77	HIGHEST
EP-111	2/21/01	4229	TDS (MEASURED AT 180 C)	10/28/1999-11/10/2000	5	3767	3850.6	3963	4.95	HIGHEST
		645	CHLORIDE (CL)	10/28/1999-11/10/2000	5	491	525.2	562	4.29	HIGHEST
EP-116	2/22/01	17	NITRATE + NITRITE AS N	11/18/1999-11/10/2000	5	8.9	10.7	13	4	HIGHEST
		0.069	CHROMIUM (CR) TOT	11/18/1999-11/10/2000	5	<0.010	0.0236	0.044	3.1	HIGHEST
		38	COPPER (CU) TOT	11/18/1999-11/10/2000	5	1.9	6.62	15	6.21	HIGHEST
EP-118	2/22/01	7.4	OXYGEN (O) (FLD) DIS	11/18/1999-11/10/2000	5	1.6	2.48	3.6	4.93	HIGHEST
		33309	TOTAL SUSPENDED SOLIDS	11/18/1999-11/10/2000	5	1139	6086.6	14581	5.18	HIGHEST
		2086	BICARBONATE (HCO3)	11/18/1999-11/10/2000	5	265	622.8	1293	3.66	HIGHEST
SEP-2	2/28/01	64	TURBIDITY (NTU)	11/01/1999-11/15/2000	5	13	19.94	26.9	7.92	HIGHEST
SEP-2-SED	2/28/01	6000	IRON (FE) TOT	08/20/1999-11/15/2000	6	13000	17666.67	22000	3.39	LOWEST
SEP-3	2/23/01	40	TURBIDITY (NTU)	11/01/1999-11/10/2000	5	17.2	24.96	29.6	3.15	HIGHEST
SEP-4-SED	2/28/01	12600	IRON (FE) TOT	08/20/1999-11/15/2000	6	16000	18333.33	20000	3.81	LOWEST
SEP-6	2/23/01	40	TURBIDITY (NTU)	11/01/1999-11/10/2000	5	16.8	24.56	29	3.32	HIGHEST
SEP-7	2/23/01	40	TURBIDITY (NTU)	11/01/1999-11/10/2000	5	14.15	23.39	28	3.09	HIGHEST

TABLE 3. SUMMARY OF HISTORICAL COMPARISONS
EL PASO, TEXAS - EPRI QUARTERLY MONITORING
WINTER 2000-2001

Site	Sample Date	Result (ppm)	Parameter	Comparison Period	N	Min (ppm)	Mean (ppm)	Max (ppm)	Standard Deviaton from the Mean	Relation to Database
SEP-9	2/28/01	60.5	TURBIDITY (NTU)	11/01/1999-11/15/2000	5	11.8	15.25	19.8	> 10	HIGHEST
SEP-10	2/28/01	86	TURBIDITY (NTU)	11/01/1999-11/15/2000	5	13	19.16	28.9	> 10	HIGHEST
SEP-11	2/28/01	74.9	TURBIDITY (NTU)	11/02/1999-11/15/2000	5	16	20.34	28.5	> 10	HIGHEST
SEP-12	2/28/01	8.1	PH	08/15/1997-11/15/2000	14	8.2	8.3643	8.5	3.14	LOWEST
SEP-12-SED	2/28/01	33	ARSENIC (AS) TOT	08/20/1999-11/15/2000	6	<10	11.6667	17	7.81	HIGHEST
		284	CHROMIUM (CR) TOT	08/20/1999-11/15/2000	6	<80	85.1667	96	> 10	HIGHEST
SEP-13	2/28/01	8	PH	08/15/1997-11/15/2000	14	8.2	8.4	8.6	3.4	LOWEST
SEP-13	2/28/01	8	PH	08/15/1997-11/15/2000	14	8.2	8.4	8.6	3.4	LOWEST
SEP-14-SED	2/27/01	6730	COPPER (CU) TOT	08/11/1999-11/14/2000	6	14000	14833.33	17000	6.93	LOWEST

SECTION H-5

REMEDIAL INVESTIGATION WATER SAMPLES, SPRING 2001

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

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AUGUST 2001

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LIST OF APPENDICES

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

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 May and June of 2001 (Spring 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)
Water	L010629	pH	Calcium	Arsenic
	L010653	Conductivity	Magnesium	Cadmium
	L010689	TDS	Sodium	Chromium
	L010706	TSS	Potassium	Copper
	L010728		Bicarbonate	Iron
	L010841		Carbonate	Lead
	L010951		Sulfate	Zinc
			Chloride	
			Fluoride	
			NO_3+NO_2 as N	
Sediment	L010734	Total Metals – XRF (same metals as for water)		

Five water samples (laboratory batch L010841) were analyzed for dissolved metals in addition to total metals. Although, these analyses were not required by the work plan or requested on the chain of custody, the results were validated and included in this report.

All water samples were analyzed for total metals. 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 statistics 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 eleven of the surface water sites, and were analyzed for the metals. 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.

Following is a summary of groundwater and surface water quality control results:

Laboratory quality control violation resulted in a total of 18 flags:

- Eighteen selenium results were flagged due to a laboratory control standard exceedance.

Field quality control violations resulted in a total of 91 flags:

- Analytes were detected in field deionized water (DI) blanks submitted 5/4/01, and 5/11/01. Fifteen results were flagged for these violations to indicate possible high bias at low concentrations. In the past, zinc contamination in field blanks was a problem. However, for this sampling event, only one field blank showed a zinc result greater than the project detection limit goal (PDLG). Following is a breakdown of results flagged for field blank violations.

Parameter	Number of Flags
Nitrate+Nitrite	3
Lead (tot)	5
Zinc (tot)	7

- Seven out of 14 field duplicate samples had measurements were out of control limits. These violations resulted in a total of 76 flags to indicate a possible lack of reproducibility. On the following page 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
Carbonate	2
Iron (tot)	28
Oxygen (dis)	17
Nitrate+Nitrite	17
Total Suspended Solids	12

Following is a summary of sediment quality control results:

Laboratory quality control violations for the sediment XRF analyses resulted in a total of 12 flags:

- For CCV standards, 100% were within control limits.
- For LCS', 87.5% were within control limits. One chromium recovery rate was out of control limits and 12 results were flagged.
- For laboratory duplicates, 100% were within control limits.

All field quality control sample results were within control limits.

Completeness for this project 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 divided by the total number of planned measurements, expressed as a percentage. Completeness was calculated at 99.9% (3834 valid measurements per 3834 planned measurements) for this sampling event. As there were enough valid measurements to satisfactorily address the important issues of the study, completeness for the Spring 2001 sampling event was achieved.

- All sites were visited according to the work plan. Sites EP-87 was not sampled due to a damaged well; and sites EP-99, EP-115 and EM-7 were not sampled due to dry (or near dry) wells.
- Fourteen new groundwater monitoring wells were sampled for this sampling event. These wells were given site codes EP-119 through EP-132.

- Two field specific conductivity measurements were flagged as anomalous. It should be noted that the laboratory specific conductivity measurements for these samples were deemed acceptable; therefore, the rejection of the field measurement data does not affect the overall quality of the data set.

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 Spring 2001 sampling event was measured at 99.9% (2 out of 3836 results were flagged as anomalous) and 96.7% (123 out of 3836 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 Spring 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 137 samples collected during the Spring 2001 (May and June 2001) for the Asarco El Paso Copper Smelter Remedial Investigation. Sites EP-87 was not sampled due to a damaged well; and sites EP-99, EP-115 and EM-7 were not sampled due to dry (or near dry) wells. Fourteen new groundwater monitoring wells were added for this sampling event. They were given site codes EP-119 through EP-132. The total number of samples submitted for analyses were:

  12 Field blanks (deionized water)
  14 Field duplicates (1 surface water, 12 groundwater, and 1 sediment)
  12 Non-quality control (QC) surface water samples
  99 Non-QC groundwater samples
  11 Non-QC sediment samples

- Validation procedures used are generally consistent with:
  _X_ EPA CLP National Functional Guidelines for Inorganics Data Review
  _X_ Asarco El Paso Copper Smelter Remedial Investigation Work Plan, El Paso, Texas (November 1996)
  ___ Other

- Overall level of validation:
  ___ Contract Laboratory Program (CLP)
  _X_ Standard
  ___ 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.
  _X_ Yes
  ___ No

- Field measurements and field documentation were complete.
  _X_ Yes
  ___ No

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.
  _X_ 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
  _X_ No

  Notes: When an analyte is detected in a blank, associated results up to 5 times the blank level are flagged with "**UJ1**" 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-0105-220	5/4/01	Nitrate+Nitrite (NO_3+NO_2)	0.12	0.60	0.10	3
EPRI-0105-238	5/11/01	Chloride	3.3	16.5	1.0	0 *
		Lead (tot)	0.004	0.020	0.003	5
		Zinc (tot)	0.032	0.160	0.02	7

* No associated sample results were less than 5 times the blank value.

- **Field duplicates**

  Field duplicates have been collected at the proper frequency.

  _X_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 ± 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

  _X_ No

  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/ Duplicate Result (mg/L)	PDLG (mg/L)	RPD / Diff (mg/L)	# of Flags
EPRI-0105-155/221	EP-89	5/7/01	Oxygen (dis)	5.40 / 4.30	0.1	22.7 RPD	8
			Bicarbonate	203 / 253	1	21.9 RPD	0 (1)
EPRI-0105-143/228	EP-77	5/9/01	TSS (2)	320 / 437	10	30.9 RPD	12
			NO_3+NO_2	1.1 / 0.75	0.1	37.8 RPD	4
EPRI-0105-162/239	EP-98	5/14/01	Carbonate	16 / <1	1	15 Diff	2
			NO_3+NO_2	14 / 18	0.1	25 RPD	13
			Iron (tot)	0.61 / 0.38	0.1	0.23 Diff	5
EPRI-0105-131/243	EP-63	5/15/01	Oxygen (dis)	3.2 / 4.2	0.1	27.0 RPD	9
EPRI-0105-108/245	EP-20	5/16/01	Iron (tot)	2.8 / 2.1	0.1	28.6 RPD	12
EPRI-0105-188/246	SEP-7	5/16/01	Iron (tot)	2.2 / 3.4	0.1	42.9 RPD	5
EPRI-0105-194/257	SEP-14	6/27/01	Alkalinity	42 / 52	1	21.3 RPD	0 (1)
			Carbonate	51 / 63	1	21.1 RPD	0 (1)

Notes:

1) Due to inherent variability of the parameter's test procedures, no samples were flagged.

2) TSS = Total Suspended Solids

4. LABORATORY PROCEDURES

- **Laboratory procedures followed**

  ___ CLP-SOW
  _X_ SW-846
  _X_ Methods for Chemical Analysis of Water and Wastes
  _X_ XRF Standard Operating Procedures

- **Holding times met**

  _X_ Yes
  ___ No

- **Consistency with project requirements**

  Analyses were carried out as requested.
  _X_ Yes
  ___No

  Project specified methods were used.
  _X_ Yes
  ___No

5. DETECTION LIMITS

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

  ___Yes
  _X_ No – 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-0105-205	Chromium Selenium	<80 <20	20 10
SEP-4-SED	EPRI-0105-207	Chromium Selenium	<80 <20	20 10
SEP-9-SED	EPRI-0105-210	Chromium Selenium	<80 <20	20 10
SEP-10-SED	EPRI-0105-211	Chromium Selenium	<80 <20	20 10
SEP-11-SED	EPRI-0105-212	Chromium Selenium	<80 <20	20 10
SEP-12-SED	EPRI-0105-213	Chromium Selenium	<80 <20	20 10
SEP-13-SED	EPRI-0105-214	Chromium Selenium	<80 <20	20 10
SEP-13-SED DUP	EPRI-0105-249	Chromium Selenium	<80 <20	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%).

  _X_ Yes
  ___ No

8. LABORATORY DUPLICATES

- Laboratory duplicate samples were analyzed at the proper frequency.

  _X_ 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, 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 the PDLG for water matrix, within plus or minus two times the PDLG for sediment or soil matrix.

  _X_ Yes
  ___ No

9. LABORATORY CONTROL STANDARDS

- LCSs were prepared and analyzed at the proper frequency.

  _X_ Yes
  ___ No

- LCS recoveries were within the required control limits (80-120% for water, 75-125% for sediment samples analyzed by XRF).

  ___ Yes
  _X_ No – notes

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

Matrix	LCS Sample	Batch	Analytical Date	Analyte	% Recovery	# of Results Flagged
Water	WG010481	L010653	5/21/01	Selenium (tot)	122%	18
Sediment	LCS287	L010734	6/5/01	Chromium (tot)	70%	12

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

- CCVs were analyzed at the proper frequency.

  _X_ Yes
  ___ No

- CCV recoveries were within the required control limits (75-125% for arsenic, cadmium, chromium, lead, iron and zinc analyzed by XRF).

  _X_ Yes

  ___ No

11. INTERPARAMETER RELATIONSHIPS

- The following relationships have been checked:

  _X_ Lab pH vs. field pH.

  _X_ Lab SC vs. field SC

  _X_ TDS vs. SC

Lab pH vs. field pH: This relationship was generally in order. Only one sample had a percent difference greater than 20%. Sample EPRI-0105-139 (site EP-72) had a field pH value of 7.11 and a lab value of 8.6, for a percent difference of 21%.

Rounded off to the nearest percent, the percent differences were distributed as follows:

equal to or less than 10%.....89 samples

11 to 20%.....34 samples

>20% (21%) .....1 sample (Site EP-72)

Lab SC vs. Field SC: This relationship was generally in order except for two samples. Sample EPRI-0105-194 and duplicate sample EPRI-0105-257 (site SEP-14) had a field SC values of 3500 and 3490 umohs/cm respectively, and laboratory values of 306 and 308 umohs/cm respectively. The laboratory values were in line with historical data and TDS values, therefore, the field SC values were flagged as anomalous (flagged with "A").

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

less than 10% .....106 samples

11 to 20%.....16 samples

>20% (1033% & 1044%)....2 samples (Site SEP-14 and Dup)

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% ..... 76 samples

76 to 100% ..... 48 samples*

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

12. HISTORICAL COMPARISON

The data for the Spring 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

13. 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, 100% of the results were within control limits.
- For laboratory control samples, 99.5% of the results were within control limits. Eighty-three percent (1 out of 6 results) of selenium LCS results were within control limits. All other analytes were within control limits 100% of the time.
- For laboratory blanks, 100% of the results were less than the detection limit.

- For field blanks, 98.2% of the results were less than the detection limits (5 out of 273 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_3+NO_2	12	1	91.7%
Zinc	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. Selenium was the only analyte out of control limits for an overall completeness of 87.5%.
- Two CCVs were 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 97.3% results were within control limits (12 out of 332 results were out of control limits). On the following page is a summary of precision for individual analytes. The analytes not listed were in control limits 100% of the time.

Field Duplicate Summary

Analyte	# Field Duplicate Samples	# Out of Control Limits	% Within Control Limits
Alkalinity	12	1	91.7%
Bicarbonate	12	1	91.7%
Carbonate	12	2	83.3%
Iron (tot)	12	3	75.0%
NO_3+NO_2	12	2	83.3%
Oxygen (dis)	12	2	83.3%
TSS	12	1	91.7%

Precision for sediment samples:

- One laboratory duplicate sample was run. The results were within control limits 100% of the time.
- One field duplicate sample was submitted and 100% of the results were within 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 Spring 2001 sampling event was measured at 99.9% (2 anomalous results out of 3836 planned measurements).

The number of flagged results per number of measurements can also measure completeness. This was calculated as 96.8% (123 flagged results out of 3836 measurements).

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

Parameter	# of Measurements	# Valid Results	Percent of Valid Results	# of Results Not Flagged	% of Results Not Flagged
DTWL	102	102	100%	102	100%
Oxygen	117	117	100%	100	85.5%
pH(field)	124	124	100%	124	100%
SC(field)	124	122	98.4%	122	98.4%
Turbidity	114	114	100%	114	100%
Water Temp.	124	124	100%	124	100%
pH(lab)	136	136	100%	136	100%
SC(lab)	136	136	100%	136	100%

Continued on the following page

Completeness Summary (Continued)

Parameter	# of Measurements	# Valid Results	Percent of Valid Results	# of Results Not Flagged	% of Results Not Flagged
TDS	136	136	100%	136	100%
TSS	136	136	100%	124	91.2%
Calcium	136	136	100%	136	100%
Magnesium	136	136	100%	136	100%
Sodium	136	136	100%	136	100%
Potassium	136	136	100%	136	100%
Alkalinity	3	3	100%	3	100%
Bicarbonate	136	136	100%	136	100%
Carbonate	136	136	100%	134	98.5%
Sulfate	136	136	100%	136	100%
Chloride	136	136	100%	136	100%
Fluoride	136	136	100%	136	100%
NO_3+NO_2 as N	136	136	100%	116	85.3%
Arsenic (tot)	148	148	100%	148	100%
Arsenic (dis)	5	5	100%	5	100%
Cadmium (tot)	148	148	100%	148	100%
Cadmium (dis)	5	5	100%	5	100%
Chromium (tot)	148	148	100%	136	91.9%
Chromium (dis)	5	5	100%	5	100%
Copper (tot)	148	148	100%	148	100%
Copper (dis)	5	5	100%	5	100%
Iron (tot)	148	148	100%	120	81.1%
Iron (dis)	5	5	100%	5	100%
Lead (tot)	148	148	100%	148	100%
Lead (dis)	5	5	100%	5	100%
Selenium (tot)	148	148	100%	130	87.8%
Selenium (dis)	5	5	100%	5	100%
Zinc (tot)	148	148	100%	141	95.3%
Zinc (dis)	5	5	100%	5	100%

In conclusion, with the exception of anomalous data, the data for the Asarco El Paso Copper Smelter Remedial Investigation Spring 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 Reviewed by: **Linda Tangen**

Report Reviewed by: **Harold Kutz**

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APPENDIX 1

TABLES

TABLE 1.

DATA VALIDATION CODES AND DEFINITIONS

CODE		DEFINITION
J	-	The associated numerical value is an estimated quantity because quality control criteria were not met. Subscripts for the "J" qualifier: 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
UJ	-	The material was analyzed for, but was not detected above the associated value. Subscripts for the "UJ" qualifier: 1 - Blank contamination. Indicates possible high bias and/or false positive. 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
R	-	Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis are necessary for verification.
E	-	Estimated. (Not an EPA code.)
A	-	Anomalous data.. No apparent explanation for discrepancy in data. (Not an EPA code.)

