



UMON000139

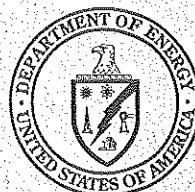


UMTRA GROUND WATER PROJECT

**DATA VALIDATION
FOR THE MONUMENT VALLEY, ARIZONA
UMTRA SITE**

**August 1997
Water Sampling**

Prepared by the
**U.S. Department of Energy
Grand Junction Projects Office**



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MONUMENT VALLEY, ARIZONA
Sampled August 1997

DATA PACKAGE CONTENTS

This data package includes the following information:

Item No. Description of Contents

1. **Site Sampling Lead Summary**
2. **Data Package Assessment**, which includes the following:
 - a. Field procedures verification checklist
 - b. Confirmation that chain-of-custody was maintained.
 - c. Confirmation that holding time requirements were met.
 - d. Evaluation of the adequacy of the QC sample results.
3. **Data Assessment Summary**, which describes problems identified in the data validation process and summarizes the validator's findings.
4. **Suspected Anomalies Reports** generated by the UMTRA database system. This report compares the new data set with historical data and designates "suspected anomalies" based on the many criteria listed as footnotes on each page. In aggregate, these criteria cause the suspected anomaly program to be very conservative; many of the data shown in the tables are not, in the evaluators judgment, truly anomalies, but merely natural variations in data or routine changes in laboratory detection limits. The designation "OK" affirms the judgment that the particular entry is not an anomaly and, therefore, requires no further inquiry.
5. **Anomalous Data Review Checksheets** which list the subset of data from the Suspected Anomalies Report that merits explanation or follow-up action. The "Disposition" column of this report describes the evaluators judgments on the listed anomalies.
6. **UMTRA Database Printouts** of analytical data organized as follows:
 - a. Ground Water Quality Data
 - b. Surface Water Data
 - c. Field QC Sample Data
 - d. Static Groundwater Level Measurement Data
7. **Sampling and Analysis Work Order and Trip Report.**

Site Sampling Lead Summary

Site: Monument Valley, Arizona

Sampling Period: August 1997

SUMMARY CRITERIA

- 1. Did concentrations in water from any domestic wells sampled exceed a primary drinking water standard or health advisory?**

There were no constituents in exceedence of primary drinking water standards in any of the domestic wells sampled during this round.

- 2. Were standards exceeded at any point-of-compliance wells?**

There are no compliance wells at Monument Valley.

- 3. As a result of this sampling round, is there any indication of unexpected contaminated ground water movement?**

There does not seem to be unexpected movement of contaminated ground water.

- 4. Is there statistical evidence that UMTRA Project related contaminants were detected in a surface body of water in greater concentrations than upstream ambient water quality?**

There was no indication that the surface waters sampled contain concentrations of contaminants higher than upstream ambient water quality.

Table 1 lists those analytes in exceedence of UMTRA ground water standards.

D. Miller
David Miller
Sampling Technical Lead

1/27/98
Date

K. Karp
Ken Karp
Site Hydrologist

1/22/98
Date

Table 1. Wells exceeding UMTRA standards

Analyte	Standard (mg/L) ¹	Wells Exceeding Standard	Concentration ¹ (mg/L)
Gross Alpha ²	15	407	22.87
Nitrate	44	606	1030.000
		653	125.000
		655	581.000
		656	236.000
		669	45.300
		761	73.700
		762	63.700
		764	86.100
		765	641.000
		771	550.000
		772	193.000
Selenium	0.01	200	0.0318
		614	0.0107
		762	0.0107

¹ Units for gross alpha are pCi/L.

² The gross alpha standard excludes radon and uranium. Gross alpha results listed in the table differ from the analytical results because uranium has been excluded.

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DATA ASSESSMENT

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UGW Water Sampling Field Activities Verification Checklist

Project Monument Valley, Az

Date(s) of Verification 10/20/97

Date(s) of Ground Water Sampling 8/20/97 - 9/4/97

Name of Verifier Barbara Wetherington

	Response (Yes, No, N/A)	Comments
1. Is the Addendum the primary document directing field procedures?	<u>Yes</u>	<u>UMTRA Ground Water Project SAP, Work Order</u>
List other documents, SOPs, Instructions.		
2. Were the sampling locations specified in the planning documents sampled?	<u>Yes</u>	<u>Except surface locations 626 and 636 which were dry and well 610 which was blocked & therefore not sampled.</u>
3. Was field equipment calibrated as specified in the above named documents?	<u>Yes</u>	<u>Except the YSI X14719 did not meet the 3 point conductivity check of $\pm 10\%$ in the 99.6 umhos/cm solution.</u>
Were the number and types (alkalinity, temperature, conductivity pH, turbidity, DO, Eh) of field measurements taken as specified?	<u>Yes</u>	
Were the standard solutions used for the calibration and operational checks of the field instruments brought to within 10°C of the temperature of the water to be sampled?	<u>Yes</u>	
Was the calibration information recorded on the field data sheets?	<u>Yes</u>	
4. Was a duplicate alkalinity measurement conducted on a frequency of one duplicate per 20 samples?	<u>Yes</u>	
5. Was depth to water measured before purging?	<u>Yes</u>	
Was this information used to calculate the purge volume?	<u>Yes</u>	
6. Were the wells purged until parameters stabilized and 3 casing volumes were removed or until the well was purged dry?	<u>Yes</u>	
7. Were duplicates taken at a frequency of one per 20 samples?	<u>Yes</u>	

8. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment? Yes
9. Were trip blanks prepared and included with each shipment of VOC samples? NA
10. Were QC samples assigned a fictitious site identification number?
Was the true identity of the samples recorded in the field notes? Yes
11. Were samples collected in the containers specified?
Were certified pre-cleaned containers used for the sampling? Yes
12. Were samples filtered and preserved as specified? Yes
13. Were the number and types of samples collected as specified? Yes
14. Were chain of custody records completed and was sample custody maintained? Yes
15. Were sample ticket book numbers recorded in the field notebook, on field data forms, and on the chain of custody? Yes
16. Are field notebooks and field data sheets signed and dated by the field team leader? Yes
17. Was all other pertinent information documented on the field data sheets/forms? Yes
18. Was the presence or absence of ice in the cooler documented in the field notebook for every sample location? Yes
19. Were water levels measured at the locations specified in the planning documents? Yes
Except 412, 608, 616, 617 which could not be located in the field.

DATA PACKAGE ASSESSMENT

REQUISITION NUMBERS: 15618 SITE: Monument Valley LABORATORY: GJ O ANALYSIS DATES: 8/26/97 - 9/30/97

REVIEWER: Barbara Wetherington
NAME (print)

Barbara Wetherington
SIGNATURE

DATE
10/27/97

	ICP-MS	ICP-AES	GFAA	FAA	NaBH ₄	AS	LSc	PC	IC	Gravimetric	Colorimetric	Other (BGC)	
CHAIN OF CUSTODY	OK	OK	NA	OK	OK	OK	OK	OK	OK	OK	OK	OK	—
HOLDING TIME	+	+	+	+	+	+	+	+	+	↓	+	+	—
CALIB. VERIFICATION (For AS, internal tracer)	+	+	+	+	+	+	+	+	+	NA	+	+	—
PREP. BLANKS (Only if digestion)	+	+	+	+	+	↓	↓	↓	+	NA	+	+	—
INT. CAL. BLANKS	+	+	+	+	+	NA	NA	NA	+	NA	+	+	—
CONT. CAL. BLANKS	+	+	+	+	+	NA	NA	NA	↓	NA	↓	↓	—
ICS (ICP ONLY)	+	+	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
LCS	+	↓	+	OK	OK	OK	OK	OK	OK	OK	OK	OK	—
DUPPLICATES	↓	I	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	—
POSTDIGEST. SPKS. (Only if MS fails)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	—
MATRIX SPKS.	OK	OK	OK	OK	NA	NA	NA	OK	NA	NA	NA	OK	—
OVERALL ASSESS.	↓	OK	↓	↓	↓	OK	OK	OK	↓	OK	OK	↓	—

REVIEWER COMMENTS: Duplicate results for vanadium were not within the control limits and were therefore given a "I" flag for that analytical run.
(See Data Assessment)

ITEMS REQUIRING ATTENTION:

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MONUMENT VALLEY, ARIZONA
AUGUST 1997 SAMPLING
DATA ASSESSMENT SUMMARY

The DOE-GJO Analytical Laboratory analyzed samples and reported results for this sampling event under requisition number 15618 for the UMTRA Groundwater project.

RADIOCHEMICAL ANALYSIS

The determination of gross alpha activity was done by gas proportional counting (PC). Due to high TDS present in the samples, the required detection limit of 1 picocurie per liter could not be met. Although not requested, gross beta results are included in this report because gross beta activity is determined concurrently with gross alpha activity.

Radium-226 was analyzed by alpha spectrometry (AS) and radium-228 was analyzed by beta/gamma coincidence counting (BGC). Lead-210 was determined by liquid scintillation counting (LSc).

All quality control requirements were met during the course of these analysis except as noted.

All radiochemical results that were less than the MDA and/or the 3-sigma counting statistic range were qualified with a non-detect flag (U) in the database, as reflected on the Surface Water Quality Data by Parameter printout.

METALS ANALYSIS

The determination of selenium was determined by hydride generation atomic absorption spectroscopy (NaBH₄). The determination of potassium was done by flame atomic absorption spectrometry (FAA). The determination of cadmium and uranium was done by inductively coupled plasma-mass spectrometry (ICP-MS). All quality control requirements were met during the course of these analyses and no additional flags were added to the database.

The determination of calcium, magnesium, sodium, strontium, and vanadium was done by inductively coupled plasma-atomic emission spectrometry (ICP-AES). A laboratory duplicate result for vanadium was not within the required control limits. Therefore a "J" flag was added to the database for vanadium results within that analytical run. Locations receiving the "J" flag are: 605, 627, 771, and the unfiltered sample from the Stanley residence (Stanley-U). All other quality control requirements were met during the course of analysis.

INORGANIC ANALYSIS

Chloride, nitrate, and sulfate were determined by ion chromatography (IC). TDS was determined gravimetrically. Ammonium was determined by spectrophotometry (Colorimetric). No additional flags were necessary because all quality control data was met during the course of these analyses.

FIELD ANALYSIS/ACTIVITIES

Locations 407, 409, 669, 771, and 775 were purged dry prior to the removal of three casing volumes. Although it is assumed that all of the stagnant water was removed from the well prior to sampling, these locations will be flagged with an "L" qualifier indicating less than three casing volumes were purged from the well.

One equipment blank was collected for the 36 monitoring wells sampled. An additional equipment blank was collected for the 2 surface water locations sampled during this round. The equipment blanks were analyzed for the same constituents as the UMTRA Groundwater project samples. There were no contaminants that were detected in the equipment blank in concentrations greater than the CRDL.

There were no wells purged using the low flow purging method. One location, Well 409, had a pH of 9.00 indicating possible grout contamination. All results from this location will be qualified with a "G" flag in the database.

Three field duplicates were collected during this sampling round; at groundwater locations 657 and 760, and at surface water location 623. There is no established regulatory criteria for the evaluation of field duplicate samples at this time. However, the Relative Percent Difference (RPD) for all constituents above the CRDL was within the EPA CLP thresholds established for laboratory duplicates, and are considered acceptable.

SAR

The SAR reflects samples collected in August 1997. Several constituents were associated with data qualifier flags representing either too high or too low concentrations, based on either the non-trend or trend approach. If a constituent has been detected fewer than four times the non-trend approach is used, and the trend approach is used when there are four or more previous detections in the data base for the constituent in question.

Regardless of the approach used to determine the upper and lower bound (non-trend or trend), values were considered to be valid if low concentrations were the result of lower detection limits. If the upper and lower bounds were determined using the non-trend approach, the data was assumed to be valid based on the lack of previous data.

Other data were accepted if the constituent was detected within the concentration range established during previous sampling events.

After considering the above criteria, eleven values identified as potential anomalies were considered suspect. Alkalinity results at locations 603, 604, 650, and 652 were at all time lows. Other low values included chloride, ammonium, and nitrate at Well 627, and Eh at Wells 650, 652, and 655. The nitrate result from Well 669 was at an all time high. These results will be compared to the next sampling round at Monument Valley.

SUMMARY

All analytical quality control criteria were met except as qualified on the Ground Water Quality Data by Parameter printout. The meaning of data qualifiers is as defined on the UMTRA database printout or as defined in the USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, Multi-Media Multi-Concentration, Document Number ILMO2.0, 1991. All data in this package meet the validation criteria and may be treated as final results.

A disk copy of the Ground Water Quality Data by Parameter database printout with the qualifiers incorporated is included in this package.

D. Miller

Dave Miller
Site Sampling Lead

11/18/97

Date

Ken Karp

Ken Karp
Site Hydrologist

12/11/97

Date

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SAR

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SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:11 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT		# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS										
			LOG DATE	SAMPLE VALUE				LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE		
			FLAGS	UNCERTAINTY				FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM		
0407	4 <i>OK</i>	CA mg/L	8/22/97	0001	74.8000	1 0	35.400 35.400	35.400 35.400	17.7000 70.8000	1/18/96 0	0001 1	35.4000 35.4000	1/18/96 0	0001 1	35.4000 35.4000	1/18/96 0	0001 1	
			8/22/97	N001	125.0000	1 0	283.000 283.000	283.000 283.000	141.5000 566.0000	1/18/96 0	N001 10	283.0000 283.0000	1/18/96 0	N001 10	283.0000 283.0000	1/18/96 0	N001 10	
	3 <i>OK</i>	NO3 mg/L	8/22/97	0001	0.0532	1 100	1.000 1.000	1.000 1.000	0.5000 2.0000	1/18/96 U	N001 0	1.0000 1	1/18/96 U	N001 0	1.0000 1	1/18/96 U	N001 0	1.0000 1
			8/22/97	0001	0.0201	1 0	0.060 0.060	0.060 0.060	0.0300 0.1200	1/18/96 0	0001 0.001	0.0600 0	1/18/96 0	0001 0.001	0.0600 0	1/18/96 0	0001 0.001	0.0600 0.001
	2 <i>OK</i>	V mg/L	8/22/97	0001	0.0130	1 0	0.010 0.010	0.010 0.010	0.0000 0.0100	1/18/96 0	0001 0	0.0100 0.01	1/18/96 0	0001 0	0.0100 0.01	1/18/96 0	0001 0	0.0100 0.01
0409	3 <i>OK</i>	NO3 mg/L	8/21/97	0001	0.0611	1 100	1.000 1.000	1.000 1.000	0.5000 2.0000	1/17/96 U	N001 0	1.0000 1	1/17/96 U	N001 0	1.0000 1	1/17/96 U	N001 0	1.0000 1
			8/21/97	N001	20.2000	1 0	8.600 8.600	8.600 8.600	4.3000 17.2000	1/17/96 0	N001 0.1	8.6000 0.1	1/17/96 0	N001 0.1	8.6000 0.1	1/17/96 0	N001 0.1	8.6000 0.1
	4 <i>OK</i>	TMP C	8/21/97	0001	0.0130	1 100	0.010 0.010	0.010 0.010	0.0000 0.0100	1/17/96 U	0001 0	0.0100 0.01	1/17/96 U	0001 0	0.0100 0.01	1/17/96 U	0001 0	0.0100 0.01
			8/21/97	0001	0.0130	1 100	0.010 0.010	0.010 0.010	0.0000 0.0100	1/17/96 U	0001 0	0.0100 0.01	1/17/96 U	0001 0	0.0100 0.01	1/17/96 U	0001 0	0.0100 0.01
0603	5 <i>OK</i>	CACO3 mg/L	8/27/97	N001	172.0000	9 0	192.000 202.000	193.000 205.000	186.1208 204.5724	6/29/93	N001 0	192.0000 0	11/21/92 0	N001 0	201.0000 0	8/10/92 0	N001 0	192.0000 0
			8/27/97	N001	96.0000	2 0	437.400 437.400	462.000 462.000	218.7000 924.0000	6/29/93	N001 0	462.0000 0	11/21/92 0	N001 0	437.4000 0	11/21/92 0	N001 0	437.4000 0
	5 <i>OK</i>	SR mg/L	8/27/97	0001	0.2300	9 22.222	0.100 0.260	0.220 0.280	0.2964 0.3981	6/29/93	N001 0	0.2200 0.01	6/29/93 0	0001 0	0.2400 0.01	11/21/92 0	0001 0	0.2800 0.00035
0604	5 <i>OK</i>	CACO3 mg/L	8/27/97	N001	161.0000	9 0	177.000 204.000	184.000 207.000	192.3295 219.2630	6/26/93	N001 0	200.0000 0	2/2/93 0	N001 0	207.0000 0	11/19/92 0	N001 0	191.0000 0
	3 <i>OK</i>	EH mV	8/27/97	N001	165.0000	2 0	395.000 453.100	453.100 453.100	197.5000 906.2000	6/26/93	N001 0	395.0000 0	11/19/92 0	N001 0	453.1000 0	11/19/92 0	N001 0	453.1000 0

Error Type Flags : 2 - All time high detection limit
 3 - Too low (non-trend approach)
 4 - Too high (non-trend approach)
 5 - Too low (trend approach)
 6 - Too high (trend approach)

Flags : I - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
 J - Estimated value.
 H - Hold time expired, value suspect.