TABLE 2. SUMMARY OF FLAGGED DATA
EL PASO QUARTERLY MONITORING
SPRING 2001

Site	Sample No	Lab No	Date	Description	Result	EPA Code	QC Sample	QC Violation	Bias
EM-1	EPRI-0105-195	L010706022	05/16/2001	IRON (FE) TOT	3.5	J4	Field Dup	28.6% RPD	
EM-2	EPRI-0105-196	L010653004	05/08/2001	SELENIUM (SE) TOT	0.13	J4	LCS	122% Recovery	+22%
EM-2 DUP	EPRI-0105-223	L010653005	05/08/2001	SELENIUM (SE) TOT	0.13	J4	LCS	122% Recovery	+22%
EM-4	EPRI-0105-197	L010629019	05/07/2001	OXYGEN (O) (FLD) DIS	3.3	J4	Field Dup	22.7% RPD	
EM-5	EPRI-0105-198	L010653020	05/09/2001	TOTAL SUSPENDED SOLIDS	5.1	J4	Field Dup	30.9% RPD	
				NITRATE + NITRITE AS N	0.36	J4	Field Dup	37.8% RPD	
EM-6	EPRI-0105-199	L010653021	05/09/2001	TOTAL SUSPENDED SOLIDS	<1.0	UJ4	Field Dup	30.9% RPD	
EP-7	EPRI-0105-103	L010629004	05/04/2001	NITRATE + NITRITE AS N	0.24	UJ1	Field Blank	Result>PRDL	+0.12 mg/L
EP-7	EPRI-0105-219	L010629005	05/04/2001	NITRATE + NITRITE AS N	0.21	UJ1	Field Blank	Result>PRDL	+0.12 mg/L
EP-13	EPRI-0105-105	L010653007	05/08/2001	SELENIUM (SE) TOT	4.5	J4	LCS	122% Recovery	+22%
EP-14	EPRI-0105-106	L010653006	05/08/2001	SELENIUM (SE) TOT	0.32	J4	LCS	122% Recovery	+22%
EP-15	EPRI-0105-107	L010653012	05/08/2001	SELENIUM (SE) TOT	0.23	J4	LCS	122% Recovery	+22%
EP-20	EPRI-0105-108	L010706013	05/16/2001	IRON (FE) TOT	2.8	J4	Field Dup	28.6% RPD	
EP-20 DUP	EPRI-0105-245	L010706014	05/16/2001	IRON (FE) TOT	2.1	J4	Field Dup	28.6% RPD	
EP-21	EPRI-0105-109	L010706028	05/16/2001	IRON (FE) TOT	1.9	J4	Field Dup	28.6% RPD	
EP-22	EPRI-0105-110	L010653023	05/09/2001	TOTAL SUSPENDED SOLIDS	14.0	J4	Field Dup	30.9% RPD	
EP-24	EPRI-0105-112	L010706029	05/16/2001	IRON (FE) TOT	<0.1	UJ4	Field Dup	28.6% RPD	
EP-25	EPRI-0105-113	L010706030	05/16/2001	IRON (FE) TOT	1.1	J4	Field Dup	28.6% RPD	
EP-29	EPRI-0105-115	L010706015	05/16/2001	IRON (FE) TOT	<0.1	UJ4	Field Dup	28.6% RPD	
EP-35	EPRI-0105-116	L010706016	05/16/2001	IRON (FE) TOT	1.9	J4	Field Dup	28.6% RPD	
EP-57	EPRI-0105-125	L010706027	05/16/2001	IRON (FE) TOT	0.93	J4	Field Dup	28.6% RPD	
EP-58	EPRI-0105-126	L010706024	05/16/2001	IRON (FE) TOT	0.5	J4	Field Dup	28.6% RPD	
EP-59	EPRI-0105-127	L010706001	05/15/2001	OXYGEN (O) (FLD) DIS	0.8	J4	Field Dup	27.0% RPD	
EP-60	EPRI-0105-128	L010706007	05/15/2001	OXYGEN (O) (FLD) DIS	2.8	J4	Field Dup	27.0% RPD	
EP-61	EPRI-0105-129	L010706025	05/16/2001	IRON (FE) TOT	0.5	J4	Field Dup	28.6% RPD	
EP-63	EPRI-0105-131	L010706005	05/15/2001	OXYGEN (O) (FLD) DIS	3.2	J4	Field Dup	27.0% RPD	
EP-63 DUP	EPRI-0105-243	L010706006	05/15/2001	OXYGEN (O) (FLD) DIS	4.2	J4	Field Dup	27.0% RPD	
EP-64	EPRI-0105-132	L010706002	05/15/2001	OXYGEN (O) (FLD) DIS	5.3	J4	Field Dup	27.0% RPD	
EP-65	EPRI-0105-133	L010706026	05/16/2001	IRON (FE) TOT	<0.1	UJ4	Field Dup	28.6% RPD	
EP-67	EPRI-0105-135	L010629011	05/07/2001	OXYGEN (O) (FLD) DIS	1.6	J4	Field Dup	22.7% RPD	
EP-70	EPRI-0105-137	L010629017	05/07/2001	OXYGEN (O) (FLD) DIS	0.3	J4	Field Dup	22.7% RPD	
EP-71	EPRI-0105-138	L010629016	05/07/2001	OXYGEN (O) (FLD) DIS	0.7	J4	Field Dup	22.7% RPD	
EP-72	EPRI-0105-139	L010629018	05/07/2001	OXYGEN (O) (FLD) DIS	2.3	J4	Field Dup	22.7% RPD	
EP-73	EPRI-0105-140	L010653030	05/09/2001	TOTAL SUSPENDED SOLIDS	7.4	J4	Field Dup	30.9% RPD	
EP-75	EPRI-0105-141	L010653028	05/09/2001	TOTAL SUSPENDED SOLIDS	20.0	J4	Field Dup	30.9% RPD	
EP-76	EPRI-0105-142	L010653029	05/09/2001	TOTAL SUSPENDED SOLIDS	2.3	J4	Field Dup	30.9% RPD	
EP-77	EPRI-0105-143	L010653018	05/09/2001	TOTAL SUSPENDED SOLIDS	320.0	J4	Field Dup	30.9% RPD	
				NITRATE + NITRITE AS N	1.1	J4	Field Dup	37.8% RPD	
				SELENIUM (SE) TOT	0.013	J4	LCS	122% Recovery	+22%
EP-77 DUP	EPRI-0105-228	L010653019	05/09/2001	TOTAL SUSPENDED SOLIDS	437.0	J4	Field Dup	30.9% RPD	
				NITRATE + NITRITE AS N	0.75	J4	Field Dup	37.8% RPD	
				SELENIUM (SE) TOT	0.01	J4	LCS	122% Recovery	+22%
EP-78	EPRI-0105-144	L010689010	05/14/2001	NITRATE + NITRITE AS N	12.0	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.91	J4	Field Dup	0.23 mg/L Diff	
EP-79	EPRI-0105-145	L010689014	05/14/2001	NITRATE + NITRITE AS N	11.0	J4	Field Dup	25.0% RPD	
EP-80	EPRI-0105-146	L010689032	05/14/2001	NITRATE + NITRITE AS N	1.4	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.79	J4	Field Dup	0.23 mg/L Diff	
EP-81	EPRI-0105-147	L010689031	05/14/2001	NITRATE + NITRITE AS N	11.0	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.61	J4	Field Dup	0.23 mg/L Diff	
EP-82	EPRI-0105-148	L010689012	05/14/2001	NITRATE + NITRITE AS N	9.8	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.11	J4	Field Dup	0.23 mg/L Diff	
EP-83	EPRI-0105-149	L010689004	05/11/2001	ZINC (ZN) TOT	0.027	UJ1	Field Blank	Result>PRDL	+0.032 mg/L

TABLE 2. SUMMARY OF FLAGGED DATA
EL PASO QUARTERLY MONITORING
SPRING 2001

Site	Sample No	Lab No	Date	Description	Result	EPA Code	QC Sample	QC Violation	Bias
EP-84	EPRI-0105-150	L010689027	05/11/2001	LEAD (PB) TOT	0.02	UJ1	Field Blank	Result>PRDL	+0.004 mg/L
				ZINC (ZN) TOT	0.074	UJ1	Field Blank	Result>PRDL	+0.032 mg/L
EP-84 DUP	EPRI-0105-236	L010689028	05/11/2001	LEAD (PB) TOT	0.019	UJ1	Field Blank	Result>PRDL	+0.004 mg/L
				ZINC (ZN) TOT	0.072	UJ1	Field Blank	Result>PRDL	+0.032 mg/L
EP-85	EPRI-0105-151	L010689015	05/14/2001	NITRATE + NITRITE AS N	8.8	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.12	J4	Field Dup	0.23 mg/L Diff	
EP-86	EPRI-0105-152	L010689013	05/14/2001	NITRATE + NITRITE AS N	6.3	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.7	J4	Field Dup	0.23 mg/L Diff	
EP-88	EPRI-0105-154	L010653022	05/09/2001	TOTAL SUSPENDED SOLIDS	3.0	J4	Field Dup	30.9% RPD	
EP-89	EPRI-0105-155	L010629013	05/07/2001	OXYGEN (O) (FLD) DIS	5.4	J4	Field Dup	22.7% RPD	
EP-89 DUP	EPRI-0105-221	L010629014	05/07/2001	OXYGEN (O) (FLD) DIS	4.3	J4	Field Dup	22.7% RPD	
EP-90	EPRI-0105-156	L010653010	05/08/2001	SELENIUM (SE) TOT	1.2	J4	LCS	122% Recovery	+22%
EP-93	EPRI-0105-157	L010689003	05/11/2001	LEAD (PB) TOT	0.005	UJ1	Field Blank	Result>PRDL	+0.004 mg/L
				ZINC (ZN) TOT	0.063	UJ1	Field Blank	Result>PRDL	+0.032 mg/L
EP-94	EPRI-0105-158	L010689001	05/11/2001	ZINC (ZN) TOT	0.054	UJ1	Field Blank	Result>PRDL	+0.032 mg/L
EP-96	EPRI-0105-160	L010689002	05/11/2001	LEAD (PB) TOT	0.006	UJ1	Field Blank	Result>PRDL	+0.004 mg/L
				ZINC (ZN) TOT	0.078	UJ1	Field Blank	Result>PRDL	+0.032 mg/L
EP-97	EPRI-0105-161	L010689006	05/14/2001	NITRATE + NITRITE AS N	0.27	J4	Field Dup	25.0% RPD	
EP-98	EPRI-0105-162	L010689007	05/14/2001	CARBONATE AS CO3	16.0	J4	Field Dup	15 mg/L Diff	
				NITRATE + NITRITE AS N	14.0	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.61	J4	Field Dup	0.23 mg/L Diff	
EP-98 DUP	EPRI-0105-239	L010689008	05/14/2001	NITRATE + NITRITE AS N	18.0	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.38	J4	Field Dup	0.23 mg/L Diff	
EP-100	EPRI-0105-164	L010653031	05/09/2001	TOTAL SUSPENDED SOLIDS	76.0	J4	Field Dup	30.9% RPD	
EP-101	EPRI-0105-165	L010653008	05/08/2001	SELENIUM (SE) TOT	1.7	J4	LCS	122% Recovery	+22%
EP-102	EPRI-0105-166	L010653009	05/08/2001	SELENIUM (SE) TOT	5.7	J4	LCS	122% Recovery	+22%
EP-103	EPRI-0105-167	L010653011	05/08/2001	SELENIUM (SE) TOT	0.26	J4	LCS	122% Recovery	+22%
EP-104	EPRI-0105-168	L010653014	05/08/2001	SELENIUM (SE) TOT	0.1	J4	LCS	122% Recovery	+22%
EP-105	EPRI-0105-169	L010653016	05/09/2001	TOTAL SUSPENDED SOLIDS	225.0	J4	Field Dup	30.9% RPD	
				NITRATE + NITRITE AS N	1.4	J4	Field Dup	37.8% RPD	
				SELENIUM (SE) TOT	0.025	J4	LCS	122% Recovery	+22%
EP-106	EPRI-0105-170	L010653017	05/09/2001	TOTAL SUSPENDED SOLIDS	17.0	J4	Field Dup	30.9% RPD	
				SELENIUM (SE) TOT	0.12	J4	LCS	122% Recovery	+22%
EP-107	EPRI-0105-171	L010653013	05/08/2001	SELENIUM (SE) TOT	0.45	J4	LCS	122% Recovery	+22%
EP-108	EPRI-0105-172	L010689009	05/14/2001	CARBONATE AS CO3	12.0	J4	Field Dup	15 mg/L Diff	
				NITRATE + NITRITE AS N	7.0	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.57	J4	Field Dup	0.23 mg/L Diff	
EP-109	EPRI-0105-173	L010689011	05/14/2001	NITRATE + NITRITE AS N	9.0	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	0.19	J4	Field Dup	0.23 mg/L Diff	
EP-110	EPRI-0105-174	L010629012	05/07/2001	OXYGEN (O) (FLD) DIS	4.9	J4	Field Dup	22.7% RPD	
EP-111	EPRI-0105-175	L010706009	05/15/2001	OXYGEN (O) (FLD) DIS	0.4	J4	Field Dup	27.0% RPD	
EP-112	EPRI-0105-176	L010706010	05/15/2001	OXYGEN (O) (FLD) DIS	3.2	J4	Field Dup	27.0% RPD	
EP-113	EPRI-0105-177	L010706011	05/15/2001	OXYGEN (O) (FLD) DIS	1.9	J4	Field Dup	27.0% RPD	
EP-114	EPRI-0105-178	L010629006	05/04/2001	NITRATE + NITRITE AS N	0.21	UJ1	Field Blank	Result>PRDL	+0.12 mg/L
EP-119	EPRI-0105-242	L010706003	05/15/2001	OXYGEN (O) (FLD) DIS	0.4	J4	Field Dup	27.0% RPD	
EP-120	EPRI-0105-225	L010653001	05/07/2001	SELENIUM (SE) TOT	0.058	J4	LCS	122% Recovery	+22%
EP-121	EPRI-0105-226	L010653002	05/07/2001	SELENIUM (SE) TOT	0.031	J4	LCS	122% Recovery	+22%
EP-122	EPRI-0105-240	L010689033	05/14/2001	NITRATE + NITRITE AS N	6.7	J4	Field Dup	25.0% RPD	
				IRON (FE) TOT	1.1	J4	Field Dup	0.23 mg/L Diff	
EP-125	EPRI-0105-227	L010653003	05/07/2001	SELENIUM (SE) TOT	0.64	J4	LCS	122% Recovery	+22%
EP-129	EPRI-0105-237	L010689029	05/11/2001	LEAD (PB) TOT	0.007	UJ1	Field Blank	Result>PRDL	+0.004 mg/L
				ZINC (ZN) TOT	0.063	UJ1	Field Blank	Result>PRDL	+0.032 mg/L
POND 1-SED	EPRI-0105-216	L010734010	05/17/2001	CHROMIUM (CR) TOT	91.0	J4	LCS	70% Recovery	-30%
POND 5-SED	EPRI-0105-217	L010734011	05/17/2001	CHROMIUM (CR) TOT	200.0	J4	LCS	70% Recovery	-30%
POND 6-SED	EPRI-0105-218	L010734012	05/17/2001	CHROMIUM (CR) TOT	210.0	J4	LCS	70% Recovery	-30%

TABLE 2. SUMMARY OF FLAGGED DATA
EL PASO QUARTERLY MONITORING
SPRING 2001

Site	Sample No	Lab No	Date	Description	Result	EPA Code	QC Sample	QC Violation	Bias
SEP-1	EPRI-0105-183	L010706017	05/16/2001	IRON (FE) TOT	3.0	J4	Field Dup	42.9% RPD	
SEP-2-SED	EPRI-0105-205	L010734005	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-3	EPRI-0105-185	L010706020	05/16/2001	IRON (FE) TOT	2.4	J4	Field Dup	42.9% RPD	
SEP-4-SED	EPRI-0105-207	L010734001	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-6	EPRI-0105-187	L010706021	05/16/2001	IRON (FE) TOT	2.7	J4	Field Dup	42.9% RPD	
SEP-7	EPRI-0105-188	L010706018	05/16/2001	IRON (FE) TOT	2.2	J4	Field Dup	42.9% RPD	
SEP-7 DUP	EPRI-0105-246	L010706019	05/16/2001	IRON (FE) TOT	3.4	J4	Field Dup	42.9% RPD	
SEP-9-SED	EPRI-0105-210	L010734008	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-10-SED	EPRI-0105-211	L010734007	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-11-SED	EPRI-0105-212	L010734006	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-12-SED	EPRI-0105-213	L010734004	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-13-SED	EPRI-0105-214	L010734002	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-13-SED DUP	EPRI-0105-249	L010734003	05/17/2001	CHROMIUM (CR) TOT	<80.0	UJ4	LCS	70% Recovery	-30%
SEP-14	EPRI-0105-194	L010951001	06/27/2001	SC (UMHOS/CM AT 25 C) (FLD)	3500.0	A	Lab/Field SC	1033% Diff	
SEP-14 DUP	EPRI-0105-257	L010951002	06/27/2001	SC (UMHOS/CM AT 25 C) (FLD)	3490.0	A	Lab/Field SC	1044% Diff	
SEP-14-SED	EPRI-0105-215	L010734009	05/17/2001	CHROMIUM (CR) TOT	730.0	J4	LCS	70% Recovery	-30%

TABLE 3

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 DEVATIONS FROM THE MEAN OF THE DATABASE PERIOD AND THE RELATIONSHIP TO THESE DATA

DataMan Program

ASARCO, EL PASO Summary of Historical

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
EM-2	05/08/2001	0.079	ZINC (ZN) TOT	08/06/1999-02/09/2001	7	<0.020	0.0316	0.051	3.36	HIGHEST
EM-2	05/08/2001	0.083	ZINC (ZN) TOT	08/06/1999-02/09/2001	7	<0.020	0.0316	0.051	3.64	HIGHEST
EM-4	05/07/2001	0.66	NITRATE + NITRITE AS N	08/26/1997-02/09/2001	15	0.15	0.2327	0.43	6.21	HIGHEST
EM-6	05/09/2001	4.83	TURBIDITY (NTU)	08/06/1999-02/14/2001	7	0.90	1.7329	2.65	5.26	HIGHEST
EM-7	05/09/2001	DRY.0	DEPTH TO WATER LEVEL (FEET)	11/17/1997-01/31/2000	11	DRY	8.7260	9.59	> 10	
EP-4	05/04/2001	8.6	PH	08/06/1997-02/05/2001	14	7.7	7.9857	8.3	3.28	HIGHEST
		22.0	IRON (FE) TOT	08/02/1999-02/05/2001	7	2.2	6.0000	13.	3.79	HIGHEST
EP-5	05/04/2001	8.5	PH	08/06/1997-02/05/2001	14	7.6	7.9571	8.2	3.29	HIGHEST
		45.7	TURBIDITY (NTU)	08/02/1999-02/05/2001	6		7.0483	10.68	9.99	HIGHEST
EP-6	05/04/2001	8.6	PH	08/06/1997-02/05/2001	15	7.7	7.9867	8.4	3.84	HIGHEST
EP-7	05/04/2001	8.7	PH	08/06/1997-02/05/2001	15	7.5	7.8400	8.1	5.55	HIGHEST
EP-23	05/10/2001	3.8	OXYGEN (O) (FLD) DIS	08/11/1997-02/21/2001	13	0.600	1.3400	2.90	3.79	HIGHEST
		280.0	TOTAL SUSPENDED SOLIDS	08/11/1997-02/21/2001	16	14.0	73.8125	204.0	3.41	HIGHEST
		6.5	IRON (FE) TOT	08/04/1999-02/21/2001	7	0.78	1.0300	1.4	> 10	HIGHEST
		0.005	SELENIUM (SE) TOT	08/04/1999-02/21/2001	7	0.009	0.0117	0.015	3.03	LOWEST
EP-24	05/16/2001	0.59	NITRATE + NITRITE AS N	08/15/1997-02/26/2001	15	<0.050	0.1280	0.36	4.90	HIGHEST
EP-49	05/10/2001	33.0	NITRATE + NITRITE AS N	11/19/1997-02/20/2001	13	<0.050	4.6269	22.0	4.22	HIGHEST
EP-51	05/10/2001	3759.0	CHLORIDE (CL)	08/26/1997-02/16/2001	15	1671.0	2270.8000	2970.0	3.64	HIGHEST
EP-52	05/10/2001	122.0	TURBIDITY (NTU)	08/05/1999-02/20/2001	7	14.8	37.2871	77	3.18	HIGHEST
		5.1	FLUORIDE (F)	11/06/1997-02/20/2001	13	5.8	6.2846	6.9	4.24	LOWEST
		0.32	CHROMIUM (CR) TOT	08/05/1999-02/20/2001	7	0.041	0.1297	0.19	3.66	HIGHEST
		11.0	IRON (FE) TOT	08/05/1999-02/20/2001	7	1.2	3.3857	6.4	3.83	HIGHEST
EP-53	05/10/2001	>200.0	TURBIDITY (NTU)	08/04/1999-02/21/2001	4	157	164.5000	176	> 10	LOWEST
		39.0	IRON (FE) TOT	08/04/1999-02/21/2001	7	1.7	6.8000	13.	8.96	HIGHEST
		0.019	LEAD (PB) TOT	08/04/1999-02/21/2001	7	<0.003	0.0064	0.011	4.77	HIGHEST
EP-54	05/10/2001	970.0	CHLORIDE (CL)	08/26/1997-02/20/2001	16	625.	739.4375	891.	3.80	HIGHEST
		0.04	LEAD (PB) TOT	08/04/1999-02/20/2001	7	0.007	0.0143	0.022	4.46	HIGHEST
EP-55	05/11/2001	652.0	CALCIUM (CA) DIS	08/15/1997-02/22/2001	15	457.0	516.0000	573.0	4.50	HIGHEST
		2.3	CADMIUM (CD) TOT	08/10/1999-02/22/2001	7	0.16	0.5729	1.3	4.33	HIGHEST
		89.0	IRON (FE) TOT	08/10/1999-02/22/2001	7	31.0	48.1429	67.0	3.55	HIGHEST
		177.0	ZINC (ZN) TOT	08/10/1999-02/22/2001	7	27.	51.5714	102.0	4.45	HIGHEST
EP-56	05/10/2001	3.9	OXYGEN (O) (FLD) DIS	08/11/1997-02/22/2001	14	0.770	1.5464	3.20	3.35	HIGHEST
		12775.0	TOTAL SUSPENDED SOLIDS	08/26/1997-02/22/2001	15	224.	1711.1333	4339.0	7.85	HIGHEST
		772.0	CALCIUM (CA) DIS	08/26/1997-02/22/2001	15	182.0	264.1333	361.0	> 10	HIGHEST
		107.0	MAGNESIUM (MG) DIS	08/26/1997-02/22/2001	15	39.0	60.8000	68.0	5.98	HIGHEST
		55.0	POTASSIUM (K) DIS	08/26/1997-02/22/2001	15	22.0	28.0000	34.0	7.89	HIGHEST
		2140.0	BICARBONATE (HCO3)	08/26/1997-02/22/2001	15	289.	552.7333	1110.0	6.47	HIGHEST
		0.15	CHROMIUM (CR) TOT	08/04/1999-02/22/2001	7	<0.010	0.0277	0.064	4.94	HIGHEST
		0.15	COPPER (CU) TOT	08/04/1999-02/22/2001	7	<0.025	0.0431	0.071	5.90	HIGHEST
		235.0	IRON (FE) TOT	08/04/1999-02/22/2001	7	2.9	36.1286	77.0	7.02	HIGHEST
		0.099	LEAD (PB) TOT	08/04/1999-02/22/2001	7	0.010	0.0229	0.036	7.71	HIGHEST
		0.57	ZINC (ZN) TOT	08/04/1999-02/22/2001	7	0.045	0.0846	0.23	7.15	HIGHEST
EP-57	05/16/2001	2.2	OXYGEN (O) (FLD) DIS	08/16/1997-02/23/2001	15	0.04	0.6653	1.72	3.11	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.
A & R Flags were excluded from Statistics The detection limit was used in calculations.

TABLE 3

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 DEVATIONS FROM THE MEAN OF THE DATABASE PERIOD AND THE RELATIONSHIP TO THESE DATA

DataMan Program

ASARCO, EL PASO Summary of Historical

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
		8.05	TURBIDITY (NTU)	02/07/2000-02/23/2001	5	12.4	14.3660	16.43	3.91	LOWEST
		1348.0	SULFATE (SO4)	08/16/1997-02/23/2001	15	56.0	398.4000	965.0	3.43	HIGHEST
		600.0	CHLORIDE (CL)	08/16/1997-02/23/2001	15	142.0	254.6667	401.0	5.06	HIGHEST
EP-58	05/16/2001	2.6	OXYGEN (O) (FLD) DIS	08/16/1997-02/23/2001	15	0.04	0.7627	1.60	4.42	HIGHEST
EP-61	05/16/2001	4.3	OXYGEN (O) (FLD) DIS	08/16/1997-02/23/2001	15	0.50	1.1760	2.30	5.78	HIGHEST
		7281.0	SULFATE (SO4)	08/16/1997-02/23/2001	15	2761.0	3394.9333	5608.0	5.57	HIGHEST
EP-63	05/15/2001	0.16	CHROMIUM (CR) TOT	08/03/1999-02/21/2001	7	<0.010	0.0224	0.057	8.22	HIGHEST
		3.6	IRON (FE) TOT	08/03/1999-02/21/2001	7	<0.10	0.8714	2.6	3.32	HIGHEST
EP-63	05/15/2001	4.2	OXYGEN (O) (FLD) DIS	08/09/1997-02/21/2001	15	0.200	1.2887	2.83	3.51	HIGHEST
		0.16	CHROMIUM (CR) TOT	08/03/1999-02/21/2001	7	<0.010	0.0224	0.057	8.22	HIGHEST
		4.1	IRON (FE) TOT	08/03/1999-02/21/2001	7	<0.10	0.8714	2.6	3.92	HIGHEST
		0.036	LEAD (PB) TOT	08/03/1999-02/21/2001	7	0.003	0.0109	0.027	3.24	HIGHEST
EP-65	05/16/2001	2.6	OXYGEN (O) (FLD) DIS	08/16/1997-02/23/2001	15	0.270	0.8147	2.30	3.21	HIGHEST
		0.059	ARSENIC (AS) TOT	08/10/1999-02/23/2001	7	<0.005	0.0134	0.033	4.51	HIGHEST
EP-67	05/07/2001	8.1	PH	08/12/1997-02/08/2001	15	7.2	7.5000	7.9	3.06	HIGHEST
		232.0	BICARBONATE (HCO3)	08/12/1997-02/08/2001	15	239.	251.6000	261.0	3.04	LOWEST
EP-70	05/07/2001	59.81	DEPTH TO WATER LEVEL (FEET)	08/12/1997-02/09/2001	16	61.50	61.9750	62.65	6.07	LOWEST
		876.0	CHLORIDE (CL)	08/26/1997-02/09/2001	15	488.	556.2667	624.0	7.12	HIGHEST
EP-71	05/07/2001	48.6	DEPTH TO WATER LEVEL (FEET)	08/12/1997-02/09/2001	14	49.55	50.1307	50.68	4.30	LOWEST
		8.2	PH	08/12/1997-02/09/2001	14	7.3	7.5643	8.0	3.20	HIGHEST
		0.044	ZINC (ZN) TOT	08/05/1999-02/09/2001	7	<0.020	0.0233	0.035	3.69	HIGHEST
EP-72	05/07/2001	8.6	PH	08/12/1997-02/09/2001	11	7.3	7.6273	8.1	3.97	HIGHEST
		8520.0	SC (UMHOS/CM AT 25 C)	08/12/1997-02/09/2001	11	5700.	6381.8182	7540.0	3.67	HIGHEST
		7586.0	TDS (MEASURED AT 180 C)	08/12/1997-02/09/2001	11	4539.	5300.2727	6394.0	3.86	HIGHEST
		337.0	MAGNESIUM (MG) DIS	08/12/1997-02/09/2001	11	148.	177.9091	234.0	5.40	HIGHEST
		1655.0	SODIUM (NA) DIS	08/12/1997-02/09/2001	11	900.	1024.1818	1227.0	7.38	HIGHEST
		4662.0	SULFATE (SO4)	08/12/1997-02/09/2001	11	2209.0	2768.0000	3904.0	3.48	HIGHEST
EP-77	05/09/2001	1.5	ARSENIC (AS) TOT	08/05/1999-02/12/2001	7	3.3	5.9857	7.7	3.36	LOWEST
EP-77	05/09/2001	1.5	ARSENIC (AS) TOT	08/05/1999-02/12/2001	7	3.3	5.9857	7.7	3.36	LOWEST
EP-78	05/14/2001	0.91	IRON (FE) TOT	08/09/1999-02/15/2001	7	<0.10	0.2700	0.62	3.09	HIGHEST
EP-79	05/14/2001	88.0	CALCIUM (CA) DIS	08/13/1997-02/15/2001	15	38.0	51.2667	60.0	5.24	HIGHEST
		636.0	CHLORIDE (CL)	08/13/1997-02/15/2001	15	366.0	430.5333	524.0	4.35	HIGHEST
		3.2	IRON (FE) TOT	08/09/1999-02/15/2001	7	<0.10	0.2486	0.80	> 10	HIGHEST
EP-80	05/14/2001	6.1	OXYGEN (O) (FLD) DIS	08/13/1997-02/16/2001	15	0.200	0.9880	2.90	6.27	HIGHEST
EP-86	05/14/2001	10.6	OXYGEN (O) (FLD) DIS	08/13/1997-02/15/2001	13	5.56	7.3546	8.70	3.50	HIGHEST
EP-89	05/07/2001	203.0	BICARBONATE (HCO3)	08/12/1997-02/08/2001	15	244	268.6667	282.0	6.39	LOWEST
EP-90	05/08/2001	5.4	IRON (FE) TOT	08/05/1999-02/12/2001	7	0.22	1.5414	3.2	4.19	HIGHEST
		0.068	ZINC (ZN) TOT	08/05/1999-02/12/2001	7	<0.020	0.0296	0.054	3.05	HIGHEST
EP-97	05/14/2001	1029.0	TOTAL SUSPENDED SOLIDS	10/18/1999-02/14/2001	6	7.5	110.7500	208.0	> 10	HIGHEST
		22.0	IRON (FE) TOT	10/18/1999-02/14/2001	6	0.45	4.0750	8.3	6.33	HIGHEST
		0.69	LEAD (PB) TOT	10/18/1999-02/14/2001	6	0.024	0.1038	0.18	9.82	HIGHEST
		0.31	ZINC (ZN) TOT	10/18/1999-02/14/2001	6	0.095	0.1442	0.21	3.99	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.
A & R Flags were excluded from Statistics The detection limit was used in calculations.

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TABLE 3

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 DEVATIONS FROM THE MEAN OF THE DATABASE PERIOD AND THE RELATIONSHIP TO THESE DATA

DataMan Program

ASARCO, EL PASO Summary of Historical

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-100	05/09/2001	0.43	ZINC (ZN) TOT	10/20/1999-02/20/2001	6	0.12	0.1850	0.24	4.85	HIGHEST
EP-101	05/08/2001	6.8	PH	10/21/1999-02/09/2001	6	7.3	7.6167	7.8	4.74	LOWEST
EP-104	05/08/2001	439.0	BICARBONATE (HCO3)	10/21/1999-02/12/2001	6	395.0	402.6667	408	7.63	HIGHEST
		557.0	CHLORIDE (CL)	10/21/1999-02/12/2001	6	451.0	479.6667	503.	3.79	HIGHEST
EP-105	05/09/2001	130.0	TURBIDITY (NTU)	01/25/2000-02/14/2001	5	5.50	9.1800	12.0	> 10	HIGHEST
		0.2	COPPER (CU) TOT	10/21/1999-02/14/2001	6	<0.025	0.0390	0.078	7.76	HIGHEST
		8.7	IRON (FE) TOT	10/21/1999-02/14/2001	6	0.30	1.5450	5.7	3.47	HIGHEST
		0.39	ZINC (ZN) TOT	10/21/1999-02/14/2001	6	0.049	0.0890	0.18	6.36	HIGHEST
EP-106	05/09/2001	0.1	ZINC (ZN) TOT	10/21/1999-02/12/2001	6	<0.020	0.0372	0.067	3.16	HIGHEST
EP-107	05/08/2001	63.04	DEPTH TO WATER LEVEL (FEET)	10/21/1999-02/12/2001	6	63.39	63.6867	64.02	3.22	LOWEST
EP-110	05/07/2001	21.0	POTASSIUM (K) DIS	10/29/1999-02/08/2001	6	17.0	18.0000	19.0	3.35	HIGHEST
		0.015	SELENIUM (SE) TOT	10/29/1999-02/08/2001	6	0.016	0.0167	0.017	3.23	LOWEST
EP-111	05/15/2001	76.0	POTASSIUM (K) DIS	10/28/1999-02/21/2001	6	51.0	59.1667	66.	3.11	HIGHEST
EP-113	05/15/2001	7.51	PH (FLD)	10/28/1999-02/21/2001	6	7.22	7.3183	7.41	3.04	HIGHEST
		325.0	BICARBONATE (HCO3)	10/28/1999-02/21/2001	6	375	399.5000	420.0	4.68	LOWEST
EP-114	05/04/2001	6.78	PH (FLD)	11/18/1999-11/10/2000	5	6.19	6.3420	6.50	3.89	HIGHEST
		1280.0	CALCIUM (CA) DIS	11/18/1999-11/10/2000	5	547.	758.0000	960.	3.36	HIGHEST
		347.0	POTASSIUM (K) DIS	11/18/1999-11/10/2000	5	182.0	222.2000	269.	3.82	HIGHEST
		2616.0	BICARBONATE (HCO3)	11/18/1999-11/10/2000	5	969	1333.4000	1708	4.48	HIGHEST
		109.0	ZINC (ZN) TOT	11/18/1999-11/10/2000	5	35.	55.6000	75.	3.46	HIGHEST
EP-116	05/04/2001	1130.0	SULFATE (SO4)	11/18/1999-02/22/2001	6	1838.0	2246.1667	2515.	4.45	LOWEST
		275.0	CHLORIDE (CL)	11/18/1999-02/22/2001	6	373.0	485.0000	563.0	3.22	LOWEST
EP-117	05/04/2001	3.9	OXYGEN (O) (FLD) DIS	11/18/1999-02/22/2001	6	1.30	1.6500	3.10	3.15	HIGHEST
		540.0	SODIUM (NA) DIS	11/18/1999-02/22/2001	6	351.0	400.3333	458.0	3.21	HIGHEST
		4.5	COPPER (CU) TOT	11/18/1999-02/22/2001	6	0.086	0.7143	2.1	5.30	HIGHEST
EP-118	05/04/2001	8.7	PH	11/18/1999-02/22/2001	6	8.0	8.1000	8.3	4.74	HIGHEST
POND 5-SED	05/17/2001	73000.0	LEAD (PB) TOT	08/11/1999-02/27/2001	6	27000.0	32900.0000	38400.0	8.22	HIGHEST
SEP-3	05/16/2001	51.0	TURBIDITY (NTU)	11/01/1999-02/23/2001	6	17.2	27.4667	40.0	3.15	HIGHEST
SEP-6	05/16/2001	56.0	TURBIDITY (NTU)	11/01/1999-02/23/2001	6	16.8	27.1333	40.0	3.82	HIGHEST
SEP-7	05/16/2001	54.0	TURBIDITY (NTU)	11/01/1999-02/23/2001	6	14.15	26.1583	40	3.35	HIGHEST
SEP-14	06/27/2001	6.79	PH (FLD)	11/12/1998-11/14/2000	4	8.33	8.7800	9.33	4.15	LOWEST
		262.0	TDS (MEASURED AT 180 C)	11/12/1998-11/14/2000	4	103.	134.2500	182.0	3.69	HIGHEST
		71.0	TOTAL SUSPENDED SOLIDS	11/12/1998-11/14/2000	4	49.0	50.7500	53.	> 10	HIGHEST
		88.2	TURBIDITY (NTU)	08/21/2000-11/14/2000	2	5.80	5.9550	6.11	> 10	HIGHEST
		1.1	NITRATE + NITRITE AS N	11/12/1998-11/14/2000	4	0.09	0.2875	0.55	3.54	HIGHEST
		0.094	ARSENIC (AS) TOT	08/21/2000-11/14/2000	2	0.038	0.0480	0.058	3.25	HIGHEST
		1.2	COPPER (CU) TOT	08/21/2000-11/14/2000	2	0.25	0.3200	0.39	8.89	HIGHEST
		9.1	IRON (FE) TOT	08/21/2000-11/14/2000	2	2.3	2.5500	2.8	> 10	HIGHEST
		0.37	LEAD (PB) TOT	08/21/2000-11/14/2000	2	0.073	0.0800	0.087	> 10	HIGHEST
		1.3	ZINC (ZN) TOT	08/21/2000-11/14/2000	2	0.14	0.1850	0.23	> 10	HIGHEST
SEP-14	06/27/2001	6.81	PH (FLD)	11/12/1998-11/14/2000	4	8.33	8.7800	9.33	4.11	LOWEST
		75.0	TOTAL SUSPENDED SOLIDS	11/12/1998-11/14/2000	4	49.0	50.7500	53.	> 10	HIGHEST
		89.7	TURBIDITY (NTU)	08/21/2000-11/14/2000	2	5.80	5.9550	6.11	> 10	HIGHEST

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

ASARCO, EL PASO Summary of Historical

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
		1.2	NITRATE + NITRITE AS N	11/12/1998-11/14/2000	4	0.09	0.2875	0.55	3.98	HIGHEST
		0.096	ARSENIC (AS) TOT	08/21/2000-11/14/2000	2	0.038	0.0480	0.058	3.39	HIGHEST
		1.2	COPPER (CU) TOT	08/21/2000-11/14/2000	2	0.25	0.3200	0.39	8.89	HIGHEST
		9.8	IRON (FE) TOT	08/21/2000-11/14/2000	2	2.3	2.5500	2.8	> 10	HIGHEST
		0.38	LEAD (PB) TOT	08/21/2000-11/14/2000	2	0.073	0.0800	0.087	> 10	HIGHEST
		1.3	ZINC (ZN) TOT	08/21/2000-11/14/2000	2	0.14	0.1850	0.23	> 10	HIGHEST
SEP-14-SED	05/17/2001	730.0	CHROMIUM (CR) TOT	08/11/1999-02/27/2001	7	81	195.0000	390.0	4.85	HIGHEST
		1500.0	LEAD (PB) TOT	08/11/1999-02/27/2001	7	3930.0	4918.5714	5900	4.40	LOWEST

NOTES: All quantities in mg/L (Water) or mg/kg (Soil) unless noted. All results LABORATORY unless field (FLD) or calculated (CALC).
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A & R Flags were excluded from Statistics The detection limit was used in calculations.