Approved by Barbara Wellington
 Hydrologist "OK" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:12 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE	VALUE				LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	
			FLAGS	UNCERTAINTY	DET LIM				FLAGS	UNCERTAINTY	DET LIM	FLAGS	UNCERTAINTY	DET LIM	FLAGS	UNCERTAINTY	DET LIM	
0604	6	GB pCi/L	8/27/97	0001	3.5900	10	0.000	1.000	0.0000	6/26/93	N001	1.0000	6/26/93	0001	3.0000	2/2/93	0001	0.0000
	MR				2.23	3.6	0	6.700	8.900	3.5768	4	4				5	11	
	3	NH4 mg/L	8/27/97	0001	0.0576	6	0.100	0.200	0.0670	6/26/93	N001	0.1000	2/22/92	0001	0.2000	5/31/91	0001	0.3000
	MR					66.667	0.200	0.300	0.4500	U	0	0.1		0	0.1	0	0.1	
	5	PH s.u.	8/27/97	N001	7.9100	9	7.810	8.010	8.0374	6/26/93	N001	8.0300	2/2/93	N001	8.1300	11/19/92	N001	8.2600
	MR					0	8.260	8.310	8.4358		0	0		0	0	0	0	0
	5	RA-228 pCi/L	8/27/97	0001	0.4000	8	0.000	0.200	0.9155	11/19/92	0001	1.9000	11/19/92	N001	0.7000	8/11/92	0001	1.8000
0605	MR				0.7	1.2	0	1.800	1.900	3.5799	1.7	2.7				1.1	2	
	3	SE mg/L	8/27/97	0001	0.0010	8	0.002	0.005	0.0010	11/19/92	0001	0.0015	11/19/92	N001	0.0015	8/11/92	0001	0.0050
	MR					0.001	62.5	0.006	0.007	0.0105	UNW	0	0.0015	W	0	0.0015	UW	0
	5	SR mg/L	8/27/97	0001	0.1900	9	0.100	0.170	0.2346	6/26/93	N001	0.2000	6/26/93	0001	0.1900	11/19/92	0001	0.2400
	MR					33.333	0.240	0.250	0.3574		0	0.01		0	0.01	S	0	
	5	TDS mg/L	8/27/97	0001	385.0000	8	359.000	360.000	385.6029	6/26/93	N001	390.0000	2/2/93	0001	370.0000	8/11/92	0001	390.0000
	MR					0	389.000	390.000	411.4490		0	10		0	10	0	42	
0605	5	CACO3 mg/L	8/28/97	N001	234.0000	13	204.000	219.000	255.5127	1/12/97	N001	288.0000	6/26/93	N001	372.0000	2/2/93	N001	393.0000
	MR					0	372.000	393.000	420.7178		0	0		0	0	0	0	
	5	CHLORI mg/L	8/28/97	0001	173.0000	12	83.000	110.000	188.5159	1/12/97	0001	213.0000	6/26/93	N001	248.0000	2/2/93	0001	232.0000
	MR					0	248.000	259.000	299.4582		0	0.5		0	0.5	0	0.5	
	5	MG mg/L	8/28/97	0001	142.0000	13	75.200	87.500	147.6674	1/12/97	0001	159.0000	6/26/93	N001	153.0000	6/26/93	0001	148.0000
	MR					0	159.000	175.000	190.7561		0	0.1		0	0.1	0	0.1	
0605	5	NA mg/L	8/28/97	0001	574.0000	13	257.000	279.000	639.3330	1/12/97	0001	707.0000	6/26/93	N001	860.0000	6/26/93	0001	828.0000
	MR					0	828.000	860.000	1044.7276		0	1		0	1	0	1	
	5	SO4 mg/L	8/28/97	0001	1550.0000	13	800.000	906.000	2325.5143	6/26/93	N001	2130.0000	2/2/93	0001	1950.0000	11/22/92	0001	1900.0000
0605	MR					0	1950.000	2130.000	3056.8444		0	1		0	1	0	1	
	5	SR mg/L	8/28/97	0001	1.9000	11	0.100	1.100	1.9903	1/12/97	0001	2.2100	6/26/93	0001	2.2300	6/26/93	N001	2.2700
	MR					18.182	2.700	2.900	3.3747		0	0.01		0	0.01	0	0.01	

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Approved by Balan Wellington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:13 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT		# OF SAMP. %NON DETEC	ALL TIME MINIMUMS ALL TIME MAXIMUMS	LOWER BOUND UPPER BOUND	3 MOST RECENT SAMPLING EVENTS												
			LOG DATE	SAMPLE VALUE				LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE					
			FLAGS	UNCERTAINTY				FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM				
0605	5 <i>OK</i>	TDS mg/L	8/28/97	0001	2880.0000	12 0	1520.000 3390.000	1660.000 3870.000	2901.2163 4493.7239	1/12/97 13.4121	0001 14.9000	3310.0000 3870.0000	6/26/93 6/26/93	N001 0	3870.0000 10	2/2/93 2/2/93	0001 0	3390.0000 10		
			6 <i>OK</i>	TMP C	8/28/97	N001	17.1000	13 0	12.500 16.900	13.000 17.500	13.4121 17.0591	1/12/97 1/12/97	N001 0001	14.9000 0.0109	6/26/93 6/26/93	N001 N001	16.1000 0.0220	2/2/93 6/26/93	N001 0001	14.4000 0.0320
			5 <i>OK</i>	U mg/L	8/28/97	0001	0.0080	15 0	0.004 0.024	0.004 0.032	0.0134 0.0353	1/12/97 1/12/97	0001 0001	0.0109 0.001	6/26/93 6/26/93	N001 0	0.0220 0.001	6/26/93 0	N001 0	0.0320 0.001
0606	5 <i>OK</i>	SR mg/L	8/28/97	0001	1.6000	20 10	0.100 2.030	1.640 2.200	1.6203 2.2769	1/13/97 1/13/97	0001 0001	1.8600 0.0040	11/19/95 11/19/95	0001 0001	1.7000 0.0100	4/24/95 4/24/95	0001 0001	1.9700 0.0100		
			6 <i>OK</i>	V mg/L	8/28/97	0001	0.0130	22 0.013	0.003 0.500	0.003 0.510	0.0000 0.0101	1/13/97 U	0001 0004	0.0040 U	11/19/95 U	0001 0	0.0100 0.01	4/24/95 U	0001 0	0.0100 0.01
0611	6 <i>OK</i>	CA mg/L	9/2/97	0001	15.3000	5 0	14.500 19.000	15.900 19.000	12.7100 14.5932	6/29/93 6/29/93	0001 0	15.9000 0.5	6/29/93 6/9/89	N001 0	14.5000 0.5	6/9/89 6/9/89	0001 0	16.8000 0.01		
			5 <i>OK</i>	CACO3 mg/L	9/2/97	N001	168.0000	4 0	195.000 224.000	207.000 224.000	179.8999 187.5830	6/29/93 6/29/93	N001 0	195.0000 0	6/9/89 0	N001 0	207.0000 0	8/16/85 8/16/85	N001 0	209.0000 0
	3 <i>OK</i>	EH mV	9/2/97	N001	113.0000	1 0	446.000 446.000	446.000 446.000	223.0000 892.0000	6/29/93 6/29/93	N001 0	446.0000 0	6/29/93 6/29/93	N001 N001	446.0000 0	6/29/93 6/29/93	N001 0	446.0000 0		
			5 <i>OK</i>	GA pCi/L	9/2/97	0001	6.7800 2.34	4 2.87	2.000 6.000	4.100 13.000	8.3469 17.3487	6/29/93 6/29/93	N001 6	13.0000 3	6/29/93 5	0001 4	6.0000 4	8/16/85 8/16/85	0001 4	4.1000 3.5
	6 <i>OK</i>	GB pCi/L	9/2/97	0001	8.0000	4 1.93	4.000 2.73	5.300 7.000	2.9786 6.9778	6/29/93 6/29/93	N001 4	4.0000 4	6/29/93 4	0001 4	7.0000 4	8/16/85 8/16/85	0001 4	7.7000 3.5		
			6 <i>OK</i>	K mg/L	9/2/97	0001	2.8700	5 0	2.100 3.650	2.800 3.650	1.4722 2.3650	6/29/93 6/29/93	N001 0	2.1000 0.1	6/29/93 0	0001 0	2.8000 0.1	6/9/89 U	0001 0	2.8000 0.01
	3 <i>OK</i>	NH4 mg/L	9/2/97	0001	0.0078	4 100	0.100 0.100	0.100 0.100	0.0670 0.1500	6/29/93 U	N001 0	0.1000 0.1	6/9/89 U	0001 0	0.1000 0.1	8/16/85 U	0001 0	0.1000 0.1		
			3 <i>OK</i>	NO3 mg/L	9/2/97	0001	0.0149	4 25	1.000 8.860	5.000 8.860	0.6700 13.2900	6/29/93 6/29/93	N001 0	1.0000 1	6/9/89 0	0001 1	5.0000 U	8/16/85 0	0001 1	1.0000 1

Error Type Flags : 2 - All time high detection limit
 3 - Too low (non-trend approach)
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 5 - Too low (trend approach)
 6 - Too high (trend approach)

Flags : I - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
 J - Estimated value.
 H - Hold time expired, value suspect.

Approved by Babine Uttington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:14 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT		# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS												
			LOG DATE	SAMPLE VALUE				LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE			
			FLAGS	UNCERTAINTY	DETLIM	FLAGS	UNCERTAINTY	DETLIM	FLAGS	UNCERTAINTY	DETLIM	FLAGS	UNCERTAINTY	DETLIM	FLAGS	UNCERTAINTY	DETLIM			
0611	4 <i>OK</i>	PB-210 pCi/L	9/2/97 0.54	0001 0.88	2 0	0.000 0.000	0.000 0.000	0.0000 0.0000	8/16/85 0.9	0001 1.5	0.0000 0.0000	4/9/85 0.8	0001 1.5	0.0000 0.0000	4/9/85 0.8	0001 1.5	0.0000 0.0000			
		5 <i>OK</i> s.u.	9/2/97	N001	7.6900 0	4 8.170	7.760 8.170	7.930 8.0117	7.7474 8.0117	6/29/93 0	N001 0	7.9300 0	6/9/89 0	N001 0	7.7600 0.1	8/16/85 0	N001 0	7.9400 0.1		
	3 <i>OK</i>	SE mg/L	9/2/97 U	0001 0.001	0.0010 100	3 100	0.005 0.005	0.005 0.005	0.0025 0.0100	6/9/89 U	0001 0	0.0050 0.005	8/16/85 U	0001 0	0.0050 0.005	4/9/85 U	0001 0	0.0050 0.005		
		5 <i>OK</i>	SO4 mg/L	9/2/97	0001	70.8000 0	4 73.000	61.200 77.000	66.300 81.8171	72.7067 81.8171	6/29/93 0	N001 1	73.0000 0	6/9/89 0	0001 0	77.0000 0.1	8/16/85 0	0001 0	66.3000 0.1	
	6 <i>OK</i>	TDS mg/L	9/2/97	0001	320.0000 0	4 310.000	302.000 310.000	305.000 313.000	309.6676 316.2801	6/29/93 H	N001 0	310.0000 10	6/9/89 0	0001 10	313.0000 0	8/16/85 0	0001 10	302.0000 0		
		5 <i>OK</i>	TMP C	9/2/97	N001	16.8000 0	4 17.000	16.000 18.000	17.000 19.1396	17.9672 0	6/29/93 0	N001 0	18.0000 0	6/9/89 0	N001 0	17.0000 0	8/16/85 0	N001 0	18.0000 0	
	5 <i>OK</i>	U mg/L	9/2/97	0001	0.0075 0	5 0.008	0.000 0.010	0.002 0.0125	0.0075 0.0125	6/29/93 0	0001 0.001	0.0080 0.001	6/29/93 0	N001 0	0.0070 0.001	6/9/89 0	0001 0	0.0099 0.003		
0612	5 <i>OK</i>	CACO3 mg/L	9/3/97	N001	125.0000 0	4 151.000	121.000 151.000	150.000 156.000	142.4565 157.3119	1/12/97 N001	150.0000 150	1/12/97 0	N001 0	121.0000 0	8/1/85 0	N001 0	156.0000 0			
		3 <i>OK</i>	GB pCi/L	9/3/97	0001	1.3200 1.61	4 2.7	2.970 8.000	4.600 9.000	1.9899 13.5000	1/12/97 U	0001 1.82	2.970 2.97	4/26/88 1.6	0001 1	9.0000 4.1	8/1/85 1	0001 1	8.0000 1	
	5 <i>OK</i>	MG mg/L	9/3/97	0001	20.0000 0	4 18.800	18.000 20.700	18.200 21.0421	20.6168 21.0421	1/12/97 N001	20.7000 20.7000	4/26/88 0	0001 0.001	18.2000 0.001	8/1/85 0	0001 0	18.8000 0.001	8/1/85 0	0001 0	18.8000 0.001
		3 <i>OK</i>	NH4 mg/L	9/3/97	0001	0.0070 0.007	4 75	0.015 0.100	0.100 0.100	0.0101 0.1500	1/12/97 B	0001 0.1500	0.0150 U	4/26/88 0	0001 0.1	0.1000 U	8/1/85 0	0001 0	0.1000 0.1	
	3 <i>OK</i>	RA-228 pCi/L	9/3/97	0001	0.0000 0.7	3 1.3	0.300 33.333	0.400 0.400	0.1500 0.700	0.1500 1.4000	1/12/97 U	0001 0.4	0.7000 0.7	8/1/85 1.9	0001 1	0.4000 1.9	4/21/85 0.8	0001 0	0.3000 1	
		6 <i>OK</i>	TDS mg/L	9/3/97	0001	160.0000 0	4 180.000	155.000 195.000	176.000 159.0012	148.3427 159.0012	1/12/97 N001	155.0000 155	4/26/88 0	0001 10	195.0000 0	8/1/85 0	0001 0	176.0000 10		

Error Type Flags : 2 - All time high detection limit
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Flags : I - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
 J - Estimated value.
 H - Hold time expired, value suspect.

Approved by Bailey Wetherington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:15 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE VALUE	FLAGS				LOG DATE	SAMPLE VALUE	FLAGS	LOG DATE	SAMPLE VALUE	FLAGS	LOG DATE	SAMPLE VALUE	FLAGS	LOG DATE
			DET	LIM					DET	LIM		DET	LIM		DET	LIM		DET
0612	6 <i>OK</i>	TMP C	9/3/97	N001	20.0000	4	16.000 0	17.500 18.600	18.2116 19.1145	1/12/97	N001	18.6000	4/26/88 0	N001	17.5000 0	8/1/85 0	N001	19.0000 0
0613	5 <i>OK</i>	CACO3 mg/L	8/28/97	N001	150.0000	17	172.000 0	173.000 199.000	164.0413 201.8427	1/13/97	N001	181.0000	11/19/95 0	N001	199.0000 10	4/23/95 0	N001	190.0000 10
	5 <i>OK</i>	PH s.u.	8/28/97	N001	7.8500	17	7.600 0	7.740 8.260	7.8746 8.2418	1/13/97	N001	8.0500	11/19/95 0	N001	8.0200 0.1	4/23/95 0	N001	8.2600 0.1
	5 <i>OK</i>	RA-226 pCi/L	8/28/97	0001	0.0600	12	0.000 0.04	0.100 0.02	0.1649 0.4219	1/13/97 0.27	N001	0.2800 0.17	11/21/92 0.2	N001	0.3000 0.3	11/21/92 0.2	0001	0.2000 0.3
0614	5 <i>OK</i>	CACO3 mg/L	9/3/97	N001	176.0000	17	173.000 0	174.000 203.000	176.7704 205.3377	1/13/97	N001	198.0000	11/18/95 0	N001	189.0000 10	4/23/95 0	N001	181.0000 10
	5 <i>OK</i>	CHLORI mg/L	9/3/97	0001	32.3000	17	15.000 0	16.000 56.700	37.3785 73.8037	1/13/97	0001	37.7000	11/19/95 0	0001	57.0000 0.5	4/23/95 0	0001	52.2000 0.5
	5 <i>OK</i>	NA mg/L	9/3/97	0001	36.1000	19	25.200 0	26.000 43.000	36.7422 49.2832	1/13/97	0001	38.5000	11/19/95 0	0001	41.0000 1	4/23/95 0	0001	41.0000 1
	6 <i>OK</i>	TMP C	9/3/97	N001	18.6000	17	12.900 0	14.500 20.000	13.4205 21.500	1/13/97	N001	15.6000	11/18/95 0	N001	17.4000 0.1	4/23/95 0	N001	16.2000 0.1
	6 <i>OK</i>	V mg/L	9/3/97	0001	0.0130	17	0.004 0.013	0.010 0.450	0.0000 0.0103	1/13/97 U	0001	0.0040 0.004	11/19/95 U	0001	0.0100 0	4/23/95 0	0001	0.0100 0.01
0618	3 <i>OK</i>	GA pCi/L	8/28/97	0001	1.9200	2	3.900 1.63	5.600 2.57	1.9500 11.2000	8/2/85	0001	5.6000	4/24/85 3.2	0001	3.9000 0.2	4/24/85 3.2	0001	3.9000 0.2
	3 <i>OK</i>	GB pCi/L	8/28/97	0001	2.0700	2	4.700 1.65	5.000 2.7	2.3500 10.0000	8/2/85	0001	4.7000	4/24/85 3.4	0001	5.0000 1	4/24/85 1.7	0001	5.0000 1
	3 <i>OK</i>	NH4 mg/L	8/28/97	0001	0.0070	2	0.100 0.007	0.100 100	0.0500 0.2000	8/2/85 U	0001 0	0.1000 0.1	4/24/85 U	0001 0	0.1000 0.1	4/24/85 U	0001	0.1000 0.1
	3 <i>OK</i>	RA-228 pCi/L	8/28/97	0001	-0.1000	2	0.000 0.6	0.000 1.3	0.0000 0.000	8/2/85 0.9	0001 1	0.0000 1	4/24/85 1	0001 1	0.0000 1	4/24/85 1	0001	0.0000 1

Error Type Flags : 2 - All time high detection limit
 3 - Too low (non-trend approach)
 4 - Too high (non-trend approach)
 5 - Too low (trend approach)
 6 - Too high (trend approach)

Flags : I - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
 J - Estimated value.
 H - Hold time expired, value suspect.

Approved by *Barbara Woffington*
 Hydrologist "OK" indicates insignificant variation

Date *10/29/97*

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:16 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE	VALUE				LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	
			FLAGS	UNCERTAINTY	DETLM				FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	
0618	3 <i>OK</i>	SE mg/L	8/28/97	0001	0.0018	3 100	0.005 0.005	0.005 0.005	0.0025 0.0100	8/2/85	0001	0.0050 0.005	4/24/85	0001	0.0050 0.005	6/8/82	0001	0.0050 0.005
	4 <i>OK</i>	SR mg/L	8/28/97	0001	0.2710	2 100	0.100 0.100	0.100 0.100	0.0500 0.2000	8/2/85	0001	0.1000 0.1	4/24/85	0001	0.1000 0.1	4/24/85	0001	0.1000 0.1
0619	5 <i>OK</i>	CACO3 mg/L	8/27/97	N001	136.0000	6 0	162.000 189.000	170.000 192.000	157.3560 173.5751	1/15/97	N001	162.0000 0	11/15/95	N001	170.0000 10	4/26/95	N001	174.0000 10
	6 <i>OK</i>	K mg/L	8/27/97	0001	2.4200	8 0	1.700 2.200	2.000 2.210	1.6621 2.1991	1/15/97	0001	2.0100 0	4/26/95	0001	2.0000 0.1	12/13/93	N001	1.7000 0.1
	5 <i>OK</i>	NA mg/L	8/27/97	0001	19.1000	9 0	20.000 22.000	20.600 23.000	19.1738 21.7545	1/15/97	0001	20.6000 0	11/15/95	0001	20.0000 1	4/26/95	0001	21.0000 1
	3 <i>OK</i>	PB-210 pCi/L	8/27/97	0001	-0.0500	3 0.48	0.300 0.500	0.500 1.180	0.1500 2.3600	1/15/97	0001	1.1800 0.5	8/2/85	0001	0.5000 0.9	4/26/85	0001	0.3000 1.5
	6 <i>OK</i>	TMP C	8/27/97	N001	19.3000	6 0	16.000 17.100	16.600 17.600	16.4780 17.3762	1/15/97	N001	16.9000 0	11/15/95	N001	16.6000 0.1	4/26/95	N001	17.1000 0.1
	6 <i>OK</i>	CACO3 mg/L	8/27/97	N001	310.0000	7 0	197.000 284.000	213.000 371.000	121.7718 266.6861	1/11/97	N001	197.0000 0	11/19/95	N001	230.0000 10	4/21/95	N001	220.0000 10
0623	3 <i>OK</i>	EH mV	8/27/97	N001	146.0000	3 0	358.000 438.000	424.000 438.000	179.0000 876.0000	11/19/95	N001	358.0000 0	4/21/95	N001	424.0000 0	12/14/94	N001	438.0000 0
	3 <i>OK</i>	PB-210 pCi/L	8/27/97	0001	-0.4700	1 0.44	0.920 0.75	0.920 0.920	0.2300 3.6800	1/11/97	0001	0.9200 U	1/11/97	0001	0.9200 0.55	1/11/97	0001	0.9200 0.92
	5 <i>OK</i>	PH s.u.	8/27/97	N001	7.2800	7 0	7.420 8.190	7.510 9.050	7.5817 9.1699	1/11/97	N001	8.1900 0	11/19/95	N001	7.6300 0.1	4/21/95	N001	9.0500 0.1
	2 <i>OK</i>	SE mg/L	8/27/97	0001	0.0010	1 0.001	0.000 0.000	0.000 0.000	0.0000 0.0002	1/11/97	0001	0.0002 U	1/11/97	0001	0.0002 0.0002	1/11/97	0001	0.0002 0.0002
	6 <i>OK</i>	TMP C	8/27/97	N001	20.0000	7 0	1.300 33.500	5.800 33.500	0.0000 16.4237	1/11/97	N001	5.8000 0	11/19/95	N001	13.2000 0.1	4/21/95	N001	14.4000 0.1

Error Type Flags : 2 - All time high detection limit
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Flags : 1 - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
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Approved by Barbara Wellington
 Hydrologist "Ok" Indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:17 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE	VALUE				LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	
			FLAGS	UNCERTAINTY	DETLM				FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	
0623	5	U mg/L	8/27/97	0001	0.0010	10	0.001 0.006	0.002 0.006	0.0019 0.0089	1/11/97	0001	0.0063	11/19/95	0001	0.0020 0 0.001	4/21/95	0001	0.0020 0 0.001
OK	OK			U	0.001	10												
0627	5	CHLORI mg/L	8/21/97	0001	96.3000	4 0	568.000 938.000	583.000 938.000	168.9503 661.1597	1/15/96	0001	583.0000	12/11/94	N001	746.0000 0 0.5	4/22/94	0001	568.0000 0 0.5
OK	3	EH mV	8/21/97	N001	95.0000	1 0	606.000 606.000	606.000 606.000	303.0000 1212.0000	12/11/94	N001	606.0000 0 0	12/11/94	N001	606.0000 0 0	12/11/94	N001	606.0000 0 0
OK	5	NH4 mg/L	8/21/97	0001	0.3930	4 0	0.500 1.600	1.000 2.300	3.9327 6.4235	12/11/94	N001	2.3000 0 0.1	4/22/94	N001	1.0000 0 0.1	12/27/93	0001	1.6000 0 0.1
OK	3	NO3 mg/L	8/21/97	0001	0.1050	5 60	1.000 1.400	1.400 4.400	0.6700 6.6000	1/15/96	N001	1.4000 0 1	12/11/94	N001	4.4000 0 U	4/22/94	N001	1.0000 0 1
OK	6	TMP C	8/21/97	N001	19.0000	5 0	2.800 26.700	4.500 26.700	0.0000 7.7662	1/15/96	N001	4.5000 0 0.1	12/11/94	N001	6.3000 0 0.1	4/22/94	N001	18.9000 0 0
0650	5	CACO3 mg/L	9/3/97	N001	187.0000	7 0	202.000 217.000	204.000 219.000	198.4314 209.9893	11/16/95	N001	210.0000 0 10	4/23/95	N001	202.0000 0 10	12/14/93	N001	204.0000 0 0
OK	3	EH mV	9/3/97	N001	50.0000	3 0	302.000 376.000	304.000 376.000	151.0000 752.0000	11/16/95	N001	302.0000 0 0	4/23/95	N001	304.0000 0 0	12/14/93	N001	376.0000 0 0
OK	3	NH4 mg/L	9/3/97	0001	0.0070	7 0.007	0.100 85.714	0.500 0.500	0.0670 0.7500	11/16/95	N001	0.1000 U 0	4/23/95	N001	0.1000 U 0	12/14/93	0001	0.1000 U 0
OK	6	PH s.u.	9/3/97	N001	8.3700	7 0	7.910 9.680	8.100 9.680	7.6014 8.1484	11/16/95	N001	8.1000 0 0.1	4/23/95	N001	7.9100 0 0.1	12/14/93	N001	8.3200 0 0
OK	3	SE mg/L	9/3/97	0001	0.0010	4 0.001	0.005 100	0.005 0.005	0.0034 0.0075	6/9/89	0001	0.0050 U 0	4/26/88	0001	0.0050 U 0	4/22/86	0001	0.0050 U 0
OK	5	SR mg/L	9/3/97	0001	0.0979	6 16.667	0.100 0.100	0.110 0.110	0.1017 0.1177	11/16/95	0001	0.1100 0 0.01	4/23/95	0001	0.1000 0 0.01	12/14/93	N001	0.1100 0 0.01
OK	5	TDS mg/L	9/3/97	0001	272.0000	7 0	249.000 309.000	262.000 319.000	288.8235 319.8593	11/16/95	0001	300.0000 0 10	4/23/95	0001	300.0000 0 10	12/14/93	0001	300.0000 0 10

Error Type Flags : 2 - All time high detection limit
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 5 - Too low (trend approach)
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Flags : I - Increased detection limit due to required dilution.
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 H - Hold time expired, value suspect.