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APPENDIX 2

DATABASE

TABLE OF CONTENTS BY SITE TYPE

TABLE OF CONTENTS BY SITE TYPE

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EM-1	EM-2	EM-2	EM-4
SAMPLE DATE	05/16/2001	05/08/2001	05/08/2001	05/07/2001
SAMPLE TIME	10:30	09:30	16:15	15:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010706022	L010653004	L010653005	L010629019
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0105-195	EPRI-0105-196	EPRI-0105-223	EPRI-0105-197
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	65.41	62.64		61.1
OXYGEN (O) (FLD) DIS	2.0	2.7	2.3	3.3 J4
PH (FLD)	7.62	6.97	6.98	7.26
PH	7.8	7.7	7.6	8.0
SC (UMHOS/CM AT 25 C)	5580.0	4760.0	4840.0	9930.0
SC (UMHOS/CM AT 25 C) (FLD)	5170.0	4710.0	4690.0	9780.0
TDS (MEASURED AT 180 C)	4161.0	3606.0	3670.0	6269.0
TOTAL SUSPENDED SOLIDS	31.0	4.9	3.1	<1.0
TURBIDITY (NTU)	7.42	6.63		2.66
WATER TEMPERATURE (C) (FLD)	22.8	24.0	24.1	25.1
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	215.0	223.0	230.0	410.0
MAGNESIUM (MG) DIS	123.0	81.0	87.0	183.0
SODIUM (NA) DIS	930.0	807.0	868.0	1498.0
POTASSIUM (K) DIS	32.0	17.0	18.0	35.0
BICARBONATE (HCO3)	214.0	345.0	362.0	146.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	1856.0	1662.0	1862.0	419.0
CHLORIDE (CL)	880.0	501.0	411.0	2896.0
FLUORIDE (F)	0.82	1.5	1.5	1.2
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.19	33.0	35.0	0.66
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	<0.005	0.83	0.88	0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	0.029
IRON (FE) TOT	3.5 J4	0.16	0.14	0.15
LEAD (PB) TOT	0.007	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	<0.005	0.13 J4	0.13 J4	<0.005
ZINC (ZN) TOT	<0.02	0.079	0.083	0.095

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		EM-7
SAMPLE DATE	05/09/2001		05/09/2001		05/09/2001
SAMPLE TIME	10:10		10:30		
LAB	TSC-SLC		TSC-SLC		HYDRO
LAB NUMBER	L010653020		L010653021		0105-03
REMARKS					NO SAMPLE
OTHER INFO					Dry
SAMPLE NUMBER	EPRI-0105-198		EPRI-0105-199		EPRI-0105-200
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	17.22		38.7		DRY
OXYGEN (O) (FLD) DIS	0.5		0.7		
PH (FLD)	7.53		7.26		
PH	7.9		8.1		
SC (UMHOS/CM AT 25 C)	2960.0		4130.0		
SC (UMHOS/CM AT 25 C) (FLD)	2890.0		4070.0		
TDS (MEASURED AT 180 C)	2073.0		2958.0		
TOTAL SUSPENDED SOLIDS	5.1	J4	<1.0	UJ4	
TURBIDITY (NTU)	5.2		4.83		
WATER TEMPERATURE (C) (FLD)	24.6		24.0		
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	106.0		89.0		
MAGNESIUM (MG) DIS	26.0		57.0		
SODIUM (NA) DIS	469.0		712.0		
POTASSIUM (K) DIS	38.0		11.0		
BICARBONATE (HCO3)	138.0		381.0		
CARBONATE AS CO3	<1.0		<1.0		
SULFATE (SO4)	2141.0		1572.0		
CHLORIDE (CL)	315.0		408.0		
FLUORIDE (F)	3.9		1.8		
-- NUTRIENTS --					
NITRATE + NITRITE AS N	0.36	J4	6.0		
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	1.5		0.025		
CADMIUM (CD) TOT	<0.005		<0.005		
CHROMIUM (CR) TOT	<0.01		<0.01		
COPPER (CU) TOT	<0.025		<0.025		
IRON (FE) TOT	1.4		<0.1		
LEAD (PB) TOT	0.005		0.003		
SELENIUM (SE) TOT	<0.005		0.078		
ZINC (ZN) TOT	0.1		0.051		

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-4	EP-5	EP-6
SAMPLE DATE	05/04/2001	05/04/2001	05/04/2001
SAMPLE TIME	08:45	09:00	09:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010629001	L010629002	L010629003
OTHER INFO	Cloudy	Sl Cloudy	
SAMPLE NUMBER	EPRI-0105-100	EPRI-0105-101	EPRI-0105-102
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	7.57	6.47	7.52
OXYGEN (O) (FLD) DIS	3.6	3.1	3.4
PH (FLD)	7.48	7.55	7.78
PH	8.6	8.5	8.6
SC (UMHOS/CM AT 25 C)	1720.0	5240.0	3620.0
SC (UMHOS/CM AT 25 C) (FLD)	1944.0	5830.0	4030.0
TDS (MEASURED AT 180 C)	1131.0	3566.0	2574.0
TOTAL SUSPENDED SOLIDS	761.0	121.0	12.0
TURBIDITY (NTU)	>200	45.7	8.9
WATER TEMPERATURE (C) (FLD)	17.4	20.1	19.3
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	123.0	118.0	129.0
MAGNESIUM (MG) DIS	34.0	59.0	45.0
SODIUM (NA) DIS	255.0	1106.0	646.0
POTASSIUM (K) DIS	18.0	15.0	15.0
BICARBONATE (HCO3)	325.0	1039.0	340.0
CARBONATE AS CO3	14.0	14.0	17.0
SULFATE (SO4)	352.0	1177.0	900.0
CHLORIDE (CL)	203.0	1013.0	284.0
FLUORIDE (F)	0.76	2.7	2.2
-- NUTRIENTS --			
NITRATE + NITRITE AS N	<0.1	<0.1	8.4
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.075	0.095	0.033
CADMIUM (CD) TOT	<0.005	0.005	0.007
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	0.26	0.16	<0.025
IRON (FE) TOT	22.0	1.8	0.16
LEAD (PB) TOT	0.1	0.027	0.01
SELENIUM (SE) TOT	<0.005	<0.005	0.068
ZINC (ZN) TOT	0.17	0.061	0.027

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-7	EP-7	EP-12	EP-13
SAMPLE DATE	05/04/2001	05/04/2001	05/17/2001	05/08/2001
SAMPLE TIME	09:45	09:50	13:00	10:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010629004	L010629005	L010728009	L010653007
REMARKS		DUPLICATE		
OTHER INFO	Clear			
SAMPLE NUMBER	EPRI-0105-103	EPRI-0105-219	EPRI-0105-104	EPRI-0105-105
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	6.84		60.82	61.35
OXYGEN (O) (FLD) DIS	3.1	2.9	0.2	2.8
PH (FLD)	7.57	7.55	7.12	7.17
PH	8.7	8.3	8.0	7.5
SC (UMHOS/CM AT 25 C)	2620.0	2640.0	5960.0	9520.0
SC (UMHOS/CM AT 25 C) (FLD)	2930.0	2930.0	5320.0	9090.0
TDS (MEASURED AT 180 C)	1767.0	1825.0	4791.0	7658.0
TOTAL SUSPENDED SOLIDS	23.0	14.0	55.0	3.2
TURBIDITY (NTU)	6.45		20.1	6.02
WATER TEMPERATURE (C) (FLD)	19.2	19.3	23.2	27.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	90.0	88.0	281.0	325.0
MAGNESIUM (MG) DIS	30.0	28.0	111.0	67.0
SODIUM (NA) DIS	488.0	474.0	925.0	1937.0
POTASSIUM (K) DIS	7.7	8.1	16.0	76.0
BICARBONATE (HCO3)	275.0	317.0	695.0	306.0
CARBONATE AS CO3	17.0	<1.0	<1.0	<1.0
SULFATE (SO4)	710.0	788.0	2393.0	4132.0
CHLORIDE (CL)	303.0	271.0	633.0	856.0
FLUORIDE (F)	1.6	1.7	1.1	1.3
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.24 UJ1	0.21 UJ1	9.5	105.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.075	0.068	0.83	25.0
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	0.54
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	2.5	2.4	1.2	0.27
LEAD (PB) TOT	<0.003	<0.003	0.005	0.006
SELENIUM (SE) TOT	<0.005	<0.005	0.069	4.5 J4
ZINC (ZN) TOT	0.029	0.026	<0.02	0.078

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: GROUNDWATER --

SITE CODE	EP-14		EP-15		EP-20		EP-20	
SAMPLE DATE	05/08/2001		05/08/2001		05/16/2001		05/16/2001	
SAMPLE TIME	10:10		14:20		08:00		08:05	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010653006		L010653012		L010706013		L010706014	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0105-106		EPRI-0105-107		EPRI-0105-108		EPRI-0105-245	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	59.99		59.74		14.0			
OXYGEN (O) (FLD) DIS	0.7		2.2		3.7		3.7	
PH (FLD)	6.91		7.13		6.99		6.98	
PH	7.6		7.8		7.3		7.4	
SC (UMHOS/CM AT 25 C)	5720.0		4500.0		8920.0		8870.0	
SC (UMHOS/CM AT 25 C) (FLD)	5640.0		4480.0		7890.0		7890.0	
TDS (MEASURED AT 180 C)	4666.0		3362.0		7798.0		7760.0	
TOTAL SUSPENDED SOLIDS	2.6		106.0		107.0		94.0	
TURBIDITY (NTU)	5.32		45.5		52.9			
WATER TEMPERATURE (C) (FLD)	25.3		24.8		19.8		19.7	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	387.0		205.0		461.0		479.0	
MAGNESIUM (MG) DIS	99.0		72.0		233.0		244.0	
SODIUM (NA) DIS	797.0		816.0		1457.0		1543.0	
POTASSIUM (K) DIS	57.0		13.0		54.0		59.0	
BICARBONATE (HCO3)	378.0		344.0		311.0		329.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	2723.0		1583.0		4517.0		4454.0	
CHLORIDE (CL)	496.0		492.0		612.0		705.0	
FLUORIDE (F)	1.5		0.99		2.1		1.9	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	25.0		30.0		118.0		116.0	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	1.4		0.013		0.93		0.92	
CADMIUM (CD) TOT	<0.005		0.008		0.087		0.091	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.14		2.4		2.8	J4	2.1	J4
LEAD (PB) TOT	0.004		0.004		0.006		0.004	
SELENIUM (SE) TOT	0.32	J4	0.23	J4	0.34		0.34	
ZINC (ZN) TOT	0.047		0.065		0.04		0.039	

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R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-21		EP-22		EP-23
SAMPLE DATE	05/16/2001		05/09/2001		05/10/2001
SAMPLE TIME	14:25		11:30		09:00
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L010706028		L010653023		L010689017
SAMPLE NUMBER	EPRI-0105-109		EPRI-0105-110		EPRI-0105-111
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	31.02		53.85		28.55
OXYGEN (O) (FLD) DIS	0.7		0.8		3.8
PH (FLD)	7.42		7.07		7.5
PH	7.8		7.6		7.9
SC (UMHOS/CM AT 25 C)	4740.0		10370.0		5320.0
SC (UMHOS/CM AT 25 C) (FLD)	4610.0		10140.0		5040.0
TDS (MEASURED AT 180 C)	2756.0		9125.0		3238.0
TOTAL SUSPENDED SOLIDS	32.0		14.0	J4	280.0
TURBIDITY (NTU)	48.4		7.5		47.0
WATER TEMPERATURE (C) (FLD)	26.7		26.4		23.7
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	19.0		488.0		114.0
MAGNESIUM (MG) DIS	27.0		250.0		69.0
SODIUM (NA) DIS	711.0		1843.0		663.0
POTASSIUM (K) DIS	285.0		147.0		51.0
BICARBONATE (HCO3)	2040.0		586.0		537.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	138.0		5250.0		1706.0
CHLORIDE (CL)	782.0		610.0		585.0
FLUORIDE (F)	7.0		2.3		2.8
-- NUTRIENTS --					
NITRATE + NITRITE AS N	0.3		115.0		0.2
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	0.057		3.0		5.2
CADMIUM (CD) TOT	<0.005		0.007		0.012
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01
COPPER (CU) TOT	<0.025		0.039		0.18
IRON (FE) TOT	1.9	J4	0.62		6.5
LEAD (PB) TOT	0.006		0.015		0.12
SELENIUM (SE) TOT	0.01		1.8		0.005
ZINC (ZN) TOT	0.32		0.47		0.11

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-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-24	EP-25	EP-26	EP-26
SAMPLE DATE	05/16/2001	05/16/2001	05/10/2001	05/10/2001
SAMPLE TIME	15:00	15:20	10:25	10:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010706029	L010706030	L010689019	L010689020
REMARKS				DUPLICATE
OTHER INFO		Cloudy		
SAMPLE NUMBER	EPRI-0105-112	EPRI-0105-113	EPRI-0105-114	EPRI-0105-234
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	37.01	50.9	60.51	
OXYGEN (O) (FLD) DIS	0.6	2.5	0.6	0.5
PH (FLD)	7.16	7.11	7.03	7.03
PH	7.5	7.6	7.8	7.8
SC (UMHOS/CM AT 25 C)	4500.0	5620.0	4900.0	4880.0
SC (UMHOS/CM AT 25 C) (FLD)	4350.0	5530.0	4820.0	4810.0
TDS (MEASURED AT 180 C)	2760.0	3315.0	3732.0	3754.0
TOTAL SUSPENDED SOLIDS	20.0	164.0	23.0	21.0
TURBIDITY (NTU)	12.05	>200	19.46	
WATER TEMPERATURE (C) (FLD)	28.7	26.8	24.9	24.9
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	103.0	84.0	229.0	225.0
MAGNESIUM (MG) DIS	30.0	23.0	74.0	73.0
SODIUM (NA) DIS	776.0	919.0	782.0	754.0
POTASSIUM (K) DIS	25.0	168.0	63.0	58.0
BICARBONATE (HCO3)	1386.0	1867.0	298.0	290.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	204.0	182.0	1834.0	1782.0
CHLORIDE (CL)	1005.0	1102.0	583.0	585.0
FLUORIDE (F)	2.6	1.9	1.8	1.8
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.59	0.53	28.0	29.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.055	8.0	0.26	0.28
CADMIUM (CD) TOT	<0.005	<0.005	0.34	0.35
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	<0.1 UJ4	1.1 J4	0.76	0.76
LEAD (PB) TOT	<0.003	0.011	0.006	0.006
SELENIUM (SE) TOT	<0.005	0.1	1.1	1.1
ZINC (ZN) TOT	<0.02	<0.02	0.95	0.98

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Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
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-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-29		EP-35		EP-43
SAMPLE DATE	05/16/2001		05/16/2001		05/17/2001
SAMPLE TIME	08:30		08:45		13:40
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L010706015		L010706016		L010728010
SAMPLE NUMBER	EPRI-0105-115		EPRI-0105-116		EPRI-0105-117
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	13.95		14.35		58.58
OXYGEN (O) (FLD) DIS	4.9		5.6		7.9
PH (FLD)	7.89		7.14		7.14
PH	8.1		7.5		7.8
SC (UMHOS/CM AT 25 C)	3260.0		6460.0		3660.0
SC (UMHOS/CM AT 25 C) (FLD)	3100.0		5830.0		3470.0
TDS (MEASURED AT 180 C)	2223.0		5335.0		2424.0
TOTAL SUSPENDED SOLIDS	188.0		96.0		36.0
TURBIDITY (NTU)	>200		5.2		14.0
WATER TEMPERATURE (C) (FLD)	22.2		20.8		26.6
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	49.0		414.0		130.0
MAGNESIUM (MG) DIS	20.0		138.0		37.0
SODIUM (NA) DIS	618.0		1053.0		683.0
POTASSIUM (K) DIS	20.0		19.0		36.0
BICARBONATE (HCO3)	293.0		606.0		871.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	1044.0		2895.0		557.0
CHLORIDE (CL)	361.0		524.0		564.0
FLUORIDE (F)	2.9		1.0		2.6
-- NUTRIENTS --					
NITRATE + NITRITE AS N	8.2		61.0		1.2
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	0.27		0.67		0.81
CADMIUM (CD) TOT	<0.005		<0.005		<0.005
CHROMIUM (CR) TOT	<0.01		0.044		0.014
COPPER (CU) TOT	<0.025		<0.025		<0.025
IRON (FE) TOT	<0.1	UJ4	1.9	J4	0.71
LEAD (PB) TOT	<0.003		0.008		0.015
SELENIUM (SE) TOT	0.16		0.96		0.051
ZINC (ZN) TOT	<0.02		0.022		0.038

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: GROUNDWATER --

SITE CODE	EP-49	EP-51	EP-52
SAMPLE DATE	05/10/2001	05/10/2001	05/10/2001
SAMPLE TIME	14:20	13:15	13:45
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010689023	L010689021	L010689022
SAMPLE NUMBER	EPRI-0105-118	EPRI-0105-119	EPRI-0105-120
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	67.81	51.91	54.28
OXYGEN (O) (FLD) DIS	0.5	1.1	1.6
PH (FLD)	6.81	6.74	6.26
PH	7.4	7.3	7.3
SC (UMHOS/CM AT 25 C)	9820.0	12220.0	11720.0
SC (UMHOS/CM AT 25 C) (FLD)	9630.0	11790.0	11340.0
TDS (MEASURED AT 180 C)	7947.0	9283.0	10251.0
TOTAL SUSPENDED SOLIDS	16.0	28.0	28.0
TURBIDITY (NTU)	16.0	16.6	122.0
WATER TEMPERATURE (C) (FLD)	26.6	25.3	26.6
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	498.0	721.0	502.0
MAGNESIUM (MG) DIS	143.0	536.0	311.0
SODIUM (NA) DIS	1394.0	1260.0	2097.0
POTASSIUM (K) DIS	269.0	50.0	20.0
BICARBONATE (HCO3)	766.0	215.0	739.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	3964.0	2318.0	4815.0
CHLORIDE (CL)	815.0	3759.0	1559.0
FLUORIDE (F)	5.6	0.8	5.1
-- NUTRIENTS --			
NITRATE + NITRITE AS N	33.0	170.0	83.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	17.0	0.34	1.7
CADMIUM (CD) TOT	0.038	0.038	0.45
CHROMIUM (CR) TOT	<0.02	0.99	0.32
COPPER (CU) TOT	<0.025	0.18	0.57
IRON (FE) TOT	1.6	2.6	11.0
LEAD (PB) TOT	0.003	0.011	1.6
SELENIUM (SE) TOT	0.089	0.22	0.17
ZINC (ZN) TOT	11.0	0.49	3.5

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: GROUNDWATER --

SITE CODE	EP-53	EP-54	EP-55
SAMPLE DATE	05/10/2001	05/10/2001	05/11/2001
SAMPLE TIME	08:15	15:00	08:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010689016	L010689024	L010689026
OTHER INFO			Cloudy
SAMPLE NUMBER	EPRI-0105-121	EPRI-0105-122	EPRI-0105-123
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	68.41	71.37	58.58
OXYGEN (O) (FLD) DIS	3.9	1.9	1.6
PH (FLD)	7.1	6.52	6.49
PH	7.3	7.3	7.3
SC (UMHOS/CM AT 25 C)	7090.0	8620.0	9520.0
SC (UMHOS/CM AT 25 C) (FLD)	6990.0	8750.0	8820.0
TDS (MEASURED AT 180 C)	5280.0	6878.0	7696.0
TOTAL SUSPENDED SOLIDS	1432.0	26.0	178.0
TURBIDITY (NTU)	>200	33.0	<200.0
WATER TEMPERATURE (C) (FLD)	25.7	26.7	24.4
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	336.0	401.0	652.0
MAGNESIUM (MG) DIS	104.0	191.0	290.0
SODIUM (NA) DIS	1108.0	1260.0	1266.0
POTASSIUM (K) DIS	67.0	262.0	184.0
BICARBONATE (HCO3)	549.0	952.0	1086.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2778.0	4700.0	3543.0
CHLORIDE (CL)	581.0	970.0	1085.0
FLUORIDE (F)	5.0	8.8	13.0
-- NUTRIENTS --			
NITRATE + NITRITE AS N	14.0	16.0	0.27
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	32.0	37.0	63.0
CADMIUM (CD) TOT	0.47	0.67	2.3
CHROMIUM (CR) TOT	<0.02	<0.02	<0.02
COPPER (CU) TOT	0.034	0.067	0.17
IRON (FE) TOT	39.0	21.0	89.0
LEAD (PB) TOT	0.019	0.04	0.44
SELENIUM (SE) TOT	0.66	0.11	0.36
ZINC (ZN) TOT	2.2	10.0	177.0

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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: GROUNDWATER --

SITE CODE	EP-56		EP-57		EP-58
SAMPLE DATE	05/10/2001		05/16/2001		05/16/2001
SAMPLE TIME	09:45		13:45		12:45
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L010689018		L010706027		L010706024
SAMPLE NUMBER	EPRI-0105-124		EPRI-0105-125		EPRI-0105-126
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	51.23		9.75		12.4
OXYGEN (O) (FLD) DIS	3.9		2.2		2.6
PH (FLD)	7.42		7.16		6.58
PH	7.8		7.5		7.2
SC (UMHOS/CM AT 25 C)	3790.0		5160.0		11080.0
SC (UMHOS/CM AT 25 C) (FLD)	3700.0		5180.0		11260.0
TDS (MEASURED AT 180 C)	2669.0		3711.0		8775.0
TOTAL SUSPENDED SOLIDS	12775.0		27.0		5.5
TURBIDITY (NTU)	>200		8.05		5.4
WATER TEMPERATURE (C) (FLD)	24.3		27.3		27.4
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	772.0		209.0		477.0
MAGNESIUM (MG) DIS	107.0		141.0		215.0
SODIUM (NA) DIS	647.0		782.0		1645.0
POTASSIUM (K) DIS	55.0		20.0		244.0
BICARBONATE (HCO3)	2140.0		1781.0		1244.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	1061.0		1348.0		5489.0
CHLORIDE (CL)	477.0		600.0		1020.0
FLUORIDE (F)	3.1		0.99		4.9
-- NUTRIENTS --					
NITRATE + NITRITE AS N	1.0		1.6		0.28
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	3.1		0.32		3.7
CADMIUM (CD) TOT	<0.005		<0.005		<0.005
CHROMIUM (CR) TOT	0.15		<0.01		<0.01
COPPER (CU) TOT	0.15		<0.025		<0.025
IRON (FE) TOT	235.0		0.93	J4	0.5 J4
LEAD (PB) TOT	0.099		<0.003		<0.003
SELENIUM (SE) TOT	0.028		<0.005		0.029
ZINC (ZN) TOT	0.57		<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: GROUNDWATER --

SITE CODE	EP-59		EP-60		EP-61	
SAMPLE DATE	05/15/2001		05/15/2001		05/16/2001	
SAMPLE TIME	09:25		13:30		13:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010706001		L010706007		L010706025	
SAMPLE NUMBER	EPRI-0105-127		EPRI-0105-128		EPRI-0105-129	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	13.63		9.87		10.04	
OXYGEN (O) (FLD) DIS	0.8	J4	2.8	J4	4.3	
PH (FLD)	7.24		7.17		7.29	
PH	7.7		7.7		7.5	
SC (UMHOS/CM AT 25 C)	5060.0		8120.0		8000.0	
SC (UMHOS/CM AT 25 C) (FLD)	4850.0		7820.0		7730.0	
TDS (MEASURED AT 180 C)	3834.0		6853.0		6558.0	
TOTAL SUSPENDED SOLIDS	<1.0		4.4		3.0	
TURBIDITY (NTU)	3.33		13.5		4.4	
WATER TEMPERATURE (C) (FLD)	24.1		24.6		26.1	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	164.0		518.0		341.0	
MAGNESIUM (MG) DIS	88.0		204.0		149.0	
SODIUM (NA) DIS	846.0		1272.0		1364.0	
POTASSIUM (K) DIS	93.0		15.0		18.0	
BICARBONATE (HCO3)	454.0		317.0		520.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	2030.0		3716.0		7281.0	
CHLORIDE (CL)	577.0		1018.0		877.0	
FLUORIDE (F)	5.1		1.6		1.6	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	5.2		38.0		113.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	2.2		0.012		0.023	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	0.01		0.28		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	<0.1		2.0		0.5	J4
LEAD (PB) TOT	<0.003		<0.003		<0.003	
SELENIUM (SE) TOT	0.25		0.21		0.31	
ZINC (ZN) TOT	0.11		0.057		<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-62	EP-63	EP-63	EP-64
SAMPLE DATE	05/15/2001	05/15/2001	05/15/2001	05/15/2001
SAMPLE TIME	10:50	11:20	11:25	10:25
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010706004	L010706005	L010706006	L010706002
REMARKS			DUPLICATE	
SAMPLE NUMBER	EPRI-0105-130	EPRI-0105-131	EPRI-0105-243	EPRI-0105-132
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	7.85	7.15		10.71
OXYGEN (O) (FLD) DIS	5.6	3.2 J4	4.2 J4	5.3 J4
PH (FLD)	7.41	7.27	7.27	8.24
PH	7.6	7.5	7.4	8.1
SC (UMHOS/CM AT 25 C)	4400.0	7110.0	7110.0	9220.0
SC (UMHOS/CM AT 25 C) (FLD)	4360.0	6670.0	6670.0	9040.0
TDS (MEASURED AT 180 C)	3271.0	5420.0	5477.0	7773.0
TOTAL SUSPENDED SOLIDS	3.1	49.0	53.0	8.0
TURBIDITY (NTU)	6.9	51.5		4.4
WATER TEMPERATURE (C) (FLD)	25.4	22.8	22.8	26.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	178.0	240.0	243.0	371.0
MAGNESIUM (MG) DIS	73.0	146.0	149.0	126.0
SODIUM (NA) DIS	771.0	1332.0	1302.0	1937.0
POTASSIUM (K) DIS	59.0	36.0	37.0	21.0
BICARBONATE (HCO3)	384.0	586.0	605.0	203.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	1665.0	2789.0	2856.0	4790.0
CHLORIDE (CL)	502.0	926.0	951.0	616.0
FLUORIDE (F)	3.1	1.9	1.9	1.7
-- NUTRIENTS --				
NITRATE + NITRITE AS N	5.3	0.29	0.31	93.0
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	1.3	0.03	0.028	0.057
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	0.16	0.16	<0.01
COPPER (CU) TOT	<0.025	0.037	0.035	<0.025
IRON (FE) TOT	<0.1	3.6	4.1	0.17
LEAD (PB) TOT	<0.003	0.034	0.036	<0.003
SELENIUM (SE) TOT	0.31	0.099	0.094	0.54
ZINC (ZN) TOT	0.056	0.091	0.094	0.062

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-65	EP-66	EP-67
SAMPLE DATE	05/16/2001	05/15/2001	05/07/2001
SAMPLE TIME	13:20	14:00	10:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010706026	L010706008	L010629011
OTHER INFO	Clear		
SAMPLE NUMBER	EPRI-0105-133	EPRI-0105-134	EPRI-0105-135
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	8.78	10.71	40.8
OXYGEN (O) (FLD) DIS	2.6	5.4	1.6 J4
PH (FLD)	7.2	7.54	6.86
PH	7.4	7.8	8.1
SC (UMHOS/CM AT 25 C)	6290.0	6900.0	4290.0
SC (UMHOS/CM AT 25 C) (FLD)	6260.0	7320.0	4230.0
TDS (MEASURED AT 180 C)	5038.0	5927.0	3733.0
TOTAL SUSPENDED SOLIDS	6.7	4.0	4.3
TURBIDITY (NTU)	5.82	4.12	7.1
WATER TEMPERATURE (C) (FLD)	27.3	29.2	24.9
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	287.0	526.0	453.0
MAGNESIUM (MG) DIS	112.0	122.0	129.0
SODIUM (NA) DIS	1072.0	1269.0	452.0
POTASSIUM (K) DIS	21.0	47.0	13.0
BICARBONATE (HCO3)	654.0	415.0	232.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2967.0	3599.0	2049.0
CHLORIDE (CL)	673.0	575.0	412.0
FLUORIDE (F)	1.9	2.9	0.7
-- NUTRIENTS --			
NITRATE + NITRITE AS N	25.0	38.0	15.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.059	8.8	0.018
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	<0.1 UJ4	<0.1	0.11
LEAD (PB) TOT	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	0.22	0.29	0.1
ZINC (ZN) TOT	<0.02	0.024	0.059

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-68		EP-70		EP-71
SAMPLE DATE	05/07/2001		05/07/2001		05/07/2001
SAMPLE TIME	11:25		14:30		14:00
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L010629015		L010629017		L010629016
SAMPLE NUMBER	EPRI-0105-136		EPRI-0105-137		EPRI-0105-138
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	63.21		59.81		48.6
OXYGEN (O) (FLD) DIS	6.3		0.3	J4	0.7 J4
PH (FLD)	7.18		7.08		7.03
PH	8.1		8.2		8.2
SC (UMHOS/CM AT 25 C)	4780.0		6460.0		6280.0
SC (UMHOS/CM AT 25 C) (FLD)	4530.0		6320.0		6170.0
TDS (MEASURED AT 180 C)	3640.0		5071.0		5122.0
TOTAL SUSPENDED SOLIDS	21.0		4.8		1.5
TURBIDITY (NTU)	14.0		5.63		4.0
WATER TEMPERATURE (C) (FLD)	24.2		24.8		24.7
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	253.0		292.0		362.0
MAGNESIUM (MG) DIS	105.0		152.0		172.0
SODIUM (NA) DIS	670.0		930.0		1045.0
POTASSIUM (K) DIS	15.0		21.0		20.0
BICARBONATE (HCO3)	251.0		232.0		298.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	1776.0		2759.0		2806.0
CHLORIDE (CL)	575.0		876.0		597.0
FLUORIDE (F)	0.67		1.1		0.84
-- NUTRIENTS --					
NITRATE + NITRITE AS N	39.0		63.0		76.0
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	0.006		0.6		0.11
CADMIUM (CD) TOT	<0.005		0.005		<0.005
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01
COPPER (CU) TOT	<0.025		<0.025		<0.025
IRON (FE) TOT	0.49		<0.1		0.14
LEAD (PB) TOT	<0.003		<0.003		<0.003
SELENIUM (SE) TOT	0.25		0.21		0.24
ZINC (ZN) TOT	0.06		0.17		0.044

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-72		EP-73		EP-75	
SAMPLE DATE	05/07/2001		05/09/2001		05/09/2001	
SAMPLE TIME	15:00		15:00		13:45	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010629018		L010653030		L010653028	
OTHER INFO	Clear					
SAMPLE NUMBER	EPRI-0105-139		EPRI-0105-140		EPRI-0105-141	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	61.0		71.75		70.49	
OXYGEN (O) (FLD) DIS	2.3	J4	0.6		1.5	
PH (FLD)	7.11		7.08		7.02	
PH	8.6		7.7		7.1	
SC (UMHOS/CM AT 25 C)	8520.0		6080.0		17560.0	
SC (UMHOS/CM AT 25 C) (FLD)	8400.0		5930.0		17190.0	
TDS (MEASURED AT 180 C)	7586.0		4702.0		16405.0	
TOTAL SUSPENDED SOLIDS	2.9		7.4	J4	20.0	J4
TURBIDITY (NTU)	4.5		9.78		6.43	
WATER TEMPERATURE (C) (FLD)	27.8		28.2		27.8	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	291.0		229.0		396.0	
MAGNESIUM (MG) DIS	337.0		101.0		374.0	
SODIUM (NA) DIS	1655.0		861.0		3711.0	
POTASSIUM (K) DIS	20.0		351.0		847.0	
BICARBONATE (HCO3)	326.0		282.0		439.0	
CARBONATE AS CO3	24.0		<1.0		<1.0	
SULFATE (SO4)	4662.0		2938.0		11056.0	
CHLORIDE (CL)	559.0		424.0		227.0	
FLUORIDE (F)	1.2		2.7		1.5	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	52.0		16.0		215.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.093		0.031		14.0	
CADMIUM (CD) TOT	<0.005		<0.005		0.006	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	0.034		<0.025		0.028	
IRON (FE) TOT	0.14		0.5		0.49	
LEAD (PB) TOT	<0.003		<0.003		0.003	
SELENIUM (SE) TOT	9.4		0.93		4.7	
ZINC (ZN) TOT	0.13		0.08		0.15	

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-76		EP-77		EP-77		EP-78	
SAMPLE DATE	05/09/2001		05/09/2001		05/09/2001		05/14/2001	
SAMPLE TIME	14:20		09:25		09:30		10:10	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010653029		L010653018		L010653019		L010689010	
REMARKS					DUPLICATE			
SAMPLE NUMBER	EPRI-0105-142		EPRI-0105-143		EPRI-0105-228		EPRI-0105-144	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	70.47		45.45				33.81	
OXYGEN (O) (FLD) DIS	0.6		1.0		1.0		2.1	
PH (FLD)	7.36		7.32		7.32		7.75	
PH	8.1		8.2		8.0		7.7	
SC (UMHOS/CM AT 25 C)	5280.0		4000.0		4070.0		3700.0	
SC (UMHOS/CM AT 25 C) (FLD)	5190.0		3990.0		3980.0		3560.0	
TDS (MEASURED AT 180 C)	3909.0		2807.0		2890.0		2543.0	
TOTAL SUSPENDED SOLIDS	2.3	J4	320.0	J4	437.0	J4	19.0	
TURBIDITY (NTU)	2.98		93.2				16.8	
WATER TEMPERATURE (C) (FLD)	22.3		24.2		24.2		23.8	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	154.0		152.0		162.0		85.0	
MAGNESIUM (MG) DIS	90.0		45.0		48.0		40.0	
SODIUM (NA) DIS	800.0		684.0		714.0		575.0	
POTASSIUM (K) DIS	121.0		18.0		18.0		52.0	
BICARBONATE (HCO3)	495.0		427.0		423.0		281.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	2070.0		1483.0		1426.0		1232.0	
CHLORIDE (CL)	554.0		426.0		459.0		357.0	
FLUORIDE (F)	2.1		2.5		2.2		3.0	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	4.4		1.1	J4	0.75	J4	12.0	J4
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	1.3		1.5		1.5		3.9	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	<0.1		6.6		8.0		0.91	J4
LEAD (PB) TOT	0.006		0.008		0.008		0.012	
SELENIUM (SE) TOT	0.19		0.013	J4	0.01	J4	0.16	
ZINC (ZN) TOT	0.11		0.065		0.059		0.06	

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-79		EP-80		EP-81	
SAMPLE DATE	05/14/2001		05/14/2001		05/14/2001	
SAMPLE TIME	13:40		14:55		14:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010689014		L010689032		L010689031	
SAMPLE NUMBER	EPRI-0105-145		EPRI-0105-146		EPRI-0105-147	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	47.58		11.4		18.81	
OXYGEN (O) (FLD) DIS	4.9		6.1		4.8	
PH (FLD)	7.62		7.35		7.09	
PH	8.1		7.9		7.8	
SC (UMHOS/CM AT 25 C)	4780.0		5200.0		2720.0	
SC (UMHOS/CM AT 25 C) (FLD)	4870.0		4990.0		2780.0	
TDS (MEASURED AT 180 C)	3309.0		3967.0		2119.0	
TOTAL SUSPENDED SOLIDS	60.0		40.0		17.0	
TURBIDITY (NTU)	9.99		9.12		14.8	
WATER TEMPERATURE (C) (FLD)	25.8		23.4		27.8	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	88.0		166.0		157.0	
MAGNESIUM (MG) DIS	71.0		74.0		80.0	
SODIUM (NA) DIS	883.0		887.0		308.0	
POTASSIUM (K) DIS	9.2		18.0		15.0	
BICARBONATE (HCO3)	458.0		531.0		476.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1159.0		1734.0		986.0	
CHLORIDE (CL)	636.0		510.0		125.0	
FLUORIDE (F)	4.6		1.2		1.6	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	11.0	J4	1.4	J4	11.0	J4
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.008		0.015		0.33	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	3.2		0.79	J4	0.61	J4
LEAD (PB) TOT	<0.003		<0.003		0.003	
SELENIUM (SE) TOT	0.092		0.007		0.29	
ZINC (ZN) TOT	<0.02		0.027		0.047	

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-82		EP-83		EP-84		EP-84	
SAMPLE DATE	05/14/2001		05/11/2001		05/11/2001		05/11/2001	
SAMPLE TIME	10:50		14:40		09:50		10:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010689012		L010689004		L010689027		L010689028	
REMARKS							DUPLICATE	
SAMPLE NUMBER	EPRI-0105-148		EPRI-0105-149		EPRI-0105-150		EPRI-0105-236	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	17.98		28.87		8.71			
OXYGEN (O) (FLD) DIS	1.6		5.0		1.7		1.7	
PH (FLD)	7.23		7.37		7.14		7.14	
PH	8.0		8.0		8.1		7.9	
SC (UMHOS/CM AT 25 C)	4610.0		3700.0		3020.0		3020.0	
SC (UMHOS/CM AT 25 C) (FLD)	4290.0		3700.0		2920.0		2930.0	
TDS (MEASURED AT 180 C)	3449.0		2596.0		2271.0		2270.0	
TOTAL SUSPENDED SOLIDS	7.3		16.0		<1.0		<1.0	
TURBIDITY (NTU)	6.4		7.43		5.63			
WATER TEMPERATURE (C) (FLD)	21.5		24.3		22.3		22.3	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	202.0		70.0		181.0		184.0	
MAGNESIUM (MG) DIS	114.0		62.0		93.0		94.0	
SODIUM (NA) DIS	700.0		664.0		307.0		317.0	
POTASSIUM (K) DIS	27.0		8.9		6.6		6.8	
BICARBONATE (HCO3)	395.0		417.0		299.0		303.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	1563.0		1145.0		967.0		873.0	
CHLORIDE (CL)	609.0		414.0		441.0		373.0	
FLUORIDE (F)	2.3		2.9		0.65		0.66	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	9.8	J4	9.7		12.0		11.0	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.009		0.01		0.043		0.041	
CADMIUM (CD) TOT	<0.005		<0.005		0.008		0.008	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.11	J4	0.33		<0.1		<0.1	
LEAD (PB) TOT	<0.003		<0.003		0.02	UJ1	0.019	UJ1
SELENIUM (SE) TOT	0.11		0.041		0.019		0.019	
ZINC (ZN) TOT	0.022		0.027	UJ1	0.074	UJ1	0.072	UJ1

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-85		EP-86		EP-88	
SAMPLE DATE	05/14/2001		05/14/2001		05/09/2001	
SAMPLE TIME	14:10		11:40		10:50	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010689015		L010689013		L010653022	
SAMPLE NUMBER	EPRI-0105-151		EPRI-0105-152		EPRI-0105-154	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	16.7		49.45		31.29	
OXYGEN (O) (FLD) DIS	0.9		10.6		.8	
PH (FLD)	7.43		7.77		7.42	
PH	7.9		8.1		8.2	
SC (UMHOS/CM AT 25 C)	3180.0		2650.0		5080.0	
SC (UMHOS/CM AT 25 C) (FLD)	3090.0		2490.0		4970.0	
TDS (MEASURED AT 180 C)	2259.0		1767.0		3575.0	
TOTAL SUSPENDED SOLIDS	2.8		20.0		3.0	J4
TURBIDITY (NTU)	4.9		6.69		3.8	
WATER TEMPERATURE (C) (FLD)	23.7		22.5		26.1	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	118.0		47.0		59.0	
MAGNESIUM (MG) DIS	58.0		34.0		40.0	
SODIUM (NA) DIS	487.0		469.0		1042.0	
POTASSIUM (K) DIS	29.0		8.9		8.6	
BICARBONATE (HCO3)	366.0		351.0		594.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1280.0		680.0		1919.0	
CHLORIDE (CL)	323.0		304.0		439.0	
FLUORIDE (F)	3.0		2.6		2.1	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	8.8	J4	6.3	J4	3.5	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	2.1		0.006		0.028	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.12	J4	0.7	J4	0.21	
LEAD (PB) TOT	0.004		0.004		<0.003	
SELENIUM (SE) TOT	0.13		0.027		0.047	
ZINC (ZN) TOT	<0.02		<0.02		0.067	