Approved by Barbara Washington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:17 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE	VALUE				LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	
			FLAGS	UNCERTAINTY	DET LIM				FLAGS	UNCERTAINTY	DET LIM	FLAGS	UNCERTAINTY	DET LIM	FLAGS	UNCERTAINTY	DET LIM	
0650	6	TMP C	9/3/97	N001	17.1000	7	15.200 0	16.400 21.000	14.6379 16,8199	11/16/95 0	N001 0	16,4000 0.1	4/23/95 0	N001 0	16.6000 0.1	12/14/93 0	N001 0	15.2000 0
0652	5	CACO3 mg/L	9/4/97	N001	156.0000	11	173.000 0	177.000 196.000	164.5438 189.4369	11/16/95 11/16/95	N001 0	184.0000 10	4/26/95 0	N001 0	184.0000 10	12/8/94 0	N001 0	173.0000 10
	5	EH mV	9/4/97	N001	60.0000	5	348.000 0	350.000 455.900	231.7936 327.4386	11/16/95 11/16/95	N001 0	350.0000 0	4/26/95 0	N001 0	400.0000 0	12/8/94 0	N001 0	348.0000 0
	6	GB pCi/L	9/4/97	0001	3.2600	10	0.000 1.71	1.000 2.71	0.0000 7.400	7/1/93 11.000	0001 2.2741	0.0000 4	6/30/93 4	N001 4	1.0000 4	2/19/93 4	0001 5	0.0000 11
	5	NA mg/L	9/4/97	0001	74.1000	11	68.700 0	72.300 82.000	77.7175 86.1518	11/16/95 11/16/95	0001 0	82.0000 1	4/26/95 0	0001 0	77.0000 1	12/8/94 0	0001 0	80.4000 1
	3	NH4 mg/L	9/4/97	0001	0.0070	8	0.100 0.007	0.120 0.120	0.0670 0.1800	11/16/95 U	N001 0	0.1000 0.1	4/26/95 U	N001 0	0.1000 0.1	12/8/94 H	N001 0	0.1200 0.1
	3	PB-210 pCi/L	9/4/97	0001	-0.0600	3	0.300 0.39	0.800 0.67	0.1500 0.800	11/21/92 5.700	0001 11.4000	0.3000 1.2	11/21/92 2	N001 0.9	5.7000 0.3	10/27/85 1	0001 1	0.8000 1.5
	5	RA-228 pCi/L	9/4/97	0001	-0.3000	6	0.000 0.5	0.400 2.000	2.0265 5.4436	11/21/92 2.900	N001 1.5	2.9000 2	11/21/92 1.7	0001 2.5	2.0000 1	8/12/92 1	0001 1.8	1.0000 1.8
0653	5	CA mg/L	8/29/97	0001	260.0000	18	81.800 0	130.000 278.000	276.0245 332.4564	1/14/97 1/14/97	0001 0001	278.0000 55.9500	11/16/95 6/30/93	N001 N001	270.0000 0.0000	4/25/95 6/30/93	0001 0001	265.0000 0.0000
	6	GB pCi/L	8/29/97	0001	14.2800	12	0.000 13.04	0.400 21.58	0.0000 8.3333	1/14/97 U	0001 33.61	55.95 55.95	11/16/95 13	N001 15	0.0000 0.15	6/30/93 14	0001 15	0.0000 0.15
	5	MG mg/L	8/29/97	0001	213.0000	18	69.000 0	89.600 223.000	227.7026 265.6340	1/14/97 1/14/97	0001 0001	223.0000 274.0000	11/16/95 11/16/95	N001 N001	230.0000 260.0000	4/25/95 4/25/95	0001 0001	217.0000 255.0000
	5	NA mg/L	8/29/97	0001	251.0000	18	210.000 0	211.000 267.000	256.6047 285.9075	1/14/97 1/14/97	0001 0001	274.0000 274.0000	11/16/95 11/16/95	N001 N001	260.0000 1	4/25/95 0	0001 1	255.0000 1
	6	PH s.u.	8/29/97	N001	7.4700	17	7.100 0	7.210 7.890	6.9806 7.2973	1/14/97 1/14/97	N001 N001	7.5000 0	11/16/95 0.1	N001 N001	7.1000 0.1	4/25/95 0	0001 0	7.2100 0.1

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Approved by Barbara Wetherington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:18 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT		# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS										
			LOG DATE	SAMPLE VALUE				LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	
			FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	
0653	5 <i>OK</i>	SO4 mg/L	8/29/97	0001	1630.0000	17 0	744.000 1800.000	911.000 1820.000	1804.3947 2228.7169	11/16/95 0	0001 1	1700.0000	4/25/95 0	0001 1	1820.0000	12/13/94 0	0001 1	1800.0000
	5 <i>OK</i>	TDS mg/L	8/29/97	0001	2820.0000	16 0	1390.000 2980.000	1610.000 3000.000	3060.6199 3447.6578	1/14/97 0	0001 10	2930.0000	11/16/95 0	0001 10	3000.0000	4/25/95 0	0001 10	2980.0000
0655	3 <i>OK</i>	EH mV	8/20/97	N001	82.0000	3 0	415.000 457.900	457.900 460.000	207.5000 920.0000	4/24/94 0	N001 0	415.0000	6/26/93 0	N001 0	460.0000	11/19/92 0	N001 0	457.9000
	6 <i>OK</i>	GB pCi/L	8/20/97	0001 13.68	26.7800 21.64	12 0	0.000 70.000	1.000 80.000	0.0000 -10.1306	6/26/93 42	0001 44	35.0000	6/26/93 40	N001 44	0.0000	2/19/93 26	0001 59	1.0000
	6 <i>OK</i>	K mg/L	8/20/97	0001 0.61	23.7000 1.02	15 0	22.900 43.100	23.500 43.400	11.8890 22.0972	4/24/94 0	N001 0.1	22.9000	4/24/94 0	0001 0.1	23.5000	6/26/93 0	N001 0.1	25.3000
	5 <i>OK</i>	PB-210 pCi/L	8/20/97	0001 0.61	0.2500 1.02	4 0	0.300 0.900	0.900 5.200	0.6090 7.4654	11/19/92 0.8	N001 0.3	5.2000	11/19/92 1.2	0001 2	0.3000	4/26/86 0.8	0001 1.5	0.9000
	5 <i>OK</i>	RA-228 pCi/L	8/20/97	0001 0.5	0.1000 1	11 0	0.000 2.700	0.200 4.100	2.0853 7.3531	11/19/92 1.4	N001 2	2.7000	11/19/92 1.7	0001 2.1	4.1000	8/13/92 1	0001 1.8	0.8000
	3 <i>OK</i>	SE mg/L	8/20/97	0001 U	0.0010 0.001	12 83.333	0.002 0.010	0.005 0.015	0.0010 0.0225	11/19/92 U	N001 0	0.0015	11/19/92 UIN	0001 0	0.0150	8/13/92 0	0001 0.005	0.0050
	5 <i>OK</i>	U mg/L	8/20/97	0001	0.0195	16 0	0.019 0.032	0.020 0.033	0.0202 0.0298	4/24/94 0	0001 0.001	0.0270	4/24/94 0	N001 0.001	0.0270	6/26/93 0	N001 0.001	0.0250
	6 <i>OK</i>	V mg/L	8/20/97	0001 U	0.0130 0.013	15 53.333	0.007 0.180	0.008 0.520	0.0000 -0.0084	4/24/94 U	N001 0	0.0100 0.01	4/24/94 U	0001 0	0.0100 0.01	6/26/93 U	N001 0	0.0100 0.01
0656	6 <i>OK</i>	CACO3 mg/L	8/29/97	N001	312.0000	7 0	241.000 263.000	247.000 263.000	237.5724 254.5013	1/13/97 0	N001 0	247.0000	6/29/93 0	N001 0	241.0000	2/19/93 0	N001 0	260.0000
	6 <i>OK</i>	CHLORI mg/L	8/29/97	0001	16.5000	6 0	15.700 23.000	17.100 25.000	14.2467 15.6253	1/13/97 0	0001 0.5	15.7000	6/29/93 0.5	N001 0	17.1000	2/19/93 0	0001 0.5	18.1000
	6 <i>OK</i>	GB pCi/L	8/29/97	0001 4.38	11.1100 6.73	8 12.5	4.000 26.000	8.700 35.000	0.0000 9.1253	1/13/97 U	0001 8.03	13.0200 13.02	6/29/93 5	N001 5	15.0000 5	6/29/93 5	0001 5	14.0000 5

Error Type Flags : 2 - All time high detection limit
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Flags : I - Increased detection limit due to required dilution.
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Approved by Barbara Wetherington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:19 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. %NON DETEC	ALL TIME MINIMUMS ALL TIME MAXIMUMS	LOWER BOUND UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE	VALUE				LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	
			FLAGS	UNCERTAINTY	DETLM				FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	
0656	6	SO4 mg/L	8/29/97	0001	337.0000	7	414.000 0	440.000 845.000	175.8257 251.1707	6/29/93 0	N001 1	414.0000	2/19/93 0	0001 0	466.0000 1	11/22/92 0	0001 1	440.0000 1
0657	6	CACO3 mg/L	8/25/97	N001	199.0000	13	186.000 0	189.000 215.000	177.7622 195.5974	1/12/97 1/12/97	N001 0001	190.0000 37.9200	12/9/94 6/29/93	N001 0001	195.0000 45.0000	4/23/94 6/29/93	N001 N001	189.0000 54.0000
	5	GA pCi/L	8/25/97	0001 4.68	29.0200 3.61	8	37.920 0	39.000 50.000	34.3766 49.1794	1/12/97 14.76	0001 15.1	37.9200 11	6/29/93 4	0001 11	45.0000 11	6/29/93 4	54.0000 5	
	5	GB pCi/L	8/25/97	0001 2.75	13.5500 3.75	8	13.000 12.5	14.000 26.700	16.1797 30.5195	1/12/97 U	0001 16.05	26.7000 26.7	6/29/93 5	N001 5	29.0000 5	6/29/93 5	0001 5	22.0000 5
	3	PB-210 pCi/L	8/25/97	0001 0.58	-0.2700 0.98	2	0.600 0	1.090 0.600	0.3000 2.1800	1/12/97 0.6	0001 0.99	1.0900 1	10/19/85 1.5	0001 1	0.6000 1	10/19/85 1.5	0001 1	0.6000 1.5
	5	PH s.u.	8/25/97	N001	7.3600	13	7.160 0	7.270 7.530	7.4115 7.6640	1/12/97 7.6640	N001 0001	7.5600 0.1	12/9/94 0	N001 0	7.5000 0.1	4/23/94 0	N001 0	7.3600 0
0658	3	GA pCi/L	8/28/97	0001 1.49	0.2300 2.75	2	0.500 0	2.000 0.500	0.2500 4.0000	4/23/86 2.7	0001 0.2	2.0000 3.3	10/21/85 0.2	0001 0.2	0.5000 0.2	10/21/85 3.3	0001 0.2	0.5000 0.2
	3	GB pCi/L	8/28/97	0001 1.63	1.7700 2.7	2	3.600 0	4.200 4.200	1.8000 8.4000	4/23/86 1.9	0001 1	3.6000 2.2	10/21/85 1	0001 1	4.2000 2.2	10/21/85 1	0001 1	4.2000 1
	3	NH4 mg/L	8/28/97	0001 B	0.0078 100	2	0.100 0.100	0.100 0.100	0.0500 0.2000	4/23/86 U	0001 0	0.1000 0.1	10/21/85 U	0001 0	0.1000 0.1	10/21/85 U	0001 0	0.1000 0.1
	3	NO3 mg/L	8/28/97	0001 U	0.0140 0.014	2	1.000 50	6.000 6.000	0.5000 12.0000	4/23/86 U	0001 0	1.0000 1	10/21/85 0	0001 1	6.0000 0	10/21/85 0	0001 1	6.0000 1
	3	RA-228 pCi/L	8/28/97	0001 0.3	0.0000 0.5	1	0.500 0	0.500 0.500	0.1250 2.0000	10/21/85 0.9	0001 1	0.5000 0.9	10/21/85 1	0001 0.9	0.5000 1	10/21/85 0.9	0001 1	0.5000 1
	3	SE mg/L	8/28/97	0001 U	0.0010 0.001	2	0.005 100	0.005 0.005	0.0025 0.0100	4/23/86 U	0001 0	0.0050 0.005	10/21/85 U	0001 0	0.0050 0.005	10/21/85 U	0001 0	0.0050 0.005
	3	SR mg/L	8/28/97	0001	0.0471	2	0.100 50	0.100 0.100	0.0500 0.2000	4/23/86 0	0001 0.1	0.1000 U	10/21/85 0	0001 0.1	0.1000 U	10/21/85 0	0001 0	0.1000 0.1

Error Type Flags : 2 - All time high detection limit
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Flags : I - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
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Approved by Barbara Wellington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:20 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT		# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS							
			LOG DATE	SAMPLE VALUE				LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	SAMPLE VALUE	LOG DATE	
			FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	
0658	3 <i>OK</i>	V mg/L	8/28/97	0001	0.0130	2	0.200 0.200	0.550 0.550	0.1000 1.1000	4/23/86	0001	0.5500	10/21/85	0001	0.2000
			U		0.013	0			0		0	0.01	0	0	0.01
0661	4 <i>OK</i>	CA mg/L	9/3/97	0001	27.6000	2	6.340 0	10.800 6.340	3.1700 21.6000	4/22/86	0001	10.8000	10/28/85	0001	6.3400
									0		0	0.01	0	0	0.01
	3 <i>OK</i>	GB pCi/L	9/3/97	0001	1.1400	2	3.700 1.59	7.600 2.68	1.8500 7.600	4/22/86	0001	3.7000	10/28/85	0001	7.6000
									1.7		1		2.2	1	
	3 <i>OK</i>	K mg/L	9/3/97	0001	1.8500	2	4.650 0	5.250 5.250	2.3250 10.5000	4/22/86	0001	4.6500	10/28/85	0001	5.2500
									0		0.01		0	0.01	
	3 <i>OK</i>	NH4 mg/L	9/3/97	0001	0.0070	2	0.100 0.007	0.100 100	0.0500 0.2000	4/22/86	0001	0.1000	10/28/85	0001	0.1000
									U	0	0.1	U	0	0.1	U
	3 <i>OK</i>	PB-210 pCi/L	9/3/97	0001	0.1800	1	1.200 0.48	1.200 0.82	0.3000 4.8000	10/28/85	0001	1.2000	10/28/85	0001	1.2000
									1.2		1.5		1.2	1.5	
	4 <i>OK</i>	RA-228 pCi/L	9/3/97	0001	0.3000	1	0.000 0.3	0.000 0.5	0.0000 0.0000	10/28/85	0001	0.0000	10/28/85	0001	0.0000
									0.9		1		0.9	1	
	3 <i>OK</i>	SE mg/L	9/3/97	0001	0.0010	2	0.005 100	0.005 0.005	0.0025 0.0100	4/22/86	0001	0.0050	10/28/85	0001	0.0050
									U	0	0.005	U	0	0.005	U
	3 <i>OK</i>	V mg/L	9/3/97	0001	0.0130	2	0.100 0.013	0.430 0	0.0500 0.8600	4/22/86	0001	0.4300	10/28/85	0001	0.1000
									0		0.01		0	0.01	
0663	5 <i>OK</i>	EH mV	8/28/97	N001	-92.0000	7	-72.000 0	80.000 282.000	0.0000 352.000	11/16/95	N001	80.0000	4/21/95	N001	89.0000
									358.5484		0	0	0	0	12/12/94
	6 <i>OK</i>	PH s.u.	8/28/97	N001	8.0900	17	7.700 0	8.030 9.710	7.2753 8.0651	11/16/95	N001	8.0800	4/21/95	N001	7.7000
									UN	0	0.1	0	0.1		12/12/94
	3 <i>OK</i>	SE mg/L	8/28/97	0001	0.0010	12	0.002 0.001	0.005 100	0.0010 0.0075	11/20/92	0001	0.0015	11/20/92	N001	0.0015
									U	0	0.0015	UW	0	0.005	
	6 <i>OK</i>	TMP C	8/28/97	N001	19.6000	17	9.600 0	13.500 18.000	12.9774 20.000	11/16/95	N001	16.5000	4/21/95	N001	15.3000
									18.0346		0	0.1	0	0.1	12/12/94

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Approved by Bailee Wellington
 Hydrologist "OK" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:21 PM