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-89		EP-89		EP-90		EP-93	
SAMPLE DATE	05/07/2001		05/07/2001		05/08/2001		05/11/2001	
SAMPLE TIME	11:00		11:05		13:30		14:00	
LAB	TSC-SLC		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010629013		L010629014		L010653010		L010689003	
REMARKS			DUPLICATE					
SAMPLE NUMBER	EPRI-0105-155		EPRI-0105-221		EPRI-0105-156		EPRI-0105-157	
-- PHYSICAL PARAMETERS --								
DEPTH TO WATER LEVEL (FEET)	14.7				58.1		47.86	
OXYGEN (O) (FLD) DIS	5.4	J4	4.3	J4	0.8		3.2	
PH (FLD)	7.21		7.22		7.1		7.14	
PH	8.2		8.2		7.9		7.9	
SC (UMHOS/CM AT 25 C)	2880.0		2860.0		5840.0		4560.0	
SC (UMHOS/CM AT 25 C) (FLD)	2820.0		2820.0		5780.0		4870.0	
TDS (MEASURED AT 180 C)	2034.0		2029.0		4694.0		3208.0	
TOTAL SUSPENDED SOLIDS	2.6		1.8		235.0		188.0	
TURBIDITY (NTU)	4.0				36.2		108.0	
WATER TEMPERATURE (C) (FLD)	24.1		24.2		24.8		28.2	
-- MAJOR CONSTITUENTS --								
CALCIUM (CA) DIS	156.0		163.0		287.0		93.0	
MAGNESIUM (MG) DIS	61.0		64.0		145.0		72.0	
SODIUM (NA) DIS	359.0		366.0		996.0		866.0	
POTASSIUM (K) DIS	18.0		19.0		16.0		9.4	
BICARBONATE (HCO3)	203.0		253.0		406.0		728.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0		<1.0	
SULFATE (SO4)	901.0		901.0		2632.0		1227.0	
CHLORIDE (CL)	359.0		353.0		544.0		555.0	
FLUORIDE (F)	0.75		0.75		0.51		1.7	
-- NUTRIENTS --								
NITRATE + NITRITE AS N	9.1		8.2		38.0		9.7	
-- METALS & MINOR CONSTITUENTS --								
ARSENIC (AS) TOT	0.005		0.005		0.14		0.019	
CADMIUM (CD) TOT	<0.005		<0.005		0.016		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025		<0.025	
IRON (FE) TOT	0.14		0.11		5.4		5.1	
LEAD (PB) TOT	0.003		<0.003		0.004		0.005	UJ1
SELENIUM (SE) TOT	0.017		0.016		1.2	J4	0.034	
ZINC (ZN) TOT	0.04		0.038		0.068		0.063	UJ1

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-94	EP-95	EP-96
SAMPLE DATE	05/11/2001	05/11/2001	05/11/2001
SAMPLE TIME	11:15	10:45	13:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010689001	L010689030	L010689002
SAMPLE NUMBER	EPRI-0105-158	EPRI-0105-159	EPRI-0105-160
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	51.0	22.58	58.64
OXYGEN (O) (FLD) DIS	4.0	5.5	4.1
PH (FLD)	7.21	7.62	7.14
PH	8.0	8.3	7.9
SC (UMHOS/CM AT 25 C)	4660.0	3140.0	4680.0
SC (UMHOS/CM AT 25 C) (FLD)	4090.0	2900.0	5010.0
TDS (MEASURED AT 180 C)	3368.0	2109.0	3437.0
TOTAL SUSPENDED SOLIDS	8.7	1.4	59.0
TURBIDITY (NTU)	9.32	1.6	45.3
WATER TEMPERATURE (C) (FLD)	24.4	22.3	27.7
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	102.0	34.0	131.0
MAGNESIUM (MG) DIS	103.0	58.0	98.0
SODIUM (NA) DIS	747.0	531.0	828.0
POTASSIUM (K) DIS	12.0	<5.0	13.0
BICARBONATE (HCO3)	398.0	371.0	471.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	1431.0	811.0	1329.0
CHLORIDE (CL)	592.0	399.0	545.0
FLUORIDE (F)	1.2	3.8	1.1
-- NUTRIENTS --			
NITRATE + NITRITE AS N	13.0	10.0	16.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.016	0.013	0.023
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	0.25	0.14	1.4
LEAD (PB) TOT	0.005	<0.003	0.006 UJ1
SELENIUM (SE) TOT	0.026	0.026	0.024
ZINC (ZN) TOT	0.054 UJ1	<0.02	0.078 UJ1

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-97		EP-98		EP-98		EP-99
SAMPLE DATE	05/14/2001		05/14/2001		05/14/2001		05/09/2001
SAMPLE TIME	08:40		09:10		09:15		14:40
LAB	TSC-SLC		TSC-SLC		TSC-SLC		HYDRO
LAB NUMBER	L010689006		L010689007		L010689008		0105-01
REMARKS					DUPLICATE		NO SAMPLE
OTHER INFO	Cloudy						Near Dry
SAMPLE NUMBER	EPRI-0105-161		EPRI-0105-162		EPRI-0105-239		EPRI-0105-163
-- PHYSICAL PARAMETERS --							
DEPTH TO WATER LEVEL (FEET)	6.77		13.16				74.79
OXYGEN (O) (FLD) DIS	9.1		2.7		2.6		
PH (FLD)	7.45		7.61		7.61		
PH	8.1		8.4		8.3		
SC (UMHOS/CM AT 25 C)	5140.0		7080.0		7080.0		
SC (UMHOS/CM AT 25 C) (FLD)	4590.0		6690.0		6700.0		
TDS (MEASURED AT 180 C)	3771.0		5320.0		5391.0		
TOTAL SUSPENDED SOLIDS	1029.0		10.0		14.0		
TURBIDITY (NTU)	61.0		9.03				
WATER TEMPERATURE (C) (FLD)	14.8		22.6		22.5		
-- MAJOR CONSTITUENTS --							
CALCIUM (CA) DIS	206.0		96.0		82.0		
MAGNESIUM (MG) DIS	126.0		87.0		75.0		
SODIUM (NA) DIS	866.0		1385.0		1405.0		
POTASSIUM (K) DIS	14.0		149.0		153.0		
BICARBONATE (HCO3)	756.0		422.0		458.0		
CARBONATE AS CO3	<1.0		16.0	J4	<1.0		
SULFATE (SO4)	1610.0		2669.0		2604.0		
CHLORIDE (CL)	607.0		712.0		694.0		
FLUORIDE (F)	1.5		3.7		3.8		
-- NUTRIENTS --							
NITRATE + NITRITE AS N	0.27	J4	14.0	J4	18.0	J4	
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	0.2		0.031		0.032		
CADMIUM (CD) TOT	0.023		<0.005		<0.005		
CHROMIUM (CR) TOT	0.015		<0.01		<0.01		
COPPER (CU) TOT	0.32		0.031		0.032		
IRON (FE) TOT	22.0		0.61	J4	0.38	J4	
LEAD (PB) TOT	0.69		0.01		0.008		
SELENIUM (SE) TOT	<0.005		0.69		0.69		
ZINC (ZN) TOT	0.31		0.066		0.073		

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-100		EP-101		EP-102	
SAMPLE DATE	05/09/2001		05/08/2001		05/08/2001	
SAMPLE TIME	15:30		11:15		11:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010653031		L010653008		L010653009	
OTHER INFO			Clear			
SAMPLE NUMBER	EPRI-0105-164		EPRI-0105-165		EPRI-0105-166	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	42.19		65.21		57.65	
OXYGEN (O) (FLD) DIS	1.5		7.1		1.7	
PH (FLD)	6.72		7.0		7.17	
PH	7.4		6.8		7.3	
SC (UMHOS/CM AT 25 C)	10160.0		6340.0		2480.0	
SC (UMHOS/CM AT 25 C) (FLD)	9590.0		6730.0		2490.0	
TDS (MEASURED AT 180 C)	8345.0		4815.0		1726.0	
TOTAL SUSPENDED SOLIDS	76.0	J4	14.0		14.0	
TURBIDITY (NTU)	41.6		7.5		4.02	
WATER TEMPERATURE (C) (FLD)	27.5		25.7		26.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	664.0		131.0		96.0	
MAGNESIUM (MG) DIS	330.0		47.0		20.0	
SODIUM (NA) DIS	1249.0		1044.0		328.0	
POTASSIUM (K) DIS	45.0		49.0		108.0	
BICARBONATE (HCO3)	334.0		117.0		233.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	2879.0		2340.0		812.0	
CHLORIDE (CL)	1569.0		650.0		207.0	
FLUORIDE (F)	1.0		1.3		1.4	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	228.0		81.0		9.4	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.021		4.7		0.4	
CADMIUM (CD) TOT	0.032		1.6		0.11	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	2.3		0.55		0.96	
LEAD (PB) TOT	0.007		0.005		0.006	
SELENIUM (SE) TOT	0.58		1.7	J4	5.7	J4
ZINC (ZN) TOT	0.43		0.32		0.11	

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-103		EP-104		EP-105	
SAMPLE DATE	05/08/2001		05/08/2001		05/09/2001	
SAMPLE TIME	14:00		15:15		08:15	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010653011		L010653014		L010653016	
OTHER INFO					Cloudy	
SAMPLE NUMBER	EPRI-0105-167		EPRI-0105-168		EPRI-0105-169	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	61.19		65.32		64.84	
OXYGEN (O) (FLD) DIS	5.2		2.2		4.1	
PH (FLD)	7.31		7.26		6.85	
PH	8.3		8.0		8.0	
SC (UMHOS/CM AT 25 C)	1510.0		4560.0		3790.0	
SC (UMHOS/CM AT 25 C) (FLD)	1489.0		4570.0		3720.0	
TDS (MEASURED AT 180 C)	1007.0		3266.0		2769.0	
TOTAL SUSPENDED SOLIDS	<1.0		24.0		225.0	J4
TURBIDITY (NTU)	3.7		9.8		130.0	
WATER TEMPERATURE (C) (FLD)	27.2		25.1		22.7	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	69.0		128.0		190.0	
MAGNESIUM (MG) DIS	22.0		77.0		72.0	
SODIUM (NA) DIS	219.0		822.0		566.0	
POTASSIUM (K) DIS	5.7		23.0		19.0	
BICARBONATE (HCO3)	132.0		439.0		227.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	356.0		1712.0		1415.0	
CHLORIDE (CL)	185.0		557.0		458.0	
FLUORIDE (F)	0.53		2.0		2.7	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	3.7		11.0		1.4	J4
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.019		0.081		0.17	
CADMIUM (CD) TOT	0.007		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		0.2	
IRON (FE) TOT	0.06		0.62		8.7	
LEAD (PB) TOT	<0.003		0.005		0.1	
SELENIUM (SE) TOT	0.26	J4	0.1	J4	0.025	J4
ZINC (ZN) TOT	0.041		0.072		0.39	

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-106		EP-107		EP-108	
SAMPLE DATE	05/09/2001		05/08/2001		05/14/2001	
SAMPLE TIME	08:45		14:45		09:40	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010653017		L010653013		L010689009	
SAMPLE NUMBER	EPRI-0105-170		EPRI-0105-171		EPRI-0105-172	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	59.98		63.04		23.07	
OXYGEN (O) (FLD) DIS	2.3		3.5		3.8	
PH (FLD)	7.05		7.11		7.56	
PH	7.7		7.7		8.5	
SC (UMHOS/CM AT 25 C)	4900.0		5840.0		3460.0	
SC (UMHOS/CM AT 25 C) (FLD)	4810.0		5710.0		3350.0	
TDS (MEASURED AT 180 C)	3804.0		4513.0		2412.0	
TOTAL SUSPENDED SOLIDS	17.0	J4	<1.0		16.0	
TURBIDITY (NTU)	16.0		2.76		9.45	
WATER TEMPERATURE (C) (FLD)	25.9		26.4		24.2	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	263.0		353.0		52.0	
MAGNESIUM (MG) DIS	119.0		164.0		49.0	
SODIUM (NA) DIS	708.0		689.0		626.0	
POTASSIUM (K) DIS	17.0		17.0		6.5	
BICARBONATE (HCO3)	293.0		177.0		384.0	
CARBONATE AS CO3	<1.0		<1.0		12.0	J4
SULFATE (SO4)	2353.0		1970.0		957.0	
CHLORIDE (CL)	455.0		905.0		381.0	
FLUORIDE (F)	0.88		0.99		2.3	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	9.9		64.0		7.0	J4
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.014		0.026		1.1	
CADMIUM (CD) TOT	<0.005		0.006		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.69		<0.1		0.57	J4
LEAD (PB) TOT	<0.003		<0.003		0.007	
SELENIUM (SE) TOT	0.12	J4	0.45	J4	0.043	
ZINC (ZN) TOT	0.1		0.073		0.031	

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-109		EP-110		EP-111	
SAMPLE DATE	05/14/2001		05/07/2001		05/15/2001	
SAMPLE TIME	10:35		10:30		14:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010689011		L010629012		L010706009	
SAMPLE NUMBER	EPRI-0105-173		EPRI-0105-174		EPRI-0105-175	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	21.02		8.89		5.25	
OXYGEN (O) (FLD) DIS	4.1		4.9	J4	0.4	J4
PH (FLD)	7.49		7.23		7.36	
PH	8.1		8.2		7.5	
SC (UMHOS/CM AT 25 C)	3900.0		2850.0		5400.0	
SC (UMHOS/CM AT 25 C) (FLD)	3810.0		2800.0		5000.0	
TDS (MEASURED AT 180 C)	2756.0		1993.0		3997.0	
TOTAL SUSPENDED SOLIDS	8.2		3.1		3.5	
TURBIDITY (NTU)	17.0		5.25		4.5	
WATER TEMPERATURE (C) (FLD)	23.8		24.1		22.5	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	96.0		157.0		228.0	
MAGNESIUM (MG) DIS	75.0		65.0		71.0	
SODIUM (NA) DIS	649.0		385.0		915.0	
POTASSIUM (K) DIS	17.0		21.0		76.0	
BICARBONATE (HCO3)	390.0		273.0		293.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	1337.0		839.0		2395.0	
CHLORIDE (CL)	426.0		356.0		643.0	
FLUORIDE (F)	2.4		0.8		2.8	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	9.0	J4	7.7		0.16	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.013		0.007		0.95	
CADMIUM (CD) TOT	<0.005		<0.005		<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01	
COPPER (CU) TOT	<0.025		<0.025		<0.025	
IRON (FE) TOT	0.19	J4	0.13		1.6	
LEAD (PB) TOT	<0.003		<0.003		<0.003	
SELENIUM (SE) TOT	0.072		0.015		0.005	
ZINC (ZN) TOT	0.026		0.044		<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-112		EP-113		EP-114	
SAMPLE DATE	05/15/2001		05/15/2001		05/04/2001	
SAMPLE TIME	15:00		15:20		10:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010706010		L010706011		L010629006	
OTHER INFO					Cloudy	
SAMPLE NUMBER	EPRI-0105-176		EPRI-0105-177		EPRI-0105-178	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	6.64		6.33		13.56	
OXYGEN (O) (FLD) DIS	3.2	J4	1.9	J4	1.8	
PH (FLD)	7.17		7.51		6.78	
PH	7.5		7.7		6.5	
SC (UMHOS/CM AT 25 C)	7200.0		3420.0		7690.0	
SC (UMHOS/CM AT 25 C) (FLD)	6490.0		3150.0		7870.0	
TDS (MEASURED AT 180 C)	5158.0		2373.0		6746.0	
TOTAL SUSPENDED SOLIDS	<1.0		<1.0		13382.0	
TURBIDITY (NTU)	3.45		4.45		>200	
WATER TEMPERATURE (C) (FLD)	21.2		22.0		22.3	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	257.0		107.0		1280.0	
MAGNESIUM (MG) DIS	133.0		50.0		414.0	
SODIUM (NA) DIS	1106.0		577.0		1133.0	
POTASSIUM (K) DIS	115.0		42.0		347.0	
BICARBONATE (HCO3)	595.0		325.0		2616.0	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	2300.0		1293.0		3190.0	
CHLORIDE (CL)	506.0		369.0		821.0	
FLUORIDE (F)	1.8		3.0		8.5	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.19		0.16		0.21	UJ1
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	0.012		0.007		292.0	
CADMIUM (CD) TOT	<0.005		<0.005		3.0	
CHROMIUM (CR) TOT	<0.01		<0.01		0.044	
COPPER (CU) TOT	<0.025		<0.025		1.9	
IRON (FE) TOT	0.22		0.48		473.0	
LEAD (PB) TOT	<0.003		<0.003		0.87	
SELENIUM (SE) TOT	0.01		<0.005		0.17	
ZINC (ZN) TOT	0.022		<0.02		109.0	

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-115	EP-116	EP-117
SAMPLE DATE	05/04/2001	05/04/2001	05/04/2001
SAMPLE TIME	13:45	14:10	14:30
LAB	HYDRO	TSC-SLC	TSC-SLC
LAB NUMBER	0105-02	L010629007	L010629008
REMARKS	NO SAMPLE		
OTHER INFO	Near Dry	Cloudy	
SAMPLE NUMBER	EPRI-0105-179	EPRI-0105-180	EPRI-0105-181
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	14.24	11.7	14.15
OXYGEN (O) (FLD) DIS		3.0	3.9
PH (FLD)		7.28	7.56
PH		7.7	7.7
SC (UMHOS/CM AT 25 C)		6210.0	3740.0
SC (UMHOS/CM AT 25 C) (FLD)		6130.0	3690.0
TDS (MEASURED AT 180 C)		4504.0	2872.0
TOTAL SUSPENDED SOLIDS		2430.0	7858.0
TURBIDITY (NTU)	21.5	>200	>200
WATER TEMPERATURE (C) (FLD)		25.7	23.8
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS		451.0	674.0
MAGNESIUM (MG) DIS		116.0	104.0
SODIUM (NA) DIS		1058.0	540.0
POTASSIUM (K) DIS		75.0	146.0
BICARBONATE (HCO3)		1049.0	1391.0
CARBONATE AS CO3		<1.0	<1.0
SULFATE (SO4)		1130.0	1317.0
CHLORIDE (CL)		275.0	329.0
FLUORIDE (F)		4.2	3.5
-- NUTRIENTS --			
NITRATE + NITRITE AS N		16.0	14.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT		6.2	11.0
CADMIUM (CD) TOT		1.4	1.7
CHROMIUM (CR) TOT		0.039	0.055
COPPER (CU) TOT		30.0	4.5
IRON (FE) TOT		72.0	129.0
LEAD (PB) TOT		3.7	4.5
SELENIUM (SE) TOT		0.32	1.2
ZINC (ZN) TOT		7.4	3.2

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-118	EP-119	EP-120
SAMPLE DATE	05/04/2001	05/15/2001	05/07/2001
SAMPLE TIME	15:15	09:50	10:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010629009	L010706003	L010653001
OTHER INFO	Cloudy	New Well	New Well
SAMPLE NUMBER	EPRI-0105-182	EPRI-0105-242	EPRI-0105-225
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	11.57	12.48	14.14
OXYGEN (O) (FLD) DIS	3.9	0.4 J4	
PH (FLD)	7.84	7.39	8.1
PH	8.7	7.7	8.0
SC (UMHOS/CM AT 25 C)	3520.0	3560.0	3720.0
SC (UMHOS/CM AT 25 C) (FLD)	3510.0	3350.0	3330.0
TDS (MEASURED AT 180 C)	2486.0	2576.0	2670.0
TOTAL SUSPENDED SOLIDS	4441.0	17.0	6.2
TURBIDITY (NTU)	>200	7.8	<10.0
WATER TEMPERATURE (C) (FLD)	23.7	23.3	24.2
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	243.0	128.0	115.0
MAGNESIUM (MG) DIS	141.0	51.0	81.0
SODIUM (NA) DIS	675.0	603.0	642.0
POTASSIUM (K) DIS	60.0	61.0	29.0
BICARBONATE (HCO3)	527.0	388.0	390.0
CARBONATE AS CO3	23.0	<1.0	<1.0
SULFATE (SO4)	1234.0	1225.0	1350.0
CHLORIDE (CL)	396.0	303.0	404.0
FLUORIDE (F)	1.5	3.6	2.2
-- NUTRIENTS --			
NITRATE + NITRITE AS N	17.0	5.3	8.5
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.52	2.0	0.27
CADMIUM (CD) TOT	0.014	<0.005	<0.005
CHROMIUM (CR) TOT	0.079	<0.01	<0.01
COPPER (CU) TOT	0.39	<0.025	<0.025
IRON (FE) TOT	256.0	0.27	0.17
LEAD (PB) TOT	0.49	<0.003	<0.003
SELENIUM (SE) TOT	0.32	0.26	0.058 J4
ZINC (ZN) TOT	0.71	0.023	0.036

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	05/07/2001		05/14/2001		05/08/2001
SAMPLE TIME	10:00		15:20		16:15
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L010653002		L010689033		L010653024
OTHER INFO	New Well		New Well		New Well
SAMPLE NUMBER	EPRI-0105-226		EPRI-0105-240		EPRI-0105-229
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	21.37		13.03		41.35
OXYGEN (O) (FLD) DIS			4.0		
PH (FLD)	8.13		7.45		7.64
PH	8.1		8.0		8.2
SC (UMHOS/CM AT 25 C)	3620.0		3200.0		3260.0
SC (UMHOS/CM AT 25 C) (FLD)	3480.0		3140.0		3570.0
TDS (MEASURED AT 180 C)	2559.0		2294.0		2230.0
TOTAL SUSPENDED SOLIDS	35.0		25.0		129.0
TURBIDITY (NTU)	<10.0		15.4		<10.0
WATER TEMPERATURE (C) (FLD)	24.1		24.4		21.1
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	89.0		109.0		72.0
MAGNESIUM (MG) DIS	78.0		49.0		33.0
SODIUM (NA) DIS	656.0		470.0		597.0
POTASSIUM (K) DIS	7.9		41.0		19.0
BICARBONATE (HCO3)	410.0		378.0		427.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	1229.0		989.0		983.0
CHLORIDE (CL)	380.0		277.0		244.0
FLUORIDE (F)	1.8		3.5		2.7
-- NUTRIENTS --					
NITRATE + NITRITE AS N	7.9		6.7	J4	6.4
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	0.59		2.1		1.5
CADMIUM (CD) TOT	<0.005		<0.005		<0.005
CHROMIUM (CR) TOT	<0.01		<0.01		<0.01
COPPER (CU) TOT	<0.025		<0.025		<0.025
IRON (FE) TOT	0.8		1.1	J4	1.4
LEAD (PB) TOT	0.01		<0.003		0.005
SELENIUM (SE) TOT	0.031	J4	0.19		0.082
ZINC (ZN) TOT	0.046		<0.02		0.034

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	05/16/2001		05/07/2001		05/08/2001
SAMPLE TIME	10:50		15:05		14:30
LAB	TSC-SLC		TSC-SLC		TSC-SLC
LAB NUMBER	L010706023		L010653003		L010653025
OTHER INFO	New Well				New Well
SAMPLE NUMBER	EPRI-0105-247		EPRI-0105-227		EPRI-0105-230
-- PHYSICAL PARAMETERS --					
DEPTH TO WATER LEVEL (FEET)	34.51		37.32		31.65
OXYGEN (O) (FLD) DIS	2.7				
PH (FLD)	7.78		6.97		7.15
PH	7.9		7.5		7.8
SC (UMHOS/CM AT 25 C)	3950.0		10320.0		6560.0
SC (UMHOS/CM AT 25 C) (FLD)	3820.0		12310.0		7100.0
TDS (MEASURED AT 180 C)	2738.0		9112.0		5331.0
TOTAL SUSPENDED SOLIDS	851.0		517.0		33.0
TURBIDITY (NTU)			<10.0		<10.0
WATER TEMPERATURE (C) (FLD)	23.8		26.4		18.3
-- MAJOR CONSTITUENTS --					
CALCIUM (CA) DIS	342.0		436.0		372.0
MAGNESIUM (MG) DIS	133.0		297.0		160.0
SODIUM (NA) DIS	757.0		1980.0		948.0
POTASSIUM (K) DIS	39.0		67.0		39.0
BICARBONATE (HCO3)	533.0		891.0		293.0
CARBONATE AS CO3	<1.0		<1.0		<1.0
SULFATE (SO4)	1139.0		5134.0		2977.0
CHLORIDE (CL)	559.0		534.0		599.0
FLUORIDE (F)	4.5		0.9		0.88
-- NUTRIENTS --					
NITRATE + NITRITE AS N	0.29		58.0		29.0
-- METALS & MINOR CONSTITUENTS --					
ARSENIC (AS) TOT	7.1		0.013		0.021
CADMIUM (CD) TOT	0.024		<0.005		<0.005
CHROMIUM (CR) TOT	0.018		<0.01		<0.01
COPPER (CU) TOT	0.087		<0.025		<0.025
IRON (FE) TOT	22.0		1.2		1.8
LEAD (PB) TOT	0.19		<0.003		0.009
SELENIUM (SE) TOT	<0.005		0.64	J4	0.93
ZINC (ZN) TOT	0.16		0.22		0.083

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	05/08/2001	05/08/2001	05/11/2001
SAMPLE TIME	11:30	10:30	10:20
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010653026	L010653027	L010689029
OTHER INFO	New Well	New Well	New Well
SAMPLE NUMBER	EPRI-0105-231	EPRI-0105-232	EPRI-0105-237
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	7.11	5.8	19.41
OXYGEN (O) (FLD) DIS			1.3
PH (FLD)	7.05	7.09	7.09
PH	7.7	7.4	7.9
SC (UMHOS/CM AT 25 C)	5780.0	5480.0	3820.0
SC (UMHOS/CM AT 25 C) (FLD)	5710.0	5070.0	3400.0
TDS (MEASURED AT 180 C)	4343.0	3380.0	2857.0
TOTAL SUSPENDED SOLIDS	13.0	11.0	384.0
TURBIDITY (NTU)	<10.0	<10.0	>200
WATER TEMPERATURE (C) (FLD)	22.3	21.8	21.9
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	292.0	116.0	205.0
MAGNESIUM (MG) DIS	75.0	40.0	109.0
SODIUM (NA) DIS	859.0	790.0	491.0
POTASSIUM (K) DIS	69.0	42.0	15.0
BICARBONATE (HCO3)	460.0	271.0	464.0
CARBONATE AS CO3	<1.0	<1.0	<1.0
SULFATE (SO4)	2174.0	1865.0	1329.0
CHLORIDE (CL)	651.0	657.0	525.0
FLUORIDE (F)	4.8	1.8	0.66
-- NUTRIENTS --			
NITRATE + NITRITE AS N	0.35	0.43	13.0
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	2.5	0.61	0.011
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	1.3	1.0	8.6
LEAD (PB) TOT	<0.003	0.003	0.007 UJ1
SELENIUM (SE) TOT	0.028	<0.005	0.028
ZINC (ZN) TOT	0.032	0.033	0.063 UJ1

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-131	EP-132	EP-132
SAMPLE DATE	06/08/2001	06/08/2001	06/08/2001	06/08/2001
SAMPLE TIME	10:00	11:20	14:35	14:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010841001	L010841002	L010841003	L010841004
REMARKS				DUPLICATE
OTHER INFO	New Well	New Well	New Well	
SAMPLE NUMBER	EPRI-0105-252	EPRI-0105-253	EPRI-0105-254	EPRI-0105-255
-- PHYSICAL PARAMETERS --				
DEPTH TO WATER LEVEL (FEET)	67.21	57.55	14.15	
OXYGEN (O) (FLD) DIS	1.6	4.7	3.5	2.9
PH (FLD)	6.48	7.32	7.55	7.45
PH	7.3	7.8	7.8	7.8
SC (UMHOS/CM AT 25 C)	11080.0	4750.0	4160.0	4190.0
SC (UMHOS/CM AT 25 C) (FLD)	11380.0	4790.0	4200.0	4250.0
TDS (MEASURED AT 180 C)	9332.0	3590.0	3146.0	3146.0
TOTAL SUSPENDED SOLIDS	60.0	26.0	28.0	35.0
TURBIDITY (NTU)	30.1	8.88	9.94	
WATER TEMPERATURE (C) (FLD)	26.9	25.1	25.5	25.5
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	732.0	180.0	217.0	221.0
MAGNESIUM (MG) DIS	355.0	66.0	48.0	51.0
SODIUM (NA) DIS	1279.0	695.0	542.0	547.0
POTASSIUM (K) DIS	37.0	20.0	40.0	42.0
BICARBONATE (HCO3)	782.0	393.0	322.0	338.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	3393.0	1888.0	1488.0	1475.0
CHLORIDE (CL)	1857.0	632.0	449.0	539.0
FLUORIDE (F)	0.82	2.3	3.4	3.5
-- NUTRIENTS --				
NITRATE + NITRITE AS N	299.0	9.7	9.0	9.1
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) DIS	0.44	0.91	1.5	1.5
ARSENIC (AS) TOT	0.56	0.9	1.5	1.5
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	0.015	0.012	<0.01	<0.01
CHROMIUM (CR) TOT	<0.01	0.011	<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	0.48	0.57	<0.1	0.1
IRON (FE) TOT	2.6	0.79	0.91	0.9
LEAD (PB) DIS	<0.003	<0.003	<0.003	<0.003
LEAD (PB) TOT	0.005	0.005	0.022	0.018
SELENIUM (SE) DIS	0.36	0.15	0.27	0.27
SELENIUM (SE) TOT	0.25	0.098	0.2	0.2
ZINC (ZN) DIS	0.05	0.021	<0.02	<0.02
ZINC (ZN) TOT	0.088	0.048	0.021	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: QUALITY CONTROL --

SITE CODE	DI	DI	DI	DI	DI	DI
SAMPLE DATE	05/04/2001	05/07/2001	05/08/2001	05/09/2001	05/10/2001	05/11/2001
SAMPLE TIME	16:00	16:20	16:00	16:15	16:00	15:15
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010629010	L010629020	L010653015	L010653032	L010689025	L010689005
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
SAMPLE NUMBER	EPRI-0105-220	EPRI-0105-222	EPRI-0105-224	EPRI-0105-233	EPRI-0105-235	EPRI-0105-238
-- PHYSICAL PARAMETERS --						
PH	5.4	5.6	5.3	5.5	5.2	4.1
SC (UMHOS/CM AT 25 C)	<5.0	<5.0	<5.0	<5.0	<5.0	32.0
TDS (MEASURED AT 180 C)	<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
-- 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	<5.0	<5.0	<5.0	<5.0
POTASSIUM (K) DIS	<2.0	<2.0	<5.0	<5.0	<5.0	<5.0
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	<1.0	<1.0	<1.0	3.3
FLUORIDE (F)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.12	<0.1	<0.1	<0.1	<0.1	<0.1
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<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) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003	<0.003	0.004
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) TOT	<0.02	<0.02	<0.02	<0.02	<0.02	0.032

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	05/14/2001	05/15/2001	05/16/2001	05/17/2001	06/08/2001	06/27/2001
SAMPLE TIME	16:20	16:00	15:45	15:00	16:00	16:30
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010689034	L010706012	L010706031	L010728011	L010841005	L010951003
REMARKS	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
SAMPLE NUMBER	EPRI-0105-241	EPRI-0105-244	EPRI-0105-248	EPRI-0105-251	EPRI-0105-256	EPRI-0105-258
-- PHYSICAL PARAMETERS --						
PH	5.5	5.4	5.6	5.6	5.2	5.0
SC (UMHOS/CM AT 25 C)	<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
TOTAL SUSPENDED SOLIDS	<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	<2.0	<1.0
SODIUM (NA) DIS	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
POTASSIUM (K) DIS	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
TOTAL ALKALINITY AS CACO3						<1.0
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	<1.0	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) DIS					<0.005	
ARSENIC (AS) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CADMIUM (CD) DIS					<0.005	
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) DIS					<0.01	
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COPPER (CU) DIS					<0.025	
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
IRON (FE) DIS					<0.1	
IRON (FE) TOT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
LEAD (PB) DIS					<0.003	
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) DIS					<0.005	
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) DIS					<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, Spike, or Split Exceedance; R:Rejected.

-- SAMPLE TYPE: SURFACE WATER --

SITE CODE	SEP-1		SEP-2	SEP-2	SEP-3	
SAMPLE DATE	05/16/2001		05/17/2001	05/17/2001	05/16/2001	
SAMPLE TIME	09:15		09:15	09:20	10:00	
LAB	TSC-SLC		TSC-SLC	TSC-SLC	TSC-SLC	
LAB NUMBER	L010706017		L010728004	L010728005	L010706020	
REMARKS				DUPLICATE		
SAMPLE NUMBER	EPRI-0105-183		EPRI-0105-184	EPRI-0105-250	EPRI-0105-185	
-- PHYSICAL PARAMETERS --						
OXYGEN (O) (FLD) DIS	9.5		9.0	9.0	8.6	
PH (FLD)	8.6		8.44	8.43	8.52	
PH	8.3		8.3	8.4	8.3	
SC (UMHOS/CM AT 25 C)	946.0		1090.0	1090.0	1001.0	
SC (UMHOS/CM AT 25 C) (FLD)	868.0		1009.0	1012.0	916.0	
TDS (MEASURED AT 180 C)	606.0		697.0	691.0	638.0	
TOTAL SUSPENDED SOLIDS	265.0		116.0	107.0	228.0	
TURBIDITY (NTU)	52.1		27.0	27.0	51.0	
WATER TEMPERATURE (C) (FLD)	22.0		22.8	22.9	21.9	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	68.0		71.0	71.0	67.0	
MAGNESIUM (MG) DIS	16.0		17.0	17.0	16.0	
SODIUM (NA) DIS	116.0		135.0	130.0	124.0	
POTASSIUM (K) DIS	9.1		9.9	9.1	9.7	
BICARBONATE (HCO3)	207.0		207.0	212.0	211.0	
CARBONATE AS CO3	<1.0		<1.0	2.4	<1.0	
SULFATE (SO4)	207.0		239.0	240.0	226.0	
CHLORIDE (CL)	90.0		130.0	116.0	106.0	
FLUORIDE (F)	0.7		0.74	0.73	0.69	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	0.53		0.47	0.52	0.53	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	<0.005		0.005	0.005	<0.005	
CADMIUM (CD) TOT	<0.005		<0.005	<0.005	<0.005	
CHROMIUM (CR) TOT	<0.01		<0.01	<0.01	<0.01	
COPPER (CU) TOT	<0.025		<0.025	<0.025	<0.025	
IRON (FE) TOT	3.0	J4	2.1	2.1	2.4	J4
LEAD (PB) TOT	<0.003		<0.003	0.003	<0.003	
SELENIUM (SE) TOT	<0.005		<0.005	<0.005	<0.005	
ZINC (ZN) TOT	<0.02		0.026	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: SURFACE WATER --

SITE CODE	SEP-4	SEP-6	SEP-7	SEP-7
SAMPLE DATE	05/17/2001	05/16/2001	05/16/2001	05/16/2001
SAMPLE TIME	08:10	10:10	09:30	09:35
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010728001	L010706021	L010706018	L010706019
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0105-186	EPRI-0105-187	EPRI-0105-188	EPRI-0105-246
-- PHYSICAL PARAMETERS --				
OXYGEN (O) (FLD) DIS	8.0	8.3	8.7	8.2
PH (FLD)	8.31	8.47	8.53	8.52
PH	8.3	8.2	8.2	8.3
SC (UMHOS/CM AT 25 C)	1106.0	1000.0	996.0	1000.0
SC (UMHOS/CM AT 25 C) (FLD)	943.0	916.0	899.0	898.0
TDS (MEASURED AT 180 C)	705.0	638.0	629.0	637.0
TOTAL SUSPENDED SOLIDS	80.0	191.0	214.0	223.0
TURBIDITY (NTU)	29.3	56.0	54.0	49.0
WATER TEMPERATURE (C) (FLD)	18.9	22.1	21.2	21.2
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	71.0	71.0	69.0	68.0
MAGNESIUM (MG) DIS	17.0	17.0	16.0	16.0
SODIUM (NA) DIS	136.0	125.0	126.0	123.0
POTASSIUM (K) DIS	9.9	9.9	10.0	9.7
BICARBONATE (HCO3)	220.0	207.0	210.0	203.0
CARBONATE AS CO3	<1.0	<1.0	<1.0	<1.0
SULFATE (SO4)	245.0	218.0	231.0	235.0
CHLORIDE (CL)	116.0	108.0	117.0	103.0
FLUORIDE (F)	0.75	0.67	0.71	0.69
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.54	0.64	0.59	0.62
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.005	<0.005	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025	<0.025
IRON (FE) TOT	1.8	2.7 J4	2.2 J4	3.4 J4
LEAD (PB) TOT	<0.003	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) TOT	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: SURFACE WATER --

SITE CODE	SEP-9	SEP-10	SEP-11
SAMPLE DATE	05/17/2001	05/17/2001	05/17/2001
SAMPLE TIME	10:20	10:00	09:40
LAB	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010728008	L010728007	L010728006
SAMPLE NUMBER	EPRI-0105-189	EPRI-0105-190	EPRI-0105-191
-- PHYSICAL PARAMETERS --			
DEPTH TO WATER LEVEL (FEET)	10.1		
OXYGEN (O) (FLD) DIS	8.5	9.9	7.5
PH (FLD)	8.15	8.52	8.45
PH	8.1	8.4	8.4
SC (UMHOS/CM AT 25 C)	1400.0	1094.0	1083.0
SC (UMHOS/CM AT 25 C) (FLD)	1479.0	1012.0	984.0
TDS (MEASURED AT 180 C)	901.0	713.0	690.0
TOTAL SUSPENDED SOLIDS	78.0	81.0	107.0
TURBIDITY (NTU)	28.6	32.0	29.0
WATER TEMPERATURE (C) (FLD)	25.5	22.7	22.4
-- MAJOR CONSTITUENTS --			
CALCIUM (CA) DIS	71.0	70.0	72.0
MAGNESIUM (MG) DIS	17.0	17.0	17.0
SODIUM (NA) DIS	203.0	133.0	134.0
POTASSIUM (K) DIS	12.0	9.1	9.3
BICARBONATE (HCO3)	217.0	215.0	223.0
CARBONATE AS CO3	<1.0	3.6	3.6
SULFATE (SO4)	290.0	244.0	215.0
CHLORIDE (CL)	206.0	133.0	126.0
FLUORIDE (F)	0.81	0.75	0.73
-- NUTRIENTS --			
NITRATE + NITRITE AS N	3.2	0.45	0.6
-- METALS & MINOR CONSTITUENTS --			
ARSENIC (AS) TOT	0.007	<0.005	<0.005
CADMIUM (CD) TOT	<0.005	<0.005	<0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	<0.025
IRON (FE) TOT	1.4	1.7	2.1
LEAD (PB) TOT	<0.003	<0.003	<0.003
SELENIUM (SE) TOT	<0.005	<0.005	<0.005
ZINC (ZN) TOT	0.025	<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, Spike, or Split Exceedance;
R:Rejected.