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Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE VALUE	FLAGS UNCERTAINTY DETLIM				LOG DATE	SAMPLE VALUE	FLAGS UNCERTAINTY DETLIM	LOG DATE	SAMPLE VALUE	FLAGS UNCERTAINTY DETLIM	LOG DATE	SAMPLE VALUE	FLAGS UNCERTAINTY DETLIM	
0668	5 <i>OK</i>	CACO3 mg/L	8/26/97	N001	177.0000	5 0	160.000 189.000	178.000 215.000	202.8466 235.9656	5/11/94 0 0	N001 0 0	215.0000 7.4000 0.5	6/29/93 6/29/93 0	N001 N001 0	186.0000 5.7000 0.5	6/25/89 6/25/89 0	N001 0001 0	178.0000 6.1000 0
		CHLORI mg/L	8/26/97	0001	7.6200	5 0	5.700 8.000	6.100 8.000	5.2761 7.5859	5/11/94 0	0001 0	7.4000 0.5	6/29/93 0	N001 0	5.7000 0.5	6/25/89 0	0001 1	6.1000
	3 <i>OK</i>	EH mV	8/26/97	N001	86.0000	2 0	245.000 450.000	450.000 450.000	122.5000 900.0000	5/11/94 0	N001 0	245.0000 0	6/29/93 0	N001 0	450.0000 0	6/29/93 0	N001 0	450.0000 0
		GB pCi/L	8/26/97	0001	3.8700	4 0	2.000 11.000	3.000 11.000	0.0000 1.4172	6/29/93 4	0001 4	3.0000 4	6/29/93 4	N001 4	2.0000 4	4/25/86 1.7	0001 1	4.1000
	5 <i>OK</i>	MG mg/L	8/26/97	0001	19.7000	7 0	7.570 20.200	11.500 23.300	20.0742 27.9430	5/11/94 0	0001 0	16.7000 0.1	5/11/94 0	N001 0	23.3000 0.1	6/29/93 0	0001 0	20.2000 0.1
		NH4 mg/L	8/26/97	0001	0.0070	5 100	0.100 0.100	0.100 0.100	0.0670 0.1500	5/14/94 U	N001 0	0.1000 0.1	6/29/93 U	N001 0	0.1000 0.1	6/25/89 U	0001 0	0.1000 0.1
	3 <i>OK</i>	PB-210 pCi/L	8/26/97	0001	-0.2000	1 0.36	1.500 0.62	1.500 0	0.3750 6.0000	10/24/85 1.1	0001 1.1	1.5000 1.5	10/24/85 1.1	0001 1.1	1.5000 1.5	10/24/85 1.1	0001 1.5	1.5000
		PH s.u.	8/26/97	N001	8.1600	5 0	7.780 9.690	7.850 9.690	6.9547 7.1975	5/11/94 0	N001 0	7.7800 0	6/29/93 0	N001 0	7.8500 0	6/25/89 0	N001 0	8.7800 0
	4 <i>OK</i>	RA-226 pCi/L	8/26/97	0001	0.1400	2 0.06	0.000 0.01	0.000 0.000	0.0000 0.0000	6/25/89 0.1	0001 1	0.0000 0.2	10/24/85 1	0001 0.2	0.0000 0.2	10/24/85 1	0001 1	0.0000 1
		RA-228 pCi/L	8/26/97	0001	-0.3000	1 0.4	0.000 0.9	0.000 0	0.0000 0.0000	6/25/89 0.8	0001 1	0.0000 0.8	6/25/89 1	0001 0.8	0.0000 1	6/25/89 0.8	0001 1	0.0000 1
	3 <i>OK</i>	SE mg/L	8/26/97	0001	0.0023	3 B	0.005 100	0.005 0.005	0.0025 0.0100	6/25/89 U	0001 0	0.0050 0.005	4/25/86 U	0001 0	0.0050 0.005	10/24/85 U	0001 0	0.0050 0.005
		SR mg/L	8/26/97	0001	0.3880	6 0	0.100 0.490	0.200 0.510	0.4081 0.6515	5/11/94 0	0001 0	0.3400 0.01	5/11/94 0	N001 0	0.4200 0.01	6/29/93 0	N001 0	0.4900 0.01
	5 <i>OK</i>	U mg/L	8/26/97	0001	0.0033	7 0	0.001 0.003	0.002 0.004	0.0037 0.0047	5/11/94 0	0001 0.001	0.0030 0	5/11/94 0	N001 0	0.0040 0.001	6/29/93 0	N001 0	0.0030 0.001

Error Type Flags : 2 - All time high detection limit
 3 - Too low (non-trend approach)
 4 - Too high (non-trend approach)
 5 - Too low (trend approach)
 6 - Too high (trend approach)

Flags : I - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
 J - Estimated value.
 H - Hold time expired, value suspect.

Approved by Bailey Wellington
 Hydrologist "Ok" indicates insignificant variation

Date 10/29/97

SUSPECTED ANOMALIES REPORT

REPORT DATE: 10/24/97

TIME: 1:15:22 PM

Page 13 of 13

Site : MON01 MONUMENT VALLE Test Data Date Range : 8/1/97 to 9/30/97

Older Data Only Used for Baseline Data

543 Chemical Records

4422 History Records

LOC. ID.	ERR. TYPE FLAG	PARAM CODE UNITS	ANOMALOUS TEST DATA POINT			# OF SAMP. ----- %NON DETEC	ALL TIME MINIMUMS ----- ALL TIME MAXIMUMS	LOWER BOUND ----- UPPER BOUND	3 MOST RECENT SAMPLING EVENTS									
			LOG DATE	SAMPLE	VALUE				LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	LOG DATE	SAMPLE	VALUE	
			FLAGS	UNCERTAINTY	DETLM				FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	FLAGS	UNCERTAINTY	DETLM	
0668	6	V <i>OK</i> mg/L	8/26/97	N001	0.0130	7	0.010 0.160	0.160 0.500	0.0000 0.0021	5/11/94 U	N001 0	0.0100 0.01	5/11/94	N001 0	0.0100 0.01	6/29/93	N001 0	0.0100 0.01
0669	5	CACO3 <i>OK</i> mg/L	8/26/97	N001	166.0000	7	202.000 0	204.000 240.000	204.0075 247.4626	1/13/97	N001	240.0000	5/12/94	N001 0	202.0000 0	6/29/93	N001 0	204.0000 0
	6	GB <i>OK</i> pCi/L	8/26/97	0001	4.9600	6	2.000 3.34	4.000 5.41	0.0000 2.8202	1/13/97	0001	10.6000 10.6	6/29/93	0001 4	2.0000 5	6/29/93	N001 4	4.0000 5
	6	NO3 <i>OK</i> mg/L	8/26/97	0001	45.3000	7	3.000 0	10.000 33.500	14.5303 44.4850	1/13/97	0001	32.1000	5/14/94	N001 0	28.0000 1	6/29/93	N001 0	3.0000 1
	3	PB-210 <i>OK</i> pCi/L	8/26/97	0001	-0.4300	3	0.900 0.37	1.290 0.63	0.4500 1.290	1/13/97	0001	1.2900 0.5	4/25/86	0001 0.9	1.6000 1.5	10/26/85	0001 1.1	0.9000 1.5
	5	PH <i>OK</i> s.u.	8/26/97	N001	7.3400	7	7.180 0	7.420 7.660	7.3951 7.7492	1/13/97	N001	7.5700	5/12/94	N001 0	7.6700 0	6/29/93	N001 0	7.1800 0
	6	SO4 <i>OK</i> mg/L	8/26/97	0001	189.0000	6	182.000 0	232.000 417.000	67.8550 109.6062	5/12/94	0001 0	182.0000 1	6/29/93	N001 0	232.0000 1	2/24/92	0001 0	266.0000 30
	6	TDS <i>OK</i> mg/L	8/26/97	0001	578.0000	7	500.000 0	567.000 982.000	411.8519 570.9460	1/13/97	0001	567.0000	5/12/94	0001 0	500.0000 10	6/29/93	N001 H	600.0000 10

Error Type Flags : 2 - All time high detection limit
 3 - Too low (non-trend approach)
 4 - Too high (non-trend approach)
 5 - Too low (trend approach)
 6 - Too high (trend approach)

Flags : 1 - Increased detection limit due to required dilution.
 L - Less than three bore volumes removed before sampling.
 J - Estimated value.
 H - Hold time expired, value suspect.

Approved by Barbara Wellington
 Hydrologist "OK" indicates insignificant variation

Date 10/29/97

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DATA REVIEW CHECKSHEET

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ANOMALOUS DATA REVIEW CHECKSHEET

SITE: Monument Valley SAMPLING DATA: 8/97 - 9/4/97

REVIEWER(s): Barbara Wetherington Barbara Wetherington 10/29/97
NAME (print) SIGNATURE DATE

SITE HYDROLOGIST: Kenneth E Karp Kerns. Id. cys 11/14/97
NAME (print) SIGNATURE DATE

SITE GEOCHEMIST: _____ **NAME (print)** _____ **SIGNATURE** _____ **DATE**

DATE OF REVIEW: 10/29/97

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ANALYTICAL LABORATORY RESULTS

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GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:45

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Alkalinity as CaCO ₃	mg/L	0200	09/04/97	N001	AL	U	233		#		-	-
	mg/L	0407	08/22/97	N001	AL	N	125	L	#		-	-
	mg/L	0409	08/21/97	N001	AL	N	131	LG	#		-	-
	mg/L	0603	08/27/97	N001	AL	U	172		#		-	-
	mg/L	0604	08/27/97	N001	AL	C	161		#		-	-
	mg/L	0605	08/28/97	N001	AL	D	234		#		-	-
	mg/L	0606	08/28/97	N001	AL	D	267		#		-	-
	mg/L	0612	09/03/97	N001	DC	U	125		#		-	-
	mg/L	0613	08/28/97	N001	DC	U	150		#		-	-
	mg/L	0614	09/03/97	N001	SR	D	176		#		-	-
	mg/L	0615	09/02/97	N001	SR	U	168		#		-	-
	mg/L	0618	08/28/97	N001	DC	O	122		#		-	-
	mg/L	0619	08/27/97	N001	DC	O	136		#		-	-
	mg/L	0650	09/03/97	N001	AL	D	187		#		-	-
	mg/L	0652	09/04/97	N001	AL	D	156		#		-	-
	mg/L	0653	08/29/97	N001	AL	D	212		#		-	-
	mg/L	0655	08/20/97	N001	AL	D	250		#		-	-
	mg/L	0656	08/29/97	N001	AL	D	312		#		-	-
	mg/L	0657	08/25/97	N001	DC	O	199		#		-	-
	mg/L	0658	08/28/97	N001	SR	U	184		#		-	-
	mg/L	0661	09/03/97	N001	DC	U	162		#		-	-
	mg/L	0663	08/28/97	N001	DC	D	191		#		-	-
	mg/L	0668	08/26/97	N001	DC	D	177		#		-	-
	mg/L	0669	08/26/97	N001	AL	D	166	L	#		-	-
	mg/L	0760	08/21/97	N001	AL	N	173		#		-	-
	mg/L	0761	09/03/97	N001	AL	N	166		#		-	-
	mg/L	0762	09/04/97	N001	AL	N	199		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:46

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
			DATE	ID				LAB	DATA	QA	
Alkalinity as CaCO ₃	mg/L	0764	09/04/97	N001	AL	N	182		#	-	-
	mg/L	0765	08/20/97	N001	AL	N	239		#	-	-
	mg/L	0767	08/21/97	N001	AL	N	176		#	-	-
	mg/L	0768	09/02/97	N001	AL	N	161		#	-	-
	mg/L	0771	08/26/97	N001	AL	N	299	L	#	-	-
	mg/L	0772	09/02/97	N001	AL	N	172		#	-	-
	mg/L	0774	08/26/97	N001	AL	N	272		#	-	-
	mg/L	0775	09/03/97	N001	DC	N	106	L	#	-	-
	mg/L	0776	08/26/97	N001	DC	N	146		#	-	-
Ammonia as NH ₄	mg/L	0200	09/04/97	0001	AL	U	0.0070	U	#	0.007	-
	mg/L	0200	09/04/97	N001	AL	U	0.0070	U	#	0.007	-
	mg/L	0407	08/22/97	0001	AL	N	0.0227	B	L	#	-
	mg/L	0409	08/21/97	0001	AL	N	0.0252	B	LG	#	-
	mg/L	0603	08/27/97	0001	AL	U	0.359		#	-	-
	mg/L	0604	08/27/97	0001	AL	C	0.0576	B		#	-
	mg/L	0605	08/28/97	0001	AL	D	0.274		#	-	-
	mg/L	0606	08/28/97	0001	AL	D	254.000		#	-	-
	mg/L	0612	09/03/97	0001	DC	U	0.0070	U	#	0.007	-
	mg/L	0613	08/28/97	0001	DC	U	0.0070	U	#	0.007	-
	mg/L	0614	09/03/97	0001	SR	D	0.0070	U	#	0.007	-
	mg/L	0615	09/02/97	0001	SR	U	0.0078	B		#	-
	mg/L	0618	08/28/97	0001	DC	O	0.0070	U	#	0.007	-
	mg/L	0619	08/27/97	0001	DC	O	0.0070	U	#	0.007	-
	mg/L	0650	09/03/97	0001	AL	D	0.0070	U	#	0.007	-
	mg/L	0652	09/04/97	0001	AL	D	0.0070	U	#	0.007	-
	mg/L	0653	08/29/97	0001	AL	D	0.0178	B		#	-
	mg/L	0655	08/20/97	0001	AL	D	181.000		#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:46

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Ammonia as NH4	mg/L	0656	08/29/97	0001	AL	D	99.800		#		-	-
	mg/L	0657	08/25/97	0001	DC	O	0.0070	U	#	0.007	-	-
	mg/L	0657	08/25/97	0002	DC	O	0.0070	U	#	0.007	-	-
	mg/L	0658	08/28/97	0001	SR	U	0.0078	B	#	-	-	-
	mg/L	0661	09/03/97	0001	DC	U	0.0070	U	#	0.007	-	-
	mg/L	0663	08/28/97	0001	DC	D	0.0352	B	#	-	-	-
	mg/L	0668	08/26/97	0001	DC	D	0.0070	U	#	0.007	-	-
	mg/L	0669	08/26/97	0001	AL	D	0.724	L	#	-	-	-
	mg/L	0760	08/21/97	0001	AL	N	0.132		#	-	-	-
	mg/L	0760	08/21/97	0002	AL	N	0.132		#	-	-	-
	mg/L	0761	09/03/97	0001	AL	N	0.0153	B	#	-	-	-
	mg/L	0762	09/04/97	0001	AL	N	0.0476	B	#	-	-	-
	mg/L	0764	09/04/97	0001	AL	N	2.350		#	-	-	-
	mg/L	0765	08/20/97	0001	AL	N	165.000		#	-	-	-
	mg/L	0767	08/21/97	0001	AL	N	0.219		#	-	-	-
	mg/L	0768	09/02/97	0001	AL	N	0.729		#	-	-	-
	mg/L	0771	08/26/97	0001	AL	N	187.000	L	#	-	-	-
	mg/L	0772	09/02/97	0001	AL	N	17.700		#	-	-	-
	mg/L	0774	08/26/97	0001	AL	N	0.0070	U		0.007	-	-
	mg/L	0775	09/03/97	0001	DC	N	0.0352	B	L	#	-	-
	mg/L	0776	08/26/97	0001	DC	N	0.0070	U		0.007	-	-
Cadmium	mg/L	0200	09/04/97	0001	AL	U	0.0010	U	#	0.001	-	-
	mg/L	0200	09/04/97	N001	AL	U	0.0011	U	#	0.0011	-	-
	mg/L	0407	08/22/97	0001	AL	N	0.0010	U	L	#	0.001	-
	mg/L	0409	08/21/97	0001	AL	N	0.0010	U	LG	#	0.001	-
	mg/L	0603	08/27/97	0001	AL	U	0.0010	U		#	0.001	-
	mg/L	0604	08/27/97	0001	AL	C	0.0010	U		#	0.001	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:47

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Cadmium	mg/L	0605	08/28/97	0001	AL	D	0.0010	U		#	0.001	-
	mg/L	0606	08/28/97	0001	AL	D	0.0010	U		#	0.001	-
	mg/L	0612	09/03/97	0001	DC	U	0.0010	U		#	0.001	-
	mg/L	0613	08/28/97	0001	DC	U	0.0010	U		#	0.001	-
	mg/L	0614	09/03/97	0001	SR	D	0.0010	U		#	0.001	-
	mg/L	0615	09/02/97	0001	SR	U	0.0010	U		#	0.001	-
	mg/L	0618	08/28/97	0001	DC	O	0.0010	U		#	0.001	-
	mg/L	0619	08/27/97	0001	DC	O	0.0010	U		#	0.001	-
	mg/L	0650	09/03/97	0001	AL	D	0.0010	U		#	0.001	-
	mg/L	0652	09/04/97	0001	AL	D	0.0010	U		#	0.001	-
	mg/L	0653	08/29/97	0001	AL	D	0.0010	U		#	0.001	-
	mg/L	0655	08/20/97	0001	AL	D	0.0010	U		#	0.001	-
	mg/L	0656	08/29/97	0001	AL	D	0.0010	U		#	0.001	-
	mg/L	0657	08/25/97	0001	DC	O	0.0010	U		#	0.001	-
	mg/L	0657	08/25/97	0002	DC	O	0.0010	U		#	0.001	-
	mg/L	0658	08/28/97	0001	SR	U	0.0010	U		#	0.001	-
	mg/L	0661	09/03/97	0001	DC	U	0.0010	U		#	0.001	-
	mg/L	0663	08/28/97	0001	DC	D	0.0010	U		#	0.001	-
	mg/L	0668	08/26/97	0001	DC	D	0.0010	U		#	0.001	-
	mg/L	0669	08/26/97	0001	AL	D	0.0010	U	L	#	0.001	-
	mg/L	0760	08/21/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0760	08/21/97	0002	AL	N	0.0010	U		#	0.001	-
	mg/L	0761	09/03/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0762	09/04/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0764	09/04/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0765	08/20/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0767	08/21/97	0001	AL	N	0.0010	U		#	0.001	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:48

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Cadmium	mg/L	0768	09/02/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0771	08/26/97	0001	AL	N	0.0010	U	L	#	0.001	-
	mg/L	0772	09/02/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0774	08/26/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0775	09/03/97	0001	DC	N	0.0010	U	L	#	0.001	-
	mg/L	0776	08/26/97	0001	DC	N	0.0010	U		#	0.001	-
Calcium	mg/L	0200	09/04/97	0001	AL	U	76.700			#	-	-
	mg/L	0200	09/04/97	N001	AL	U	77.300			#	-	-
	mg/L	0407	08/22/97	0001	AL	N	74.800		L	#	-	-
	mg/L	0409	08/21/97	0001	AL	N	20.900		LG	#	-	-
	mg/L	0603	08/27/97	0001	AL	U	19.300			#	-	-
	mg/L	0604	08/27/97	0001	AL	C	20.000			#	-	-
	mg/L	0605	08/28/97	0001	AL	D	121.000			#	-	-
	mg/L	0606	08/28/97	0001	AL	D	194.000			#	-	-
	mg/L	0612	09/03/97	0001	DC	U	28.300			#	-	-
	mg/L	0613	08/28/97	0001	DC	U	16.100			#	-	-
	mg/L	0614	09/03/97	0001	SR	D	87.600			#	-	-
	mg/L	0615	09/02/97	0001	SR	U	15.300			#	-	-
	mg/L	0618	08/28/97	0001	DC	O	31.700			#	-	-
	mg/L	0619	08/27/97	0001	DC	O	38.900			#	-	-
	mg/L	0650	09/03/97	0001	AL	D	9.180			#	-	-
	mg/L	0652	09/04/97	0001	AL	D	26.500			#	-	-
	mg/L	0653	08/29/97	0001	AL	D	260.000			#	-	-
	mg/L	0655	08/20/97	0001	AL	D	331.000			#	-	-
	mg/L	0656	08/29/97	0001	AL	D	51.200			#	-	-
	mg/L	0657	08/25/97	0001	DC	O	56.500			#	-	-
	mg/L	0657	08/25/97	0002	DC	O	56.300			#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:48

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Calcium	mg/L	0658	08/28/97	0001	SR	U	2.450		#		-	-
	mg/L	0661	09/03/97	0001	DC	U	27.600		#		-	-
	mg/L	0663	08/28/97	0001	DC	D	17.000		#		-	-
	mg/L	0668	08/26/97	0001	DC	D	15.700		#		-	-
	mg/L	0669	08/26/97	0001	AL	D	66.700	L	#		-	-
	mg/L	0760	08/21/97	0001	AL	N	20.100		#		-	-
	mg/L	0760	08/21/97	0002	AL	N	20.100		#		-	-
	mg/L	0761	09/03/97	0001	AL	N	126.000		#		-	-
	mg/L	0762	09/04/97	0001	AL	N	104.000		#		-	-
	mg/L	0764	09/04/97	0001	AL	N	115.000		#		-	-
	mg/L	0765	08/20/97	0001	AL	N	180.000		#		-	-
	mg/L	0767	08/21/97	0001	AL	N	35.300		#		-	-
	mg/L	0768	09/02/97	0001	AL	N	92.200		#		-	-
	mg/L	0771	08/26/97	0001	AL	N	559.000	L	#		-	-
	mg/L	0772	09/02/97	0001	AL	N	30.700		#		-	-
	mg/L	0774	08/26/97	0001	AL	N	45.300		#		-	-
Chloride	mg/L	0775	09/03/97	0001	DC	N	11.700	L	#		-	-
	mg/L	0776	08/26/97	0001	DC	N	33.100		#		-	-
	mg/L	0200	09/04/97	0001	AL	U	125.000		#		-	-
	mg/L	0200	09/04/97	N001	AL	U	116.000		#		-	-
	mg/L	0407	08/22/97	0001	AL	N	192.000	L	#		-	-
	mg/L	0409	08/21/97	0001	AL	N	7.190	LG	#		-	-
	mg/L	0603	08/27/97	0001	AL	U	12.400		#		-	-
	mg/L	0604	08/27/97	0001	AL	C	11.200		#		-	-
	mg/L	0605	08/28/97	0001	AL	D	173.000		#		-	-
	mg/L	0606	08/28/97	0001	AL	D	17.600		#		-	-
	mg/L	0612	09/03/97	0001	DC	U	4.340		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:49

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Chloride	mg/L	0613	08/28/97	0001	DC	U	8.420		#		-	-
	mg/L	0614	09/03/97	0001	SR	D	32.300		#		-	-
	mg/L	0615	09/02/97	0001	SR	U	9.610		#		-	-
	mg/L	0618	08/28/97	0001	DC	O	3.230		#		-	-
	mg/L	0619	08/27/97	0001	DC	O	5.970		#		-	-
	mg/L	0650	09/03/97	0001	AL	D	8.740		#		-	-
	mg/L	0652	09/04/97	0001	AL	D	14.200		#		-	-
	mg/L	0653	08/29/97	0001	AL	D	35.600		#		-	-
	mg/L	0655	08/20/97	0001	AL	D	24.400		#		-	-
	mg/L	0656	08/29/97	0001	AL	D	16.500		#		-	-
	mg/L	0657	08/25/97	0001	DC	O	7.060		#		-	-
	mg/L	0657	08/25/97	0002	DC	O	7.100		#		-	-
	mg/L	0658	08/28/97	0001	SR	U	9.290		#		-	-
	mg/L	0661	09/03/97	0001	DC	U	3.110		#		-	-
	mg/L	0663	08/28/97	0001	DC	D	9.780		#		-	-
	mg/L	0668	08/26/97	0001	DC	D	7.620		#		-	-
	mg/L	0669	08/26/97	0001	AL	D	11.900	L	#		-	-
	mg/L	0760	08/21/97	0001	AL	N	11.500		#		-	-
	mg/L	0760	08/21/97	0002	AL	N	11.400		#		-	-
	mg/L	0761	09/03/97	0001	AL	N	16.000		#		-	-
	mg/L	0762	09/04/97	0001	AL	N	56.400		#		-	-
	mg/L	0764	09/04/97	0001	AL	N	13.500		#		-	-
	mg/L	0765	08/20/97	0001	AL	N	22.100		#		-	-
	mg/L	0767	08/21/97	0001	AL	N	5.240		#		-	-
	mg/L	0768	09/02/97	0001	AL	N	106.000		#		-	-
	mg/L	0771	08/26/97	0001	AL	N	31.700	L	#		-	-
	mg/L	0772	09/02/97	0001	AL	N	20.300		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:49

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Chloride	mg/L	0774	08/26/97	0001	AL	N	8.770		#		-	-
	mg/L	0775	09/03/97	0001	DC	N	8.680	L	#		-	-
	mg/L	0776	08/26/97	0001	DC	N	5.670		#		-	-
Gross Alpha	pCi/L	0200	09/04/97	0001	AL	U	8.44	U	#	8.44	± 5.11	
	pCi/L	0200	09/04/97	N001	AL	U	10.04		#	8.61	± 5.90	
	pCi/L	0407	08/22/97	0001	AL	N	36.68	L	#	16.62	± 13.3	
	pCi/L	0409	08/21/97	0001	AL	N	2.48	U	LG	#	2.48	± 1.36
	pCi/L	0603	08/27/97	0001	AL	U	3.52	U		#	3.52	± 2.28
	pCi/L	0604	08/27/97	0001	AL	C	3.42	U		#	3.42	± 2.11
	pCi/L	0605	08/28/97	0001	AL	D	20.52	U		#	20.52	± 12.0
	pCi/L	0606	08/28/97	0001	AL	D	13.93	U		#	13.93	± 8.58
	pCi/L	0612	09/03/97	0001	DC	U	3.28		#	2.32	± 1.65	
	pCi/L	0613	08/28/97	0001	DC	U	2.82	U		#	2.82	± 1.79
	pCi/L	0614	09/03/97	0001	SR	D	10.68		#	5	± 3.97	
	pCi/L	0615	09/02/97	0001	SR	U	6.78		#	2.87	± 2.34	
	pCi/L	0618	08/28/97	0001	DC	O	2.57	U		#	2.57	± 1.63
	pCi/L	0619	08/27/97	0001	DC	O	18.50		#	2.86	± 3.37	
	pCi/L	0650	09/03/97	0001	AL	D	2.45	U		#	2.45	± 1.39
	pCi/L	0652	09/04/97	0001	AL	D	2.75	U		#	2.75	± 1.74
	pCi/L	0653	08/29/97	0001	AL	D	21.25	U		#	21.25	± 12.3
	pCi/L	0655	08/20/97	0001	AL	D	22.09	U		#	22.09	± 13.7
	pCi/L	0656	08/29/97	0001	AL	D	6.28	U		#	6.28	± 3.76
	pCi/L	0657	08/25/97	0001	DC	O	29.02		#	3.61	± 4.68	
	pCi/L	0657	08/25/97	0002	DC	O	20.49		#	2.88	± 3.53	
	pCi/L	0658	08/28/97	0001	SR	U	2.75	U		#	2.75	± 1.49
	pCi/L	0661	09/03/97	0001	DC	U	2.38	U		#	2.38	± 1.35
	pCi/L	0663	08/28/97	0001	DC	D	2.74	U		#	2.74	± 1.53

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:50

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Gross Alpha	pCi/L	0668	08/26/97	0001	DC	D	2.71	U		#	2.71	± 1.71
	pCi/L	0669	08/26/97	0001	AL	D	6.44		L	#	5.18	± 3.60
	pCi/L	0760	08/21/97	0001	AL	N	3.38	U		#	3.38	± 1.95
	pCi/L	0760	08/21/97	0002	AL	N	3.37	U		#	3.37	± 2.22
	pCi/L	0761	09/03/97	0001	AL	N	7.06	U		#	7.06	± 4.35
	pCi/L	0762	09/04/97	0001	AL	N	11.01	U		#	11.01	± 6.79
	pCi/L	0764	09/04/97	0001	AL	N	7.84			#	6.73	± 4.61
	pCi/L	0765	08/20/97	0001	AL	N	15.50	U		#	15.5	± 9.09
	pCi/L	0767	08/21/97	0001	AL	N	2.82	U		#	2.82	± 1.69
	pCi/L	0768	09/02/97	0001	AL	N	13.15	U		#	13.15	± 7.44
	pCi/L	0771	08/26/97	0001	AL	N	48.57	U	L	#	48.57	± 26.5
	pCi/L	0772	09/02/97	0001	AL	N	17.99			#	6.59	± 5.63
	pCi/L	0774	08/26/97	0001	AL	N	27.17			#	2.83	± 3.99
Gross Beta	pCi/L	0775	09/03/97	0001	DC	N	2.57	U	L	#	2.57	± 1.63
	pCi/L	0776	08/26/97	0001	DC	N	15.61			#	2.71	± 3.04
Gross Beta	pCi/L	0200	09/04/97	0001	AL	U	8.98	U		#	8.98	± 5.27
	pCi/L	0200	09/04/97	N001	AL	U	9.02	U		#	9.02	± 5.39
	pCi/L	0407	08/22/97	0001	AL	N	18.11	U	L	#	18.11	± 10.7
	pCi/L	0409	08/21/97	0001	AL	N	2.69	U	LG	#	2.69	± 1.65
	pCi/L	0603	08/27/97	0001	AL	U	3.60	U		#	3.6	± 2.16
	pCi/L	0604	08/27/97	0001	AL	C	3.60	U		#	3.6	± 2.23
	pCi/L	0605	08/28/97	0001	AL	D	21.55	U		#	21.55	± 12.6
	pCi/L	0606	08/28/97	0001	AL	D	15.38	U		#	15.38	± 9.51
	pCi/L	0612	09/03/97	0001	DC	U	2.70	U		#	2.7	± 1.61
	pCi/L	0613	08/28/97	0001	DC	U	3.26			#	2.71	± 1.71
	pCi/L	0614	09/03/97	0001	SR	D	11.35			#	5.43	± 3.64
	pCi/L	0615	09/02/97	0001	SR	U	8.00			#	2.73	± 1.93

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:50

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Gross Beta	pCi/L	0618	08/28/97	0001	DC	O	2.70	U		#	2.7	± 1.65
	pCi/L	0619	08/27/97	0001	DC	O	12.03			#	2.79	± 2.13
	pCi/L	0650	09/03/97	0001	AL	D	2.69	U		#	2.69	± 1.62
	pCi/L	0652	09/04/97	0001	AL	D	3.26			#	2.71	± 1.71
	pCi/L	0653	08/29/97	0001	AL	D	21.58	U		#	21.58	± 13.0
	pCi/L	0655	08/20/97	0001	AL	D	26.78			#	21.64	± 13.6
	pCi/L	0656	08/29/97	0001	AL	D	11.11			#	6.73	± 4.38
	pCi/L	0657	08/25/97	0001	DC	O	13.55			#	3.75	± 2.75
	pCi/L	0657	08/25/97	0002	DC	O	12.67			#	2.8	± 2.16
	pCi/L	0658	08/28/97	0001	SR	U	2.70	U		#	2.7	± 1.63
	pCi/L	0661	09/03/97	0001	DC	U	2.68	U		#	2.68	± 1.59
	pCi/L	0663	08/28/97	0001	DC	D	3.26			#	2.7	± 1.70
	pCi/L	0668	08/26/97	0001	DC	D	3.87			#	2.7	± 1.73
	pCi/L	0669	08/26/97	0001	AL	D	5.41	U	L	#	5.41	± 3.34
	pCi/L	0760	08/21/97	0001	AL	N	3.59	U		#	3.59	± 2.17
	pCi/L	0760	08/21/97	0002	AL	N	3.60	U		#	3.6	± 2.18
	pCi/L	0761	09/03/97	0001	AL	N	7.69	U		#	7.69	± 4.74
	pCi/L	0762	09/04/97	0001	AL	N	11.97	U		#	11.97	± 7.08
	pCi/L	0764	09/04/97	0001	AL	N	7.21	U		#	7.21	± 4.34
	pCi/L	0765	08/20/97	0001	AL	N	34.32			#	15.42	± 10.4
	pCi/L	0767	08/21/97	0001	AL	N	2.76			#	2.71	± 1.68
	pCi/L	0768	09/02/97	0001	AL	N	13.47	U		#	13.47	± 7.78
	pCi/L	0771	08/26/97	0001	AL	N	61.89		L	#	53.68	± 33.7
	pCi/L	0772	09/02/97	0001	AL	N	9.02			#	6.83	± 4.34
	pCi/L	0774	08/26/97	0001	AL	N	11.63			#	2.84	± 2.13
	pCi/L	0775	09/03/97	0001	DC	N	3.70		L	#	2.7	± 1.72
	pCi/L	0776	08/26/97	0001	DC	N	8.94			#	2.78	± 1.99

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:51

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
			DATE	ID				LAB	DATA	QA	
Lead-210	pCi/L	0200	09/04/97	0001	AL	U	0.77	U		#	0.77 ± 0.45
	pCi/L	0200	09/04/97	N001	AL	U	0.77	U		#	0.77 ± 0.46
	pCi/L	0407	08/22/97	0001	AL	N	1.13	U	L	#	1.13 ± 0.66
	pCi/L	0409	08/21/97	0001	AL	N	0.88	U	LG	#	0.88 ± 0.51
	pCi/L	0603	08/27/97	0001	AL	U	0.83	U		#	0.83 ± 0.49
	pCi/L	0604	08/27/97	0001	AL	C	0.85	U		#	0.85 ± 0.51
	pCi/L	0605	08/28/97	0001	AL	D	0.86	U		#	0.86 ± 0.52
	pCi/L	0606	08/28/97	0001	AL	D	0.87	U		#	0.87 ± 0.51
	pCi/L	0612	09/03/97	0001	DC	U	0.87	U		#	0.87 ± 0.51
	pCi/L	0613	08/28/97	0001	DC	U	0.76	U		#	0.76 ± 0.45
	pCi/L	0614	09/03/97	0001	SR	D	1.85			#	0.74 ± 0.47
	pCi/L	0615	09/02/97	0001	SR	U	1.30			#	0.88 ± 0.54
	pCi/L	0618	08/28/97	0001	DC	O	0.81	U		#	0.81 ± 0.48
	pCi/L	0619	08/27/97	0001	DC	O	0.82	U		#	0.82 ± 0.48
	pCi/L	0650	09/03/97	0001	AL	D	0.82	U		#	0.82 ± 0.50
	pCi/L	0652	09/04/97	0001	AL	D	0.67	U		#	0.67 ± 0.39
	pCi/L	0653	08/29/97	0001	AL	D	0.80	U		#	0.8 ± 0.48
	pCi/L	0655	08/20/97	0001	AL	D	1.02	U		#	1.02 ± 0.61
	pCi/L	0656	08/29/97	0001	AL	D	0.75	U		#	0.75 ± 0.45
	pCi/L	0657	08/25/97	0001	DC	O	0.98	U		#	0.98 ± 0.58
	pCi/L	0657	08/25/97	0002	DC	O	1.03	U		#	1.03 ± 0.60
	pCi/L	0658	08/28/97	0001	SR	U	0.93			#	0.82 ± 0.50
	pCi/L	0661	09/03/97	0001	DC	U	0.82	U		#	0.82 ± 0.48
	pCi/L	0663	08/28/97	0001	DC	D	0.88	U		#	0.88 ± 0.52
	pCi/L	0668	08/26/97	0001	DC	D	0.62	U		#	0.62 ± 0.36
	pCi/L	0669	08/26/97	0001	AL	D	0.63	U	L	#	0.63 ± 0.37
	pCi/L	0760	08/21/97	0001	AL	N	0.98	U		#	0.98 ± 0.57

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:52

PARAMETER	UNITS	LOCATION ID	SAMPLE:	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY		
			DATE				LAB	DATA	QA			
Lead-210	pCi/L	0760	08/21/97	0002	AL	N	1.25	U	#	1.25	± 0.73	
	pCi/L	0761	09/03/97	0001	AL	N	0.75	U	#	0.75	± 0.45	
	pCi/L	0762	09/04/97	0001	AL	N	1.14	U	#	1.14	± 0.68	
	pCi/L	0764	09/04/97	0001	AL	N	0.78	U	#	0.78	± 0.47	
	pCi/L	0765	08/20/97	0001	AL	N	1.15	U	#	1.15	± 0.68	
	pCi/L	0767	08/21/97	0001	AL	N	1.13	U	#	1.13	± 0.66	
	pCi/L	0768	09/02/97	0001	AL	N	0.80	U	#	0.8	± 0.47	
	pCi/L	0771	08/26/97	0001	AL	N	0.64	U	L	#	0.64	± 0.37
	pCi/L	0772	09/02/97	0001	AL	N	0.84	U	#	0.84	± 0.50	
	pCi/L	0774	08/26/97	0001	AL	N	0.67	U	#	0.67	± 0.39	
	pCi/L	0775	09/03/97	0001	DC	N	0.82	U	L	#	0.82	± 0.48
	pCi/L	0776	08/26/97	0001	DC	N	0.61	U	#	0.61	± 0.36	
Magnesium	mg/L	0200	09/04/97	0001	AL	U	68.900		#	-	-	
	mg/L	0200	09/04/97	N001	AL	U	67.100		#	-	-	
	mg/L	0407	08/22/97	0001	AL	N	120.000	L	#	-	-	
	mg/L	0409	08/21/97	0001	AL	N	10.600	LG	#	-	-	
	mg/L	0603	08/27/97	0001	AL	U	14.100		#	-	-	
	mg/L	0604	08/27/97	0001	AL	C	12.000		#	-	-	
	mg/L	0605	08/28/97	0001	AL	D	142.000		#	-	-	
	mg/L	0606	08/28/97	0001	AL	D	110.000		#	-	-	
	mg/L	0612	09/03/97	0001	DC	U	20.000		#	-	-	
	mg/L	0613	08/28/97	0001	DC	U	28.200		#	-	-	
	mg/L	0614	09/03/97	0001	SR	D	54.900		#	-	-	
	mg/L	0615	09/02/97	0001	SR	U	20.600		#	-	-	
	mg/L	0618	08/28/97	0001	DC	O	18.700		#	-	-	
	mg/L	0619	08/27/97	0001	DC	O	26.400		#	-	-	
	mg/L	0650	09/03/97	0001	AL	D	6.310		#	-	-	

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:52

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
			DATE	ID				LAB	DATA	QA	
Magnesium	mg/L	0652	09/04/97	0001	AL	D	12.100		#	-	-
	mg/L	0653	08/29/97	0001	AL	D	213.000		#	-	-
	mg/L	0655	08/20/97	0001	AL	D	231.000		#	-	-
	mg/L	0656	08/29/97	0001	AL	D	42.300		#	-	-
	mg/L	0657	08/25/97	0001	DC	O	36.400		#	-	-
	mg/L	0657	08/25/97	0002	DC	O	36.600		#	-	-
	mg/L	0658	08/28/97	0001	SR	U	1.610		#	-	-
	mg/L	0661	09/03/97	0001	DC	U	19.800		#	-	-
	mg/L	0663	08/28/97	0001	DC	D	13.000		#	-	-
	mg/L	0668	08/26/97	0001	DC	D	19.700		#	-	-
	mg/L	0669	08/26/97	0001	AL	D	48.400	L	#	-	-
	mg/L	0760	08/21/97	0001	AL	N	16.000		#	-	-
	mg/L	0760	08/21/97	0002	AL	N	16.000		#	-	-
	mg/L	0761	09/03/97	0001	AL	N	82.700		#	-	-
	mg/L	0762	09/04/97	0001	AL	N	92.400		#	-	-
	mg/L	0764	09/04/97	0001	AL	N	68.400		#	-	-
	mg/L	0765	08/20/97	0001	AL	N	152.000		#	-	-
	mg/L	0767	08/21/97	0001	AL	N	16.300		#	-	-
	mg/L	0768	09/02/97	0001	AL	N	125.000		#	-	-
	mg/L	0771	08/26/97	0001	AL	N	600.000	L	#	-	-
	mg/L	0772	09/02/97	0001	AL	N	14.400		#	-	-
	mg/L	0774	08/26/97	0001	AL	N	28.400		#	-	-
	mg/L	0775	09/03/97	0001	DC	N	8.200	L	#	-	-
	mg/L	0776	08/26/97	0001	DC	N	23.900		#	-	-
Nitrate	mg/L	0200	09/04/97	0001	AL	U	10.500		#	-	-
	mg/L	0200	09/04/97	N001	AL	U	10.300		#	-	-
	mg/L	0407	08/22/97	0001	AL	N	0.0532	B L	#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:53