-- SAMPLE TYPE: SURFACE WATER --

SITE CODE	SEP-12	SEP-13	SEP-14	SEP-14
SAMPLE DATE	05/17/2001	05/17/2001	06/27/2001	06/27/2001
SAMPLE TIME	09:00	08:30	15:45	15:50
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L010728003	L010728002	L010951001	L010951002
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0105-192	EPRI-0105-193	EPRI-0105-194	EPRI-0105-257
-- PHYSICAL PARAMETERS --				
OXYGEN (O) (FLD) DIS	8.7	8.0	4.6	4.7
PH (FLD)	8.46	8.46	6.79	6.81
PH	8.3	8.4	6.8	6.5
SC (UMHOS/CM AT 25 C)	1090.0	1099.0	306.0	308.0
SC (UMHOS/CM AT 25 C) (FLD)	972.0	948.0	3500.0 A	3490.0 A
TDS (MEASURED AT 180 C)	697.0	704.0	262.0	232.0
TOTAL SUSPENDED SOLIDS	92.0	66.0	71.0	75.0
TURBIDITY (NTU)	32.0	28.3	88.2	89.7
WATER TEMPERATURE (C) (FLD)	21.1	18.8	32.7	33.0
-- MAJOR CONSTITUENTS --				
CALCIUM (CA) DIS	73.0	70.0	23.0	24.0
MAGNESIUM (MG) DIS	18.0	17.0	4.5	4.8
SODIUM (NA) DIS	136.0	135.0	26.0	26.0
POTASSIUM (K) DIS	9.8	9.1	7.7	7.9
TOTAL ALKALINITY AS CACO3			42.0	52.0
BICARBONATE (HCO3)	215.0	211.0	51.0	63.0
CARBONATE AS CO3	<1.0	2.4	<1.0	<1.0
SULFATE (SO4)	208.0	244.0	75.0	73.0
CHLORIDE (CL)	111.0	131.0	9.2	9.6
FLUORIDE (F)	0.75	0.75	0.35	0.35
-- NUTRIENTS --				
NITRATE + NITRITE AS N	0.49	0.64	1.1	1.2
-- METALS & MINOR CONSTITUENTS --				
ARSENIC (AS) TOT	0.005	0.005	0.094	0.096
CADMIUM (CD) TOT	<0.005	<0.005	0.005	0.005
CHROMIUM (CR) TOT	<0.01	<0.01	<0.01	<0.01
COPPER (CU) TOT	<0.025	<0.025	1.2	1.2
IRON (FE) TOT	1.9	1.7	9.1	9.8
LEAD (PB) TOT	<0.003	<0.003	0.37	0.38
SELENIUM (SE) TOT	<0.005	<0.005	<0.005	<0.005
ZINC (ZN) TOT	<0.02	<0.02	1.3	1.3

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	POND 1-SED		POND 5-SED		POND 6-SED	
SAMPLE DATE	05/17/2001		05/17/2001		05/17/2001	
SAMPLE TIME	10:55		11:05		11:10	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L010734010		L010734011		L010734012	
TYPE	EDXRF		EDXRF		EDXRF	
SAMPLE NUMBER	EPRI-0105-216		EPRI-0105-217		EPRI-0105-218	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) TOT	5000.0		3100.0		5400.0	
CADMIUM (CD) TOT	2600.0		1100.0		2100.0	
CHROMIUM (CR) TOT	91.0	J4	200.0	J4	210.0	J4
COPPER (CU) TOT	10000.0		54000.0		63000.0	
IRON (FE) TOT	24000.0		87000.0		45000.0	
LEAD (PB) TOT	8000.0		73000.0		15000.0	
SELENIUM (SE) TOT	140.0		170.0		150.0	
ZINC (ZN) TOT	12000.0		26000.0		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: SEDIMENT/SOIL --

SITE CODE	SEP-2-SED		SEP-4-SED		SEP-9-SED		
SAMPLE DATE	05/17/2001		05/17/2001		05/17/2001		
SAMPLE TIME	09:20		08:10		10:20		
LAB	TSC-SLC		TSC-SLC		TSC-SLC		
LAB NUMBER	L010734005		L010734001		L010734008		
TYPE	EDXRF		EDXRF		EDXRF		
SAMPLE NUMBER	EPRI-0105-205		EPRI-0105-207		EPRI-0105-210		
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	19.0		20.0		14.0		
CADMIUM (CD) TOT	11.0		13.0		11.0		
CHROMIUM (CR) TOT	<80.0	UJ4	<80.0	UJ4	<80.0	UJ4	
COPPER (CU) TOT	48.0		59.0		59.0		
IRON (FE) TOT	13000.0		15000.0		15000.0		
LEAD (PB) TOT	53.0		40.0		37.0		
SELENIUM (SE) TOT	<20.0		<20.0		<20.0		
ZINC (ZN) TOT	<10.0		14.0		30.0		

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: SEDIMENT/SOIL --

SITE CODE	SEP-10-SED		SEP-11-SED		SEP-12-SED		
SAMPLE DATE	05/17/2001		05/17/2001		05/17/2001		
SAMPLE TIME	10:00		09:40		09:00		
LAB	TSC-SLC		TSC-SLC		TSC-SLC		
LAB NUMBER	L010734007		L010734006		L010734004		
TYPE	EDXRF		EDXRF				
SAMPLE NUMBER	EPRI-0105-211		EPRI-0105-212		EPRI-0105-213		
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS) TOT	35.0		26.0		22.0		
CADMIUM (CD) TOT	<10.0		<10.0		11.0		
CHROMIUM (CR) TOT	<80.0	UJ4	<80.0	UJ4	<80.0	UJ4	
COPPER (CU) TOT	53.0		60.0		52.0		
IRON (FE) TOT	18000.0		16000.0		17000.0		
LEAD (PB) TOT	53.0		56.0		59.0		
SELENIUM (SE) TOT	<20.0		<20.0		<20.0		
ZINC (ZN) TOT	<10.0		<10.0		14.0		

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: SEDIMENT/SOIL --

SITE CODE		SEP-13-SED		SEP-13-SED		SEP-14-SED	
SAMPLE DATE		05/17/2001		05/17/2001		05/17/2001	
SAMPLE TIME		08:30		08:35		10:45	
LAB		TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER		L010734002		L010734003		L010734009	
REMARKS				DUPLICATE			
TYPE		EDXRF		EDXRF		EDXRF	
SAMPLE NUMBER		EPRI-0105-214		EPRI-0105-249		EPRI-0105-215	
-- METALS & MINOR CONSTITUENTS --							
ARSENIC (AS)	TOT	30.0		28.0		1700.0	
CADMIUM (CD)	TOT	<10.0		<10.0		43.0	
CHROMIUM (CR)	TOT	<80.0	UJ4	<80.0	UJ4	730.0	J4
COPPER (CU)	TOT	65.0		49.0		9500.0	
IRON (FE)	TOT	17000.0		17000.0		310000.0	
LEAD (PB)	TOT	66.0		59.0		1500.0	
SELENIUM (SE)	TOT	<20.0		<20.0		27.0	
ZINC (ZN)	TOT	13.0		<10.0		16000.0	

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.

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

Prepared by
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OCTOBER 2001

TABLE OF CONTENTS

LIST OF APPENDICES

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_3+NO_2 as N	
Sediment	L01111202	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:

  _X_ EPA CLP National Functional Guidelines for Inorganics Data Review
  _X_ Asarco El Paso Copper Smelter Remedial Investigation Work Plan, El Paso, Texas (November 1996)
  ___ Other

- Overall level of validation:

  ___ Contract Laboratory Program (CLP)
  _X_ 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.

  _X_ Yes
  ___ No

- Field measurements and field documentation were complete.

  _X_ 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.
  _X_ 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
  _X_ No

  Notes: When an analyte is detected in a blank, associated results up to 5 times the blank level are flagged with "**UJ1**" 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 (1)
		Lead (tot)	0.003	0.015	0.003	6
EPRI-0108-240	7/19/01	Nitrate+Nitrite (NO_3+NO_2)	0.092	0.46	0.05 (2)	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.

  _X_ 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 ± 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

  _X_ 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 (1)	336 / 267	1.0 (2)	22.9 RPD	6
EPRI-0108-156 / 239	EP-90	7/19/01	TSS (1)	103 / 151	1.0 (2)	37.8 RPD	10
			NO_3+NO_2	25 / 35	0.05 (3)	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_3+NO_2	3.9 / 6.2	0.05 (3)	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_3+NO_2	3.3 / 7.3	0.05 (3)	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
  _X_ SW-846
  _X_ Methods for Chemical Analysis of Water and Wastes
  _X_ XRF Standard Operating Procedures

- **Holding times met**

  _X_ Yes
  ___ No

- **Consistency with project requirements**

  Analyses were carried out as requested.
  _X_ Yes
  ___ No

  Project specified methods were used.
  _X_ Yes
  ___ No

5. DETECTION LIMITS

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

  ___ Yes
  _X_ 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.

  _X_ 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.

  _X_ Yes
  ___ No

9. LABORATORY CONTROL STANDARDS

- LCSs were prepared and analyzed at the proper frequency.

  _X_ Yes
  ___ No

- LCS recoveries were within the required control limits (80-120% for water, 75-125% for sediment samples analyzed by XRF).

  ___ Yes
  _X_ 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.

  _X_ Yes
  ___ No

- CCV recoveries were within the required control limits (75-125% for arsenic, cadmium, chromium, lead, iron and zinc analyzed by XRF).

  _X_ 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.

  _X_ 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
  _X_ 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:

  _X_ Lab pH vs. field pH.
  _X_ Lab SC vs. field SC
  _X_ 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_3+NO_2	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_3+NO_2	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_3+NO_2 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

CODE		DEFINITION
J	-	The associated numerical value is an estimated quantity because quality control criteria were not met. Subscripts for the "J" qualifier: 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
UJ	-	The material was analyzed for, but was not detected above the associated value. Subscripts for the "UJ" qualifier: 1 - Blank contamination. Indicates possible high bias and/or false positive. 2 - Calibration range exceeded or significant deviation from known value. Possible bias. 3 - Holding time not met. Indicates possible bias. 4 - Other QC outside control limits.
R	-	Quality control indicates that the data are unusable (compound may or may not be present). Resampling and/or reanalysis are necessary for verification.
E	-	Estimated. (Not an EPA code.)
A	-	Anomalous data.. No apparent explanation for discrepancy in data. (Not an EPA code.)

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 (0.011ppm) > 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 (0.011ppm) > 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 (0.011ppm) > 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 (0.011ppm) > PDLG
				ZINC (ZN) TOT	0.5	J4	LCS	124% 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-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 (0.011ppm) > 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 (0.011ppm) > 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 (0.011ppm) > 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 (0.011ppm) > 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
P-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
SUMMER 2001

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 UMHOS/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 (0.011ppm) > 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 DEVATIONS 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 DATABASE PERIOD	N	MIN (mg/L)	MEAN (mg/L)	MAX (mg/L)	STD DEVS FROM MEAN	RELATION TO DATABASE PERIOD
EM-4	07/18/2001	122.0	BICARBONATE (HCO3)	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 (HCO3)	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 (HCO3)	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	8010.0	TOTAL SUSPENDED SOLIDS	08/15/1997-05/11/2001	16	178.0	1077.3125	5379.0	5.26	HIGHEST
		2501.0	BICARBONATE (HCO3)	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).
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.

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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 DEVATIONS 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 DATABASE PERIOD	N	MIN (mg/L)	MEAN (mg/L)	MAX (mg/L)	STD DEVS FROM MEAN	RELATION TO DATABASE PERIOD
		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	3.85	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

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.

Generated from C:\statout\\rp734H20.002

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 DEVATIONS 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 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

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TABLE

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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
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

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APPENDIX 2

DATABASE

TABLE OF CONTENTS BY SITE TYPE

TABLE OF CONTENTS BY SITE TYPE

-- SAMPLE TYPE: GROUNDWATER --

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 --							
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 --							
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 --							
NITRATE + NITRITE AS N	0.27		0.31		29.0		0.65
-- METALS & MINOR CONSTITUENTS --							
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		1868.0
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)
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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: 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
SAMPLE TIME	13:15	13:30	13:50	14:00
LAB	TSC-SLC	TSC-SLC	TSC-SLC	TSC-SLC
LAB NUMBER	L011027003	L011027004	L011027005	L011027006
REMARKS				DUPLICATE
SAMPLE NUMBER	EPRI-0108-101	EPRI-0108-102	EPRI-0108-103	EPRI-0108-234
-- PHYSICAL PARAMETERS --				
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 --				
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 --				
NITRATE + NITRITE AS N	0.053	3.4	<0.05	<0.05
-- METALS & MINOR CONSTITUENTS --				
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 --						
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 --						
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 --						
NITRATE + NITRITE AS N	16.0		122.0		26.0	
-- METALS & MINOR CONSTITUENTS --						
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 --								
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 --								
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 --								
NITRATE + NITRITE AS N	28.0	J4	118.0		122.0		0.13	
-- METALS & MINOR CONSTITUENTS --								
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	L011102002	
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	J4	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	J4	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	J4	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 --					
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 --					
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 --					
NITRATE + NITRITE AS N	0.23		35.0		7.0
-- METALS & MINOR CONSTITUENTS --					
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)
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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: 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		L011102005	
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 --				
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 --				
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)	0.64	5.8	4.6	
-- NUTRIENTS --				
NITRATE + NITRITE AS N	165.0	121.0	7.3	
-- METALS & MINOR CONSTITUENTS --				
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	
SAMPLE TIME	14:45		15:45		09:30	
LAB	TSC-SLC		TSC-SLC		TSC-SLC	
LAB NUMBER	L011102007		L011102008		L011102009	
SAMPLE NUMBER	EPRI-0108-122		EPRI-0108-123		EPRI-0108-124	
-- PHYSICAL PARAMETERS --						
DEPTH TO WATER LEVEL (FEET)	71.38		59.27		51.3	
OXYGEN (O) (FLD) DIS	1.4		0.4		1.6	
PH (FLD)	6.47		6.41		7.24	
PH	7.3		7.0		7.8	
SC (UMHOS/CM AT 25 C)	9330.0		9350.0		3750.0	
SC (UMHOS/CM AT 25 C) (FLD)	9260.0		9240.0		3650.0	
TDS (MEASURED AT 180 C)	7315.0		7422.0		2584.0	
TOTAL SUSPENDED SOLIDS	34.0		8010.0		2782.0	
TURBIDITY (NTU)	133.0		>1000		>100	
WATER TEMPERATURE (C) (FLD)	35.0		28.3		25.0	
-- MAJOR CONSTITUENTS --						
CALCIUM (CA) DIS	447.0		557.0		114.0	
MAGNESIUM (MG) DIS	209.0		230.0		31.0	
SODIUM (NA) DIS	1485.0		1390.0		732.0	
POTASSIUM (K) DIS	278.0		162.0		19.0	
BICARBONATE (HCO3)	1137.0		2501.0		1384.7	
CARBONATE AS CO3	<1.0		<1.0		<1.0	
SULFATE (SO4)	3757.0		4186.0		1229.0	
CHLORIDE (CL)	789.0		973.0		417.0	
FLUORIDE (F)	9.4		12.0		3.3	
-- NUTRIENTS --						
NITRATE + NITRITE AS N	12.0		0.23		1.0	
-- METALS & MINOR CONSTITUENTS --						
ARSENIC (AS) DIS	22.0		43.0		3.0	
ARSENIC (AS) TOT	26.0		92.0		3.0	
CADMIUM (CD) DIS	0.34		<0.005		<0.005	
CADMIUM (CD) TOT	0.45		8.7		<0.005	
CHROMIUM (CR) DIS	<0.01		<0.01		<0.01	
CHROMIUM (CR) TOT	0.01		0.09		0.02	
COPPER (CU) DIS	0.13		<0.025		<0.025	
COPPER (CU) TOT	0.37		0.28		0.038	
IRON (FE) DIS	<0.1		16.0		<0.01	
IRON (FE) TOT	7.8	J4	292.0	J4	60.0	J4
LEAD (PB) DIS	<0.003		<0.003		<0.003	
LEAD (PB) TOT	0.013		1.1		0.038	
SELENIUM (SE) DIS	0.16		0.027		0.002	
SELENIUM (SE) TOT	0.16		0.43		0.027	
ZINC (ZN) DIS	6.9		4.4		<0.02	
ZINC (ZN) TOT	7.9		923.0		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 --						
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		10230.0		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 --						
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 --						
NITRATE + NITRITE AS N	0.19		0.13		3.7	
-- METALS & MINOR CONSTITUENTS --						
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 --

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 --

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 --								
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 --								
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 --								
NITRATE + NITRITE AS N	0.089		67.0		19.0		19.0	
-- METALS & MINOR CONSTITUENTS --								
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	L011102015		L011027017	L011027018	
SAMPLE NUMBER	EPRI-0108-134		EPRI-0108-135	EPRI-0108-136	
-- PHYSICAL PARAMETERS --					
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)	1290.0	A	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 --					
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 --					
NITRATE + NITRITE AS N	33.0		15.0	35.0	
-- METALS & MINOR CONSTITUENTS --					
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	<0.1	J4	<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
-- 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 --

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 --						
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 --						
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 --						
NITRATE + NITRITE AS N	0.69	UJ1 J4	10.0		9.7	
-- METALS & MINOR CONSTITUENTS --						
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)
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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)
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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: 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	
-- METALS & 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-88		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 --								
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 --								
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 --								
NITRATE + NITRITE AS N	7.0		6.6		5.3	J4	9.2	
-- METALS & MINOR CONSTITUENTS --								
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 --							
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 --							
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 --							
NITRATE + NITRITE AS N	25.0	J4	35.0	J4	5.8		13.0
-- METALS & MINOR CONSTITUENTS --							
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 --

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 --								
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 --								
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 --								
NITRATE + NITRITE AS N	8.6		8.0		13.0		3.0	
-- METALS & MINOR CONSTITUENTS --								
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
-- METALS & 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 --						
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 --						
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 --						
NITRATE + NITRITE AS N	72.0		10.0		5.6	J4
-- METALS & MINOR CONSTITUENTS --						
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
-- METALS & 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 --						
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 --						
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 --						
NITRATE + NITRITE AS N	11.0		8.0		8.5	
-- METALS & MINOR CONSTITUENTS --						
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 --			
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 --			
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 --			
NITRATE + NITRITE AS N	8.7	0.17	0.21
-- METALS & MINOR CONSTITUENTS --			
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 --

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 --			
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 --			
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 --			
NITRATE + NITRITE AS N	0.15	<0.05	20.0
-- METALS & MINOR CONSTITUENTS --			
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 --

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 --								
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 --								
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 --								
NITRATE + NITRITE AS N	3.9	J4	6.2	J4	3.3	J4	7.3	J4
-- METALS & MINOR CONSTITUENTS --								
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 --						
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 --						
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 --						
NITRATE + NITRITE AS N	6.7	J4	6.4	J4	5.2	
-- METALS & MINOR CONSTITUENTS --						
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	L011103008			L011038025		L011038024	
SAMPLE NUMBER	EPRI-0108-188			EPRI-0108-189		EPRI-0108-190	
-- PHYSICAL PARAMETERS --							
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 --							
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 --							
NITRATE + NITRITE AS N	0.56	J4		9.5	J4	35.0	J4
-- METALS & MINOR CONSTITUENTS --							
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)	6260.0		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	
-- 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
-- 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
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, Spike, 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
TDS (MEASURED AT 180 C)	<10.0	<10.0	<10.0	<10.0	<10.0	13.0
TOTAL SUSPENDED SOLIDS	<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
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	3.7
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	<1.0	<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	<0.05	<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
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 UJ4	<0.02 UJ4	<0.02
ZINC (ZN) TOT	<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 --				
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 --				
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 --				
NITRATE + NITRITE AS N	0.34	0.32	0.16	0.56 J4
-- METALS & MINOR CONSTITUENTS --				
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 UUJ4	<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.