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Nitrate	mg/L	0409	08/21/97	0001	AL	N	0.0611	B	LG	#	-	-
	mg/L	0603	08/27/97	0001	AL	U	1.780			#	-	-
	mg/L	0604	08/27/97	0001	AL	C	0.343	B		#	-	-
	mg/L	0605	08/28/97	0001	AL	D	0.0140	U		#	0.014	-
	mg/L	0606	08/28/97	0001	AL	D	1030.000			#	-	-
	mg/L	0612	09/03/97	0001	DC	U	3.540			#	-	-
	mg/L	0613	08/28/97	0001	DC	U	2.560			#	-	-
	mg/L	0614	09/03/97	0001	SR	D	21.500			#	-	-
	mg/L	0615	09/02/97	0001	SR	U	0.0149	B		#	-	-
	mg/L	0618	08/28/97	0001	DC	O	4.210			#	-	-
	mg/L	0619	08/27/97	0001	DC	O	10.700			#	-	-
	mg/L	0650	09/03/97	0001	AL	D	0.999	B		#	-	-
	mg/L	0652	09/04/97	0001	AL	D	19.200			#	-	-
	mg/L	0653	08/29/97	0001	AL	D	125.000			#	-	-
	mg/L	0655	08/20/97	0001	AL	D	581.000			#	-	-
	mg/L	0656	08/29/97	0001	AL	D	236.000			#	-	-
	mg/L	0657	08/25/97	0001	DC	O	18.800			#	-	-
	mg/L	0657	08/25/97	0002	DC	O	18.800			#	-	-
	mg/L	0658	08/28/97	0001	SR	U	0.0140	U		#	0.014	-
	mg/L	0661	09/03/97	0001	DC	U	2.270			#	-	-
	mg/L	0663	08/28/97	0001	DC	D	0.0836	B		#	-	-
	mg/L	0668	08/26/97	0001	DC	D	1.500			#	-	-
	mg/L	0669	08/26/97	0001	AL	D	45.300		L	#	-	-
	mg/L	0760	08/21/97	0001	AL	N	0.0140	U		#	0.014	-
	mg/L	0760	08/21/97	0002	AL	N	0.0164	B		#	-	-
	mg/L	0761	09/03/97	0001	AL	N	73.700			#	-	-
	mg/L	0762	09/04/97	0001	AL	N	63.700			#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:53

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Nitrate	mg/L	0764	09/04/97	0001	AL	N	86.100		#		-	-
	mg/L	0765	08/20/97	0001	AL	N	641.000		#		-	-
	mg/L	0767	08/21/97	0001	AL	N	0.0140	U	#		0.014	-
	mg/L	0768	09/02/97	0001	AL	N	0.0140	U	#		0.014	-
	mg/L	0771	08/26/97	0001	AL	N	550.000	L	#		-	-
	mg/L	0772	09/02/97	0001	AL	N	193.000		#		-	-
	mg/L	0774	08/26/97	0001	AL	N	11.900		#		-	-
	mg/L	0775	09/03/97	0001	DC	N	0.656	B	L	#	-	-
	mg/L	0776	08/26/97	0001	DC	N	7.920		#		-	-
pH	s.u.	0200	09/04/97	N001	AL	U	7.79		#		-	-
	s.u.	0407	08/22/97	N001	AL	N	6.30	L	#		-	-
	s.u.	0409	08/21/97	N001	AL	N	9.00	LG	#		-	-
	s.u.	0603	08/27/97	N001	AL	U	7.53		#		-	-
	s.u.	0604	08/27/97	N001	AL	C	7.91		#		-	-
	s.u.	0605	08/28/97	N001	AL	D	7.51		#		-	-
	s.u.	0606	08/28/97	N001	AL	D	6.90		#		-	-
	s.u.	0612	09/03/97	N001	DC	U	7.72		#		-	-
	s.u.	0613	08/28/97	N001	DC	U	7.85		#		-	-
	s.u.	0614	09/03/97	N001	SR	D	7.44		#		-	-
	s.u.	0615	09/02/97	N001	SR	U	7.69		#		-	-
	s.u.	0618	08/28/97	N001	DC	O	7.58		#		-	-
	s.u.	0619	08/27/97	N001	DC	O	7.51		#		-	-
	s.u.	0650	09/03/97	N001	AL	D	8.37		#		-	-
	s.u.	0652	09/04/97	N001	AL	D	7.89		#		-	-
	s.u.	0653	08/29/97	N001	AL	D	7.47		#		-	-
	s.u.	0655	08/20/97	N001	AL	D	7.06		#		-	-
	s.u.	0656	08/29/97	N001	AL	D	7.61		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:54

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
pH	s.u.	0657	08/25/97	N001	DC	O	7.36		#		-	-
	s.u.	0658	08/28/97	N001	SR	U	8.57		#		-	-
	s.u.	0661	09/03/97	N001	DC	U	7.78		#		-	-
	s.u.	0663	08/28/97	N001	DC	D	8.09		#		-	-
	s.u.	0668	08/26/97	N001	DC	D	8.16		#		-	-
	s.u.	0669	08/26/97	N001	AL	D	7.34	L	#		-	-
	s.u.	0760	08/21/97	N001	AL	N	8.25		#		-	-
	s.u.	0761	09/03/97	N001	AL	N	7.40		#		-	-
	s.u.	0762	09/04/97	N001	AL	N	7.76		#		-	-
	s.u.	0764	09/04/97	N001	AL	N	7.92		#		-	-
	s.u.	0765	08/20/97	N001	AL	N	7.15		#		-	-
	s.u.	0767	08/21/97	N001	AL	N	7.65		#		-	-
	s.u.	0768	09/02/97	N001	AL	N	7.85		#		-	-
	s.u.	0771	08/26/97	N001	AL	N	7.02	L	#		-	-
	s.u.	0772	09/02/97	N001	AL	N	8.00		#		-	-
	s.u.	0774	08/26/97	N001	AL	N	7.45		#		-	-
	s.u.	0775	09/03/97	N001	DC	N	8.74	L	#		-	-
	s.u.	0776	08/26/97	N001	DC	N	7.48		#		-	-
Potassium	mg/L	0200	09/04/97	0001	AL	U	3.020		#		-	-
	mg/L	0200	09/04/97	N001	AL	U	3.200		#		-	-
	mg/L	0407	08/22/97	0001	AL	N	0.977	L	#		-	-
	mg/L	0409	08/21/97	0001	AL	N	2.800	LG	#		-	-
	mg/L	0603	08/27/97	0001	AL	U	2.480		#		-	-
	mg/L	0604	08/27/97	0001	AL	C	1.880		#		-	-
	mg/L	0605	08/28/97	0001	AL	D	3.380		#		-	-
	mg/L	0606	08/28/97	0001	AL	D	9.700		#		-	-
	mg/L	0612	09/03/97	0001	DC	U	1.960		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:54

PARAMETER	UNITS	LOCATION ID	SAMPLE:	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
			DATE				LAB	DATA	QA	
Potassium	mg/L	0613	08/28/97	0001	DC	U	2.980		#	-
	mg/L	0614	09/03/97	0001	SR	D	1.960		#	-
	mg/L	0615	09/02/97	0001	SR	U	2.870		#	-
	mg/L	0618	08/28/97	0001	DC	O	1.530		#	-
	mg/L	0619	08/27/97	0001	DC	O	2.420		#	-
	mg/L	0650	09/03/97	0001	AL	D	1.190		#	-
	mg/L	0652	09/04/97	0001	AL	D	2.810		#	-
	mg/L	0653	08/29/97	0001	AL	D	4.510		#	-
	mg/L	0655	08/20/97	0001	AL	D	23.700		#	-
	mg/L	0656	08/29/97	0001	AL	D	12.400		#	-
	mg/L	0657	08/25/97	0001	DC	O	2.060		#	-
	mg/L	0657	08/25/97	0002	DC	O	2.070		#	-
	mg/L	0658	08/28/97	0001	SR	U	0.970		#	-
	mg/L	0661	09/03/97	0001	DC	U	1.850		#	-
	mg/L	0663	08/28/97	0001	DC	D	2.820		#	-
	mg/L	0668	08/26/97	0001	DC	D	2.900		#	-
	mg/L	0669	08/26/97	0001	AL	D	2.870	L	#	-
	mg/L	0760	08/21/97	0001	AL	N	2.550		#	-
	mg/L	0760	08/21/97	0002	AL	N	2.520		#	-
	mg/L	0761	09/03/97	0001	AL	N	0.959		#	-
	mg/L	0762	09/04/97	0001	AL	N	3.050		#	-
	mg/L	0764	09/04/97	0001	AL	N	2.810		#	-
	mg/L	0765	08/20/97	0001	AL	N	18.200		#	-
	mg/L	0767	08/21/97	0001	AL	N	2.630		#	-
	mg/L	0768	09/02/97	0001	AL	N	2.630		#	-
	mg/L	0771	08/26/97	0001	AL	N	50.100	L	#	-
	mg/L	0772	09/02/97	0001	AL	N	1.900		#	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:55

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
								LAB	DATA	QA	
Potassium	mg/L	0774	08/26/97	0001	AL	N	2.310		#	-	-
	mg/L	0775	09/03/97	0001	DC	N	3.700	L	#	-	-
	mg/L	0776	08/26/97	0001	DC	N	2.260		#	-	-
Radium-226	pCi/L	0200	09/04/97	0001	AL	U	0.23		#	0.02	± 0.08
	pCi/L	0200	09/04/97	N001	AL	U	0.38		#	0.02	± 0.11
	pCi/L	0407	08/22/97	0001	AL	N	0.15	L	#	0.02	± 0.07
	pCi/L	0409	08/21/97	0001	AL	N	0.24	LG	#	0.02	± 0.08
	pCi/L	0603	08/27/97	0001	AL	U	0.30		#	0.02	± 0.09
	pCi/L	0604	08/27/97	0001	AL	C	0.16		#	0.03	± 0.07
	pCi/L	0605	08/28/97	0001	AL	D	0.10		#	0.02	± 0.04
	pCi/L	0606	08/28/97	0001	AL	D	0.43		#	0.01	± 0.09
	pCi/L	0612	09/03/97	0001	DC	U	0.16		#	0.01	± 0.06
	pCi/L	0613	08/28/97	0001	DC	U	0.06		#	0.02	± 0.04
	pCi/L	0614	09/03/97	0001	SR	D	0.56		#	0.01	± 0.12
	pCi/L	0615	09/02/97	0001	SR	U	2.17		#	0.02	± 0.29
	pCi/L	0618	08/28/97	0001	DC	O	0.14		#	0.02	± 0.06
	pCi/L	0619	08/27/97	0001	DC	O	0.09		#	0.02	± 0.04
	pCi/L	0650	09/03/97	0001	AL	D	0.28	U	#	0.18	± 0.30
	pCi/L	0652	09/04/97	0001	AL	D	0.13		#	0.02	± 0.06
	pCi/L	0653	08/29/97	0001	AL	D	0.11		#	0.02	± 0.06
	pCi/L	0655	08/20/97	0001	AL	D	0.15		#	0.02	± 0.06
	pCi/L	0656	08/29/97	0001	AL	D	0.20		#	0.02	± 0.08
	pCi/L	0657	08/25/97	0001	DC	O	0.25		#	0.01	± 0.07
	pCi/L	0657	08/25/97	0002	DC	O	0.17		#	0.01	± 0.06
	pCi/L	0658	08/28/97	0001	SR	U	0.23		#	0.02	± 0.07
	pCi/L	0661	09/03/97	0001	DC	U	0.15		#	0.01	± 0.06
	pCi/L	0663	08/28/97	0001	DC	D	0.24		#	0.02	± 0.08

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:56

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY	
			DATE	ID				LAB	DATA	QA		
Radium-226	pCi/L	0668	08/26/97	0001	DC	D	0.14		#	0.01	± 0.06	
	pCi/L	0669	08/26/97	0001	AL	D	0.31	L	#	0.02	± 0.09	
	pCi/L	0760	08/21/97	0001	AL	N	0.26		#	0.02	± 0.06	
	pCi/L	0760	08/21/97	0002	AL	N	0.25		#	0.03	± 0.09	
	pCi/L	0761	09/03/97	0001	AL	N	0.33		#	0.02	± 0.08	
	pCi/L	0762	09/04/97	0001	AL	N	0.37		#	0.02	± 0.10	
	pCi/L	0764	09/04/97	0001	AL	N	0.23		#	0.02	± 0.07	
	pCi/L	0765	08/20/97	0001	AL	N	0.39		#	0.02	± 0.10	
	pCi/L	0767	08/21/97	0001	AL	N	0.49		#	0.02	± 0.12	
	pCi/L	0768	09/02/97	0001	AL	N	0.17		#	0.02	± 0.06	
	pCi/L	0771	08/26/97	0001	AL	N	0.24	L	#	0.02	± 0.08	
	pCi/L	0772	09/02/97	0001	AL	N	0.42		#	0.02	± 0.10	
	pCi/L	0774	08/26/97	0001	AL	N	0.12		#	0.02	± 0.06	
	pCi/L	0775	09/03/97	0001	DC	N	0.24	L	#	0.02	± 0.08	
	pCi/L	0776	08/26/97	0001	DC	N	0.14		#	0.02	± 0.06	
Radium-228	pCi/L	0200	09/04/97	0001	AL	U	0.9	U	#	0.9	± 0.50	
	pCi/L	0200	09/04/97	N001	AL	U	0.9	U	#	0.9	± 0.50	
	pCi/L	0407	08/22/97	0001	AL	N	0.7	U	L	#	0.7	± 0.40
	pCi/L	0409	08/21/97	0001	AL	N	0.9	U	LG	#	0.9	± 0.40
	pCi/L	0603	08/27/97	0001	AL	U	1.0	U		#	1	± 0.50
	pCi/L	0604	08/27/97	0001	AL	C	1.2	U		#	1.2	± 0.70
	pCi/L	0605	08/28/97	0001	AL	D	1.0	U		#	1	± 0.50
	pCi/L	0606	08/28/97	0001	AL	D	1.3	U		#	1.3	± 0.70
	pCi/L	0612	09/03/97	0001	DC	U	1.3	U		#	1.3	± 0.70
	pCi/L	0613	08/28/97	0001	DC	U	0.9	U		#	0.9	± 0.50
	pCi/L	0614	09/03/97	0001	SR	D	1.2	U		#	1.2	± 0.70
	pCi/L	0615	09/02/97	0001	SR	U	1.6	U		#	1.6	± 0.90

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:56

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Radium-228	pCi/L	0618	08/28/97	0001	DC	O	1.3	U		#	1.3	± 0.60
	pCi/L	0619	08/27/97	0001	DC	O	1.2	U		#	1.2	± 0.70
	pCi/L	0650	09/03/97	0001	AL	D	0.3	U		#	0.3	± 0.20
	pCi/L	0652	09/04/97	0001	AL	D	1.0	U		#	1	± 0.50
	pCi/L	0653	08/29/97	0001	AL	D	1.2	U		#	1.2	± 0.60
	pCi/L	0655	08/20/97	0001	AL	D	1.0	U		#	1	± 0.50
	pCi/L	0656	08/29/97	0001	AL	D	1.2	U		#	1.2	± 0.70
	pCi/L	0657	08/25/97	0001	DC	O	0.8	U		#	0.8	± 0.40
	pCi/L	0657	08/25/97	0002	DC	O	0.8	U		#	0.8	± 0.40
	pCi/L	0658	08/28/97	0001	SR	U	0.5	U		#	0.5	± 0.30
	pCi/L	0661	09/03/97	0001	DC	U	0.5	U		#	0.5	± 0.30
	pCi/L	0663	08/28/97	0001	DC	D	0.5	U		#	0.5	± 0.30
	pCi/L	0668	08/26/97	0001	DC	D	0.9	U		#	0.9	± 0.40
	pCi/L	0669	08/26/97	0001	AL	D	0.8	U	L	#	0.8	± 0.50
	pCi/L	0760	08/21/97	0001	AL	N	0.7	U		#	0.7	± 0.40
	pCi/L	0760	08/21/97	0002	AL	N	0.7	U		#	0.7	± 0.40
	pCi/L	0761	09/03/97	0001	AL	N	0.8	U		#	0.8	± 0.40
	pCi/L	0762	09/04/97	0001	AL	N	1.2			#	0.9	± 0.60
	pCi/L	0764	09/04/97	0001	AL	N	1.0	U		#	1	± 0.60
	pCi/L	0765	08/20/97	0001	AL	N	0.8	U		#	0.8	± 0.50
	pCi/L	0767	08/21/97	0001	AL	N	0.8	U		#	0.8	± 0.50
	pCi/L	0768	09/02/97	0001	AL	N	0.5	U		#	0.5	± 0.30
	pCi/L	0771	08/26/97	0001	AL	N	0.8		L	#	0.7	± 0.50
	pCi/L	0772	09/02/97	0001	AL	N	0.5	U		#	0.5	± 0.30
	pCi/L	0774	08/26/97	0001	AL	N	0.4	U		#	0.4	± 0.30
	pCi/L	0775	09/03/97	0001	DC	N	0.8	U	L	#	0.8	± 0.40
	pCi/L	0776	08/26/97	0001	DC	N	0.3	U		#	0.3	± 0.20

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:57

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Redox Potential	mV	0200	09/04/97	N001	AL	U	130			#	-	-
	mV	0407	08/22/97	N001	AL	N	166	L		#	-	-
	mV	0409	08/21/97	N001	AL	N	201	LG		#	-	-
	mV	0603	08/27/97	N001	AL	U	96			#	-	-
	mV	0604	08/27/97	N001	AL	C	165			#	-	-
	mV	0605	08/28/97	N001	AL	D	11			#	-	-
	mV	0606	08/28/97	N001	AL	D	182			#	-	-
	mV	0612	09/03/97	N001	DC	U	136			#	-	-
	mV	0613	08/28/97	N001	DC	U	114			#	-	-
	mV	0614	09/03/97	N001	SR	D	132			#	-	-
	mV	0615	09/02/97	N001	SR	U	113			#	-	-
	mV	0618	08/28/97	N001	DC	O	79			#	-	-
	mV	0619	08/27/97	N001	DC	O	204			#	-	-
	mV	0650	09/03/97	N001	AL	D	50			#	-	-
	mV	0652	09/04/97	N001	AL	D	60			#	-	-
	mV	0653	08/29/97	N001	AL	D	121			#	-	-
	mV	0655	08/20/97	N001	AL	D	82			#	-	-
	mV	0656	08/29/97	N001	AL	D	143			#	-	-
	mV	0657	08/25/97	N001	DC	O	54			#	-	-
	mV	0658	08/28/97	N001	SR	U	-27			#	-	-
	mV	0661	09/03/97	N001	DC	U	108			#	-	-
	mV	0663	08/28/97	N001	DC	D	-92			#	-	-
	mV	0668	08/26/97	N001	DC	D	86			#	-	-
	mV	0669	08/26/97	N001	AL	D	219	L		#	-	-
	mV	0760	08/21/97	N001	AL	N	3			#	-	-
	mV	0761	09/03/97	N001	AL	N	66			#	-	-
	mV	0762	09/04/97	N001	AL	N	122			#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:57

PARAMETER	UNITS	LOCATION ID	SAMPLE:	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
			DATE				LAB	DATA	QA	
Redox Potential	mV	0764	09/04/97	N001	AL	N	128		#	-
	mV	0765	08/20/97	N001	AL	N	131		#	-
	mV	0767	08/21/97	N001	AL	N	25		#	-
	mV	0768	09/02/97	N001	AL	N	-86		#	-
	mV	0771	08/26/97	N001	AL	N	38	L	#	-
	mV	0772	09/02/97	N001	AL	N	127		#	-
	mV	0774	08/26/97	N001	AL	N	140		#	-
	mV	0775	09/03/97	N001	DC	N	28	L	#	-
	mV	0776	08/26/97	N001	DC	N	23		#	-
Selenium	mg/L	0200	09/04/97	0001	AL	U	0.0318		#	-
	mg/L	0200	09/04/97	N001	AL	U	0.0291		#	-
	mg/L	0407	08/22/97	0001	AL	N	0.0010	U	L	# 0.001
	mg/L	0409	08/21/97	0001	AL	N	0.0010	U	LG	# 0.001
	mg/L	0603	08/27/97	0001	AL	U	0.0016	B		-
	mg/L	0604	08/27/97	0001	AL	C	0.0010	U		# 0.001
	mg/L	0605	08/28/97	0001	AL	D	0.0010	U		# 0.001
	mg/L	0606	08/28/97	0001	AL	D	0.0010	B		-
	mg/L	0612	09/03/97	0001	DC	U	0.0018	B		-
	mg/L	0613	08/28/97	0001	DC	U	0.0021	B		-
	mg/L	0614	09/03/97	0001	SR	D	0.0107		#	-
	mg/L	0615	09/02/97	0001	SR	U	0.0010	U		# 0.001
	mg/L	0618	08/28/97	0001	DC	O	0.0018	B		-
	mg/L	0619	08/27/97	0001	DC	O	0.0035	B		-
	mg/L	0650	09/03/97	0001	AL	D	0.0010	U		# 0.001
	mg/L	0652	09/04/97	0001	AL	D	0.0062		#	-
	mg/L	0653	08/29/97	0001	AL	D	0.0015	B		-
	mg/L	0655	08/20/97	0001	AL	D	0.0010	U		# 0.001

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:58

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
								LAB	DATA	QA	
Selenium	mg/L	0656	08/29/97	0001	AL	D	0.0015	B		#	-
	mg/L	0657	08/25/97	0001	DC	O	0.0038	B		#	-
	mg/L	0657	08/25/97	0002	DC	O	0.0037	B		#	-
	mg/L	0658	08/28/97	0001	SR	U	0.0010	U		#	0.001
	mg/L	0661	09/03/97	0001	DC	U	0.0010	B		#	-
	mg/L	0663	08/28/97	0001	DC	D	0.0010	U		#	0.001
	mg/L	0668	08/26/97	0001	DC	D	0.0023	B		#	-
	mg/L	0669	08/26/97	0001	AL	D	0.0047	B	L	#	-
	mg/L	0760	08/21/97	0001	AL	N	0.0010	U		#	0.001
	mg/L	0760	08/21/97	0002	AL	N	0.0010	U		#	0.001
	mg/L	0761	09/03/97	0001	AL	N	0.0046	B		#	-
	mg/L	0762	09/04/97	0001	AL	N	0.0107			#	-
	mg/L	0764	09/04/97	0001	AL	N	0.0027	B		#	-
	mg/L	0765	08/20/97	0001	AL	N	0.0010	U		#	0.001
	mg/L	0767	08/21/97	0001	AL	N	0.0010	U		#	0.001
	mg/L	0768	09/02/97	0001	AL	N	0.0010	U		#	0.001
	mg/L	0771	08/26/97	0001	AL	N	0.0010	U	L	#	0.001
	mg/L	0772	09/02/97	0001	AL	N	0.0058			#	-
	mg/L	0774	08/26/97	0001	AL	N	0.0034	B		#	-
	mg/L	0775	09/03/97	0001	DC	N	0.0010	B	L	#	-
	mg/L	0776	08/26/97	0001	DC	N	0.0025	B		#	-
Sodium	mg/L	0200	09/04/97	0001	AL	U	222.000			#	-
	mg/L	0200	09/04/97	N001	AL	U	213.000			#	-
	mg/L	0407	08/22/97	0001	AL	N	362.000		L	#	-
	mg/L	0409	08/21/97	0001	AL	N	50.200		LG	#	-
	mg/L	0603	08/27/97	0001	AL	U	102.000			#	-
	mg/L	0604	08/27/97	0001	AL	C	97.000			#	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:58

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Sodium	mg/L	0605	08/28/97	0001	AL	D	574.000		#		-	-
	mg/L	0606	08/28/97	0001	AL	D	92.600		#		-	-
	mg/L	0612	09/03/97	0001	DC	U	7.150		#		-	-
	mg/L	0613	08/28/97	0001	DC	U	49.500		#		-	-
	mg/L	0614	09/03/97	0001	SR	D	36.100		#		-	-
	mg/L	0615	09/02/97	0001	SR	U	73.400		#		-	-
	mg/L	0618	08/28/97	0001	DC	O	6.890		#		-	-
	mg/L	0619	08/27/97	0001	DC	O	19.100		#		-	-
	mg/L	0650	09/03/97	0001	AL	D	92.800		#		-	-
	mg/L	0652	09/04/97	0001	AL	D	74.100		#		-	-
	mg/L	0653	08/29/97	0001	AL	D	251.000		#		-	-
	mg/L	0655	08/20/97	0001	AL	D	133.000		#		-	-
	mg/L	0656	08/29/97	0001	AL	D	104.000		#		-	-
	mg/L	0657	08/25/97	0001	DC	O	13.000		#		-	-
	mg/L	0657	08/25/97	0002	DC	O	12.800		#		-	-
	mg/L	0658	08/28/97	0001	SR	U	119.000		#		-	-
	mg/L	0661	09/03/97	0001	DC	U	7.150		#		-	-
	mg/L	0663	08/28/97	0001	DC	D	70.800		#		-	-
	mg/L	0668	08/26/97	0001	DC	D	60.800		#		-	-
	mg/L	0669	08/26/97	0001	AL	D	40.100	L	#		-	-
	mg/L	0760	08/21/97	0001	AL	N	88.000		#		-	-
	mg/L	0760	08/21/97	0002	AL	N	88.600		#		-	-
	mg/L	0761	09/03/97	0001	AL	N	53.600		#		-	-
	mg/L	0762	09/04/97	0001	AL	N	226.000		#		-	-
	mg/L	0764	09/04/97	0001	AL	N	49.400		#		-	-
	mg/L	0765	08/20/97	0001	AL	N	129.000		#		-	-
	mg/L	0767	08/21/97	0001	AL	N	27.100		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:59

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
								LAB	DATA	QA	
Sodium	mg/L	0768	09/02/97	0001	AL	N	224.000		#	-	-
	mg/L	0771	08/26/97	0001	AL	N	163.000	L	#	-	-
	mg/L	0772	09/02/97	0001	AL	N	232.000		#	-	-
	mg/L	0774	08/26/97	0001	AL	N	21.000		#	-	-
	mg/L	0775	09/03/97	0001	DC	N	82.100	L	#	-	-
	mg/L	0776	08/26/97	0001	DC	N	22.200		#	-	-
Strontium	mg/L	0200	09/04/97	0001	AL	U	0.922		#	-	-
	mg/L	0200	09/04/97	N001	AL	U	0.926		#	-	-
	mg/L	0407	08/22/97	0001	AL	N	1.990	L	#	-	-
	mg/L	0409	08/21/97	0001	AL	N	0.312	LG	#	-	-
	mg/L	0603	08/27/97	0001	AL	U	0.230		#	-	-
	mg/L	0604	08/27/97	0001	AL	C	0.190		#	-	-
	mg/L	0605	08/28/97	0001	AL	D	1.900		#	-	-
	mg/L	0606	08/28/97	0001	AL	D	1.600		#	-	-
	mg/L	0612	09/03/97	0001	DC	U	0.245		#	-	-
	mg/L	0613	08/28/97	0001	DC	U	0.350		#	-	-
	mg/L	0614	09/03/97	0001	SR	D	0.610		#	-	-
	mg/L	0615	09/02/97	0001	SR	U	0.331		#	-	-
	mg/L	0618	08/28/97	0001	DC	O	0.271		#	-	-
	mg/L	0619	08/27/97	0001	DC	O	0.382		#	-	-
	mg/L	0650	09/03/97	0001	AL	D	0.0979		#	-	-
	mg/L	0652	09/04/97	0001	AL	D	0.484		#	-	-
	mg/L	0653	08/29/97	0001	AL	D	2.050		#	-	-
	mg/L	0655	08/20/97	0001	AL	D	2.510		#	-	-
	mg/L	0656	08/29/97	0001	AL	D	0.506		#	-	-
	mg/L	0657	08/25/97	0001	DC	O	0.456		#	-	-
	mg/L	0657	08/25/97	0002	DC	O	0.453		#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:40:59

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Strontium	mg/L	0658	08/28/97	0001	SR	U	0.0471		#		-	-
	mg/L	0661	09/03/97	0001	DC	U	0.296		#		-	-
	mg/L	0663	08/28/97	0001	DC	D	0.560		#		-	-
	mg/L	0668	08/26/97	0001	DC	D	0.388		#		-	-
	mg/L	0669	08/26/97	0001	AL	D	0.511	L	#		-	-
	mg/L	0760	08/21/97	0001	AL	N	0.258		#		-	-
	mg/L	0760	08/21/97	0002	AL	N	0.258		#		-	-
	mg/L	0761	09/03/97	0001	AL	N	0.894		#		-	-
	mg/L	0762	09/04/97	0001	AL	N	1.190		#		-	-
	mg/L	0764	09/04/97	0001	AL	N	0.899		#		-	-
	mg/L	0765	08/20/97	0001	AL	N	1.480		#		-	-
	mg/L	0767	08/21/97	0001	AL	N	0.336		#		-	-
	mg/L	0768	09/02/97	0001	AL	N	1.860		#		-	-
	mg/L	0771	08/26/97	0001	AL	N	4.950	L	#		-	-
	mg/L	0772	09/02/97	0001	AL	N	0.282		#		-	-
	mg/L	0774	08/26/97	0001	AL	N	0.399		#		-	-
Sulfate	mg/L	0200	09/04/97	0001	AL	U	543.000		#		-	-
	mg/L	0200	09/04/97	N001	AL	U	512.000		#		-	-
	mg/L	0407	08/22/97	0001	AL	N	1210.000	L	#		-	-
	mg/L	0409	08/21/97	0001	AL	N	29.700	LG	#		-	-
	mg/L	0603	08/27/97	0001	AL	U	112.000		#		-	-
	mg/L	0604	08/27/97	0001	AL	C	109.000		#		-	-
	mg/L	0605	08/28/97	0001	AL	D	1550.000		#		-	-
	mg/L	0606	08/28/97	0001	AL	D	674.000		#		-	-
	mg/L	0612	09/03/97	0001	DC	U	11.700		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:00

PARAMETER	UNITS	LOCATION ID	SAMPLE:	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:	DETECTION LIMIT	UN-CERTAINTY
			DATE					LAB		
Sulfate	mg/L	0613	08/28/97	0001	DC	U	58.400	#	-	-
	mg/L	0614	09/03/97	0001	SR	D	244.000	#	-	-
	mg/L	0615	09/02/97	0001	SR	U	70.800	#	-	-
	mg/L	0618	08/28/97	0001	DC	O	13.100	#	-	-
	mg/L	0619	08/27/97	0001	DC	O	55.500	#	-	-
	mg/L	0650	09/03/97	0001	AL	D	26.700	#	-	-
	mg/L	0652	09/04/97	0001	AL	D	61.400	#	-	-
	mg/L	0653	08/29/97	0001	AL	D	1630.000	#	-	-
	mg/L	0655	08/20/97	0001	AL	D	1770.000	#	-	-
	mg/L	0656	08/29/97	0001	AL	D	337.000	#	-	-
	mg/L	0657	08/25/97	0001	DC	O	103.000	#	-	-
	mg/L	0657	08/25/97	0002	DC	O	103.000	#	-	-
	mg/L	0658	08/28/97	0001	SR	U	54.000	#	-	-
	mg/L	0661	09/03/97	0001	DC	U	11.600	#	-	-
	mg/L	0663	08/28/97	0001	DC	D	42.800	#	-	-
	mg/L	0668	08/26/97	0001	DC	D	39.400	#	-	-
	mg/L	0669	08/26/97	0001	AL	D	189.000	L	#	-
	mg/L	0760	08/21/97	0001	AL	N	126.000	#	-	-
	mg/L	0760	08/21/97	0002	AL	N	127.000	#	-	-
	mg/L	0761	09/03/97	0001	AL	N	492.000	#	-	-
	mg/L	0762	09/04/97	0001	AL	N	761.000	#	-	-
	mg/L	0764	09/04/97	0001	AL	N	409.000	#	-	-
	mg/L	0765	08/20/97	0001	AL	N	986.000	#	-	-
	mg/L	0767	08/21/97	0001	AL	N	28.500	#	-	-
	mg/L	0768	09/02/97	0001	AL	N	862.000	#	-	-
	mg/L	0771	08/26/97	0001	AL	N	3540.000	L	#	-
	mg/L	0772	09/02/97	0001	AL	N	186.000	#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:00

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Sulfate	mg/L	0774	08/26/97	0001	AL	N	67.000		#		-	-
	mg/L	0775	09/03/97	0001	DC	N	45.800	L	#		-	-
	mg/L	0776	08/26/97	0001	DC	N	40.400		#		-	-
Temperature	C	0200	09/04/97	N001	AL	U	17.0		#		-	-
	C	0407	08/22/97	N001	AL	N	19.0	L	#		-	-
	C	0409	08/21/97	N001	AL	N	20.2	LG	#		-	-
	C	0603	08/27/97	N001	AL	U	16.0		#		-	-
	C	0604	08/27/97	N001	AL	C	15.7		#		-	-
	C	0605	08/28/97	N001	AL	D	17.1		#		-	-
	C	0606	08/28/97	N001	AL	D	18.5		#		-	-
	C	0612	09/03/97	N001	DC	U	20.0		#		-	-
	C	0613	08/28/97	N001	DC	U	16.3		#		-	-
	C	0614	09/03/97	N001	SR	D	18.6		#		-	-
	C	0615	09/02/97	N001	SR	U	16.8		#		-	-
	C	0618	08/28/97	N001	DC	O	17.8		#		-	-
	C	0619	08/27/97	N001	DC	O	19.3		#		-	-
	C	0650	09/03/97	N001	AL	D	17.1		#		-	-
	C	0652	09/04/97	N001	AL	D	16.5		#		-	-
	C	0653	08/29/97	N001	AL	D	17.1		#		-	-
	C	0655	08/20/97	N001	AL	D	20.2		#		-	-
	C	0656	08/29/97	N001	AL	D	17.3		#		-	-
	C	0657	08/25/97	N001	DC	O	18.2		#		-	-
	C	0658	08/28/97	N001	SR	U	17.0		#		-	-
	C	0661	09/03/97	N001	DC	U	19.1		#		-	-
	C	0663	08/28/97	N001	DC	D	19.6		#		-	-
	C	0668	08/26/97	N001	DC	D	17.9		#		-	-
	C	0669	08/26/97	N001	AL	D	18.3	L	#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:00

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Temperature	C	0760	08/21/97	N001	AL	N	16.7		#		-	-
	C	0761	09/03/97	N001	AL	N	16.8		#		-	-
	C	0762	09/04/97	N001	AL	N	17.5		#		-	-
	C	0764	09/04/97	N001	AL	N	18.6		#		-	-
	C	0765	08/20/97	N001	AL	N	19.3		#		-	-
	C	0767	08/21/97	N001	AL	N	15.8		#		-	-
	C	0768	09/02/97	N001	AL	N	15.8		#		-	-
	C	0771	08/26/97	N001	AL	N	19.9	L	#		-	-
	C	0772	09/02/97	N001	AL	N	17.0		#		-	-
	C	0774	08/26/97	N001	AL	N	18.1		#		-	-
	C	0775	09/03/97	N001	DC	N	18.7	L	#		-	-
	C	0776	08/26/97	N001	DC	N	17.6		#		-	-
Total Dissolved Solids	mg/L	0200	09/04/97	0001	AL	U	1210		#		-	-
	mg/L	0200	09/04/97	N001	AL	U	1150		#		-	-
	mg/L	0407	08/22/97	0001	AL	N	2380	L	#		-	-
	mg/L	0409	08/21/97	0001	AL	N	182	LG	#		-	-
	mg/L	0603	08/27/97	0001	AL	U	387		#		-	-
	mg/L	0604	08/27/97	0001	AL	C	385		#		-	-
	mg/L	0605	08/28/97	0001	AL	D	2880		#		-	-
	mg/L	0606	08/28/97	0001	AL	D	1920		#		-	-
	mg/L	0612	09/03/97	0001	DC	U	160		#		-	-
	mg/L	0613	08/28/97	0001	DC	U	275		#		-	-
	mg/L	0614	09/03/97	0001	SR	D	645		#		-	-
	mg/L	0615	09/02/97	0001	SR	U	320		#		-	-
	mg/L	0618	08/28/97	0001	DC	O	160		#		-	-
	mg/L	0619	08/27/97	0001	DC	O	265		#		-	-
	mg/L	0650	09/03/97	0001	AL	D	272		#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:01

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Total Dissolved Solids	mg/L	0652	09/04/97	0001	AL	D	340		#		-	-
	mg/L	0653	08/29/97	0001	AL	D	2820		#		-	-
	mg/L	0655	08/20/97	0001	AL	D	3090		#		-	-
	mg/L	0656	08/29/97	0001	AL	D	838		#		-	-
	mg/L	0657	08/25/97	0001	DC	O	373		#		-	-
	mg/L	0657	08/25/97	0002	DC	O	30.0		#		*	-
	mg/L	0658	08/28/97	0001	SR	U	320		#		-	-
	mg/L	0661	09/03/97	0001	DC	U	162		#		-	-
	mg/L	0663	08/28/97	0001	DC	D	263		#		-	-
	mg/L	0668	08/26/97	0001	DC	D	262		#		*	-
	mg/L	0669	08/26/97	0001	AL	D	578	L	#		-	-
	mg/L	0760	08/21/97	0001	AL	N	375		#		-	-
	mg/L	0760	08/21/97	0002	AL	N	370		#		-	-
	mg/L	0761	09/03/97	0001	AL	N	1020		#		-	-
	mg/L	0762	09/04/97	0001	AL	N	1520		#		*	-
	mg/L	0764	09/04/97	0001	AL	N	910		#		-	-
	mg/L	0765	08/20/97	0001	AL	N	2080		#		-	-
	mg/L	0767	08/21/97	0001	AL	N	232		#		-	-
	mg/L	0768	09/02/97	0001	AL	N	1650		#		*	-
	mg/L	0771	08/26/97	0001	AL	N	5800	L	#		-	-
	mg/L	0772	09/02/97	0001	AL	N	862		#		-	-
	mg/L	0774	08/26/97	0001	AL	N	310		#		-	-
	mg/L	0775	09/03/97	0001	DC	N	300	L	#		-	-
	mg/L	0776	08/26/97	0001	DC	N	255		#		-	-
Uranium	mg/L	0200	09/04/97	0001	AL	U	0.0109		#		-	-
	mg/L	0200	09/04/97	N001	AL	U	0.0104		#		-	-
	mg/L	0407	08/22/97	0001	AL	N	0.0201	L	#		-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MOND1, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:01

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Uranium	mg/L	0409	08/21/97	0001	AL	N	0.0012	LG	#	-	-	-
	mg/L	0603	08/27/97	0001	AL	U	0.0033		#	-	-	-
	mg/L	0604	08/27/97	0001	AL	C	0.0030		#	-	-	-
	mg/L	0605	08/28/97	0001	AL	D	0.0080		#	-	-	-
	mg/L	0606	08/28/97	0001	AL	D	0.0103		#	-	-	-
	mg/L	0612	09/03/97	0001	DC	U	0.0072		#	-	-	-
	mg/L	0613	08/28/97	0001	DC	U	0.0043		#	-	-	-
	mg/L	0614	09/03/97	0001	SR	D	0.0335		#	-	-	-
	mg/L	0615	09/02/97	0001	SR	U	0.0075		#	-	-	-
	mg/L	0618	08/28/97	0001	DC	O	0.0038		#	-	-	-
	mg/L	0619	08/27/97	0001	DC	O	0.0527		#	-	-	-
	mg/L	0650	09/03/97	0001	AL	D	0.0025		#	-	-	-
	mg/L	0652	09/04/97	0001	AL	D	0.0046		#	-	-	-
	mg/L	0653	08/29/97	0001	AL	D	0.0122		#	-	-	-
	mg/L	0655	08/20/97	0001	AL	D	0.0195		#	-	-	-
	mg/L	0656	08/29/97	0001	AL	D	0.0070		#	-	-	-
	mg/L	0657	08/25/97	0001	DC	O	0.0673		#	-	-	-
	mg/L	0657	08/25/97	0002	DC	O	0.0669		#	-	-	-
	mg/L	0658	08/28/97	0001	SR	U	0.0010	U	#	0.001	-	-
	mg/L	0661	09/03/97	0001	DC	U	0.0018		#	-	-	-
	mg/L	0663	08/28/97	0001	DC	D	0.0010	U	#	0.001	-	-
	mg/L	0668	08/26/97	0001	DC	D	0.0033		#	-	-	-
	mg/L	0669	08/26/97	0001	AL	D	0.0098	L	#	-	-	-
	mg/L	0760	08/21/97	0001	AL	N	0.0021		#	-	-	-
	mg/L	0760	08/21/97	0002	AL	N	0.0022		#	-	-	-
	mg/L	0761	09/03/97	0001	AL	N	0.0243		#	-	-	-
	mg/L	0762	09/04/97	0001	AL	N	0.0086		#	-	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:01

PARAMETER	UNITS	LOCATION ID	SAMPLE:		ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
			DATE	ID				LAB	DATA	QA		
Uranium	mg/L	0764	09/04/97	0001	AL	N	0.0107		#		-	-
	mg/L	0765	08/20/97	0001	AL	N	0.0145		#		-	-
	mg/L	0767	08/21/97	0001	AL	N	0.0010	U		#	0.001	-
	mg/L	0768	09/02/97	0001	AL	N	0.0025		#		-	-
	mg/L	0771	08/26/97	0001	AL	N	0.0267	L	#		-	-
	mg/L	0772	09/02/97	0001	AL	N	0.0387		#		-	-
	mg/L	0774	08/26/97	0001	AL	N	0.0690		#		-	-
	mg/L	0775	09/03/97	0001	DC	N	0.0029	L	#		-	-
	mg/L	0776	08/26/97	0001	DC	N	0.0366		#		-	-
Vanadium	mg/L	0200	09/04/97	0001	AL	U	0.0130	U		#	0.013	-
	mg/L	0200	09/04/97	N001	AL	U	0.0144	U*	J	#	0.0144	-
	mg/L	0407	08/22/97	0001	AL	N	0.0130	U	L	#	0.013	-
	mg/L	0409	08/21/97	0001	AL	N	0.0130	U	LG	#	0.013	-
	mg/L	0603	08/27/97	0001	AL	U	0.0130	U		#	0.013	-
	mg/L	0604	08/27/97	0001	AL	C	0.0130	U		#	0.013	-
	mg/L	0605	08/28/97	0001	AL	D	0.0130	U	J	#	0.013	-
	mg/L	0606	08/28/97	0001	AL	D	0.0130	U		#	0.013	-
	mg/L	0612	09/03/97	0001	DC	U	0.309			#	-	-
	mg/L	0613	08/28/97	0001	DC	U	0.0130	U		#	0.013	-
	mg/L	0614	09/03/97	0001	SR	D	0.0130	U		#	0.013	-
	mg/L	0615	09/02/97	0001	SR	U	0.0130	U		#	0.013	-
	mg/L	0618	08/28/97	0001	DC	O	0.0542			#	-	-
	mg/L	0619	08/27/97	0001	DC	O	0.0150			#	-	-
	mg/L	0650	09/03/97	0001	AL	D	0.0130	U		#	0.013	-
	mg/L	0652	09/04/97	0001	AL	D	0.0130	U		#	0.013	-
	mg/L	0653	08/29/97	0001	AL	D	0.0130	U		#	0.013	-
	mg/L	0655	08/20/97	0001	AL	D	0.0130	U		#	0.013	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:02

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	ZONE COMPL.	FLOW REL.	RESULT	QUALIFIERS:			UN-CERTAINTY
								LAB	DATA	QA	
Vanadium	mg/L	0656	08/29/97	0001	AL	D	0.0130	U	#	0.013	-
	mg/L	0657	08/25/97	0001	DC	O	0.0522		#	-	-
	mg/L	0657	08/25/97	0002	DC	O	0.0565		#	-	-
	mg/L	0658	08/28/97	0001	SR	U	0.0130	U	#	0.013	-
	mg/L	0661	09/03/97	0001	DC	U	0.0130	U	#	0.013	-
	mg/L	0663	08/28/97	0001	DC	D	0.0130	U	#	0.013	-
	mg/L	0668	08/26/97	0001	DC	D	0.0130	U	#	0.013	-
	mg/L	0669	08/26/97	0001	AL	D	0.0469	L	#	-	-
	mg/L	0760	08/21/97	0001	AL	N	0.0130	U	#	0.013	-
	mg/L	0760	08/21/97	0002	AL	N	0.0130	U	#	0.013	-
	mg/L	0761	09/03/97	0001	AL	N	0.0130	U	#	0.013	-
	mg/L	0762	09/04/97	0001	AL	N	0.0130	U	#	0.013	-
	mg/L	0764	09/04/97	0001	AL	N	0.0130	U	#	0.013	-
	mg/L	0765	08/20/97	0001	AL	N	0.0130	U	#	0.013	-
	mg/L	0767	08/21/97	0001	AL	N	0.0130	U	#	0.013	-
	mg/L	0768	09/02/97	0001	AL	N	0.0130	U	#	0.013	-
	mg/L	0771	08/26/97	0001	AL	N	0.0130	U	JL	#	0.013
	mg/L	0772	09/02/97	0001	AL	N	0.0542		#	-	-
	mg/L	0774	08/26/97	0001	AL	N	0.0162		#	-	-
	mg/L	0775	09/03/97	0001	DC	N	0.0130	U	L	#	0.013
	mg/L	0776	08/26/97	0001	DC	N	0.0146		#	-	-

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:02

PARAMETER	UNITS	LOCATION ID	SAMPLE: DATE	ZONE ID	FLOW COMPL.	RESULT REL.	QUALIFIERS: LAB	DETECTION DATA	UN-LIMIT QA	CERTAINTY
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RECORDS: SELECTED FROM USEE200 WHERE site_code='MON01' AND quality_assurance = TRUE AND DATE_SAMPLED between #8/1/97# and #9/30/97#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- | | | |
|--|----------------------------------|---|
| J Estimated value. | F Low flow sampling method used. | G Possible grout contamination, pH > 9. |
| L Less than 3 bore volumes purged prior to sampling. | R Unusable result. | X Location is undefined. |
| U Parameter analyzed for but was not detected. | | |

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:56 AM

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	ID	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
						LAB	DATA	QA		
Alkalinity as CaCO ₃	mg/L	0623	08/27/97	N001	310			#	-	-
	mg/L	0627	08/21/97	N001	857			#	-	-
Ammonia as NH ₄	mg/L	0623	08/27/97	0001	0.0203 B			#	-	-
	mg/L	0623	08/27/97	0002	0.0178 B			#	-	-
	mg/L	0627	08/21/97	0001	0.393			#	-	-
Cadmium	mg/L	0623	08/27/97	0001	0.0010 U			#	0.001	-
	mg/L	0623	08/27/97	0002	0.0010 U			#	0.001	-
	mg/L	0627	08/21/97	0001	0.0011 U			#	0.0011	-
Calcium	mg/L	0623	08/27/97	0001	38.600			#	-	-
	mg/L	0623	08/27/97	0002	38.600			#	-	-
	mg/L	0627	08/21/97	0001	11.600			#	-	-
Chloride	mg/L	0623	08/27/97	0001	8.210			#	-	-
	mg/L	0623	08/27/97	0002	8.170			#	-	-
	mg/L	0627	08/21/97	0001	96.300			#	-	-
Gross Alpha	pCi/L	0623	08/27/97	0001	2.84 U			#	2.84	± 1.72
	pCi/L	0623	08/27/97	0002	2.80 U			#	2.8	± 1.53
	pCi/L	0627	08/21/97	0001	14.50			#	11.73	± 8.13
Gross Beta	pCi/L	0623	08/27/97	0001	3.08			#	2.71	± 1.70
	pCi/L	0623	08/27/97	0002	4.05			#	2.7	± 1.74
	pCi/L	0627	08/21/97	0001	19.21			#	13.48	± 8.64
Lead-210	pCi/L	0623	08/27/97	0001	0.75 U			#	0.75	± 0.44
	pCi/L	0623	08/27/97	0002	0.70 U			#	0.7	± 0.41
	pCi/L	0627	08/21/97	0001	1.35 U			#	1.35	± 0.79
Magnesium	mg/L	0623	08/27/97	0001	28.600			#	-	-
	mg/L	0623	08/27/97	0002	28.600			#	-	-
	mg/L	0627	08/21/97	0001	8.150			#	-	-
Nitrate	mg/L	0623	08/27/97	0001	0.198 B			#	-	-
	mg/L	0623	08/27/97	0002	0.194 B			#	-	-
	mg/L	0627	08/21/97	0001	0.105 B			#	-	-
pH	s.u.	0623	08/27/97	N001	7.28			#	-	-
	s.u.	0627	08/21/97	N001	8.62			#	-	-
Potassium	mg/L	0623	08/27/97	0001	3.410			#	-	-
	mg/L	0623	08/27/97	0002	3.370			#	-	-
	mg/L	0627	08/21/97	0001	15.400			#	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:57 AM

PARAMETER	UNITS	LOCATION		SAMPLE:		RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
		ID	DATE	ID	LAB		DATA	QA			
Radium-226	pCi/L	0623	08/27/97	0001		0.12		#	0.03	± 0.07	
	pCi/L	0623	08/27/97	0002		0.73	U	#	0.31	± 0.61	
	pCi/L	0627	08/21/97	0001		1.00		#	0.14	± 0.49	
Radium-228	pCi/L	0623	08/27/97	0001		0.5	U		#	0.5	± 0.30
	pCi/L	0623	08/27/97	0002		0.9	U		#	0.9	± 0.50
	pCi/L	0627	08/21/97	0001		0.9			#	0.6	± 0.40
Redox Potential	mV	0623	08/27/97	N001		146			#	-	-
	mV	0627	08/21/97	N001		95			#	-	-
Selenium	mg/L	0623	08/27/97	0001		0.0010	U		#	0.001	-
	mg/L	0623	08/27/97	0002		0.0010	U		#	0.001	-
	mg/L	0627	08/21/97	0001		0.0011	U		#	0.0011	-
Sodium	mg/L	0623	08/27/97	0001		44.300			#	-	-
	mg/L	0623	08/27/97	0002		44.500			#	-	-
	mg/L	0627	08/21/97	0001		414.000			#	-	-
Strontium	mg/L	0623	08/27/97	0001		0.537			#	-	-
	mg/L	0623	08/27/97	0002		0.541			#	-	-
	mg/L	0627	08/21/97	0001		0.159			#	-	-
Sulfate	mg/L	0623	08/27/97	0001		24.900			#	-	-
	mg/L	0623	08/27/97	0002		25.600			#	-	-
	mg/L	0627	08/21/97	0001		217.000			#	-	-
Temperature	C	0623	08/27/97	N001		20.0			#	-	-
	C	0627	08/21/97	N001		19.0			#	-	-
Total Dissolved Solids	mg/L	0623	08/27/97	0001		322			#	-	-
	mg/L	0623	08/27/97	0002		92.0			#	-	-
	mg/L	0627	08/21/97	0001		1200			#	-	-
Uranium	mg/L	0623	08/27/97	0001		0.0010	U		#	0.001	-
	mg/L	0623	08/27/97	0002		0.0010	U		#	0.001	-
	mg/L	0627	08/21/97	0001		0.0126			#	-	-
Vanadium	mg/L	0623	08/27/97	0001		0.0130	U		#	0.013	-
	mg/L	0623	08/27/97	0002		0.0130	U		#	0.013	-
	mg/L	0627	08/21/97	0001		0.0285 *	J	#	-	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MON01, MONUMENT VALLEY
 REPORT DATE: 11/3/97 10:41:58 AM

PARAMETER	UNITS	LOCATION ID	SAMPLE DATE	SAMPLE ID	RESULT	QUALIFIERS: LAB	DETECTION DATA	UN-LIMIT QA	CERTAINTY
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RECORDS: SELECTED FROM USEE800 WHERE site_code='MON01' AND quality_assurance = TRUE AND DATE_SAMPLED between #8/1/97# and #9/30/97#

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- | | |
|--|--|
| J Estimated value. | F Low flow sampling method used. |
| G Possible grout contamination, pH > 9. | L Less than 3 bore volumes purged prior to sampling. |
| R Unusable result. | X Location is undefined. |
| U Parameter analyzed for but was not detected. | |

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

Equipment Blank Data for Lowman 7/97 Sampling Event

11/3/97

ANALYTE	SITE CODE	LOCATION CO	DATE SAMPL	SAMPLE ID	WATER UNIT OF MEA	RESULT	LAB QUALIFIE	DATA VALIDATION	QUAL	DETECTION LIM	UNCERTAINTY
Ammonia as NH4	MON01	0999	8/21/97	0001	mg/L	0.007	U			0.007	
Ammonia as NH4	MON01	0999	8/25/97	0001	mg/L	0.007	U			0.007	
Cadmium	MON01	0999	8/21/97	0001	mg/L	0.001	U			0.001	
Cadmium	MON01	0999	8/25/97	0001	mg/L	0.001	U			0.001	
Calcium	MON01	0999	8/21/97	0001	mg/L	0.0522	B				
Calcium	MON01	0999	8/25/97	0001	mg/L	0.0398	B			0.004	
Chloride	MON01	0999	8/21/97	0001	mg/L	0.004	U			0.004	
Chloride	MON01	0999	8/25/97	0001	mg/L	0.004	U			0.004	
Gross Alpha	MON01	0999	8/21/97	0001	pCi/L	1.47	U			1.47	0.83
Gross Alpha	MON01	0999	8/25/97	0001	pCi/L	1.96	U			1.96	1.11
Gross Beta	MON01	0999	8/21/97	0001	pCi/L	2.65	U			2.65	1.56
Gross Beta	MON01	0999	8/25/97	0001	pCi/L	3.53	U			3.53	2.02
Lead-210	MON01	0999	8/21/97	0001	pCi/L	0.8	U			0.8	0.46
Lead-210	MON01	0999	8/25/97	0001	pCi/L	0.71	U			0.71	0.41
Magnesium	MON01	0999	8/21/97	0001	mg/L	0.075	U			0.075	
Magnesium	MON01	0999	8/25/97	0001	mg/L	0.075	U			0.075	
Nitrate	MON01	0999	8/21/97	0001	mg/L	0.014	U			0.014	
Nitrate	MON01	0999	8/25/97	0001	mg/L	0.014	U			0.014	
Potassium	MON01	0999	8/21/97	0001	mg/L	0.075	U			0.075	
Potassium	MON01	0999	8/25/97	0001	mg/L	0.075	U			0.075	
Radium-226	MON01	0999	8/21/97	0001	pCi/L	0.1				0.01	0.05
Radium-226	MON01	0999	8/25/97	0001	pCi/L	0.17				0.02	0.07
Radium-228	MON01	0999	8/21/97	0001	pCi/L	0.8	U			0.8	0.4
Radium-228	MON01	0999	8/25/97	0001	pCi/L	0.4	U			0.4	0.2
Selenium	MON01	0999	8/21/97	0001	mg/L	0.001	U			0.001	
Selenium	MON01	0999	8/25/97	0001	mg/L	0.001	U			0.001	
Sodium	MON01	0999	8/21/97	0001	mg/L	0.031	U			0.031	
Sodium	MON01	0999	8/25/97	0001	mg/L	0.031	U			0.031	
Strontium	MON01	0999	8/21/97	0001	mg/L	0.001	U			0.001	
Strontium	MON01	0999	8/25/97	0001	mg/L	0.001	U			0.001	
Sulfate	MON01	0999	8/21/97	0001	mg/L	0.027	U			0.027	
Sulfate	MON01	0999	8/25/97	0001	mg/L	0.0303	B			5	
Total Dissolved Solids	MON01	0999	8/21/97	0001	mg/L	5	U				
Total Dissolved Solids	MON01	0999	8/25/97	0001	mg/L	370					
Uranium	MON01	0999	8/21/97	0001	mg/L	0.001	U			0.001	
Uranium	MON01	0999	8/25/97	0001	mg/L	0.001	U			0.001	
Vanadium	MON01	0999	8/21/97	0001	mg/L	0.013	U			0.013	
Vanadium	MON01	0999	8/25/97	0001	mg/L	0.013	U			0.013	

Equipment Blank Data for Monument Valley 8/97 Sampling Event

11/3/97

ANALYTE	SITE CODE	LOCATION COD	DATE SAMPL	SAMPLE ID	WATER UNIT OF MEA	RESULT	LAB QUALIFIE	DATA VALIDATION	QUAL DETECTION LIM	UNCERTAINTY
Ammonia as NH4	MON01	0999	8/21/97	0001	mg/L	0.007	U		0.007	
Ammonia as NH4	MON01	0999	8/25/97	0001	mg/L	0.007	U		0.007	
Cadmium	MON01	0999	8/21/97	0001	mg/L	0.001	U		0.001	
Cadmium	MON01	0999	8/25/97	0001	mg/L	0.001	U		0.001	
Calcium	MON01	0999	8/21/97	0001	mg/L	0.0522	B			
Calcium	MON01	0999	8/25/97	0001	mg/L	0.0398	B			
Chloride	MON01	0999	8/21/97	0001	mg/L	0.004	U		0.004	
Chloride	MON01	0999	8/25/97	0001	mg/L	0.004	U		0.004	
Gross Alpha	MON01	0999	8/21/97	0001	pCi/L	1.47	U		1.47	0.83
Gross Alpha	MON01	0999	8/25/97	0001	pCi/L	1.96	U		1.96	1.11
Gross Beta	MON01	0999	8/21/97	0001	pCi/L	2.65	U		2.65	1.56
Gross Beta	MON01	0999	8/25/97	0001	pCi/L	3.53	U		3.53	2.02
Lead-210	MON01	0999	8/21/97	0001	pCi/L	0.8	U		0.8	0.46
Lead-210	MON01	0999	8/25/97	0001	pCi/L	0.71	U		0.71	0.41
Magnesium	MON01	0999	8/21/97	0001	mg/L	0.075	U		0.075	
Magnesium	MON01	0999	8/25/97	0001	mg/L	0.075	U		0.075	
Nitrate	MON01	0999	8/21/97	0001	mg/L	0.014	U		0.014	
Nitrate	MON01	0999	8/25/97	0001	mg/L	0.014	U		0.014	
Potassium	MON01	0999	8/21/97	0001	mg/L	0.075	U		0.075	
Potassium	MON01	0999	8/25/97	0001	mg/L	0.075	U		0.075	
Radium-226	MON01	0999	8/21/97	0001	pCi/L	0.1			0.01	0.05
Radium-226	MON01	0999	8/25/97	0001	pCi/L	0.17			0.02	0.07
Radium-228	MON01	0999	8/21/97	0001	pCi/L	0.8	U		0.8	0.4
Radium-228	MON01	0999	8/25/97	0001	pCi/L	0.4	U		0.4	0.2
Selenium	MON01	0999	8/21/97	0001	mg/L	0.001	U		0.001	
Selenium	MON01	0999	8/25/97	0001	mg/L	0.001	U		0.001	
Sodium	MON01	0999	8/21/97	0001	mg/L	0.031	U		0.031	
Sodium	MON01	0999	8/25/97	0001	mg/L	0.031	U		0.031	
Strontium	MON01	0999	8/21/97	0001	mg/L	0.001	U		0.001	
Strontium	MON01	0999	8/25/97	0001	mg/L	0.001	U		0.001	
Sulfate	MON01	0999	8/21/97	0001	mg/L	0.027	U		0.027	
Sulfate	MON01	0999	8/25/97	0001	mg/L	0.0303	B			
Total Dissolved Solids	MON01	0999	8/21/97	0001	mg/L	5	U		5	
Total Dissolved Solids	MON01	0999	8/25/97	0001	mg/L	370				
Uranium	MON01	0999	8/21/97	0001	mg/L	0.001	U		0.001	
Uranium	MON01	0999	8/25/97	0001	mg/L	0.001	U		0.001	
Vanadium	MON01	0999	8/21/97	0001	mg/L	0.013	U		0.013	
Vanadium	MON01	0999	8/25/97	0001	mg/L	0.013	U		0.013	

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WATER LEVELS

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STATIC GROUND WATER LEVELS (USEE700) FOR SITE MON01, MONUMENT VALLE
 REPORT DATE: 11/3/97 12:30:34 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)
			DATE	TIME		
0400	U	4881.24	08/21/97		292.00	4589.24
0401	U	4881.21	08/21/97		2.90	4878.31
0407	N	4830.90	08/22/97		6.38	4824.52
0408	N	4834.37	08/19/97		1.56	4832.81
0409	N	4832.37	08/19/97		0.80	4831.57
		4832.37	08/21/97		0.80	4831.57
0410	N	4834.24	08/19/97		5.70	4828.54
0411	N	4832.21	08/19/97		3.48	4828.73
0413	N	4792.85	08/21/97		4.53	4788.32
0414	N	4792.98	08/21/97		1.82	4791.16
0417	N	4794.69	08/21/97		1.85	4792.84
0601	U	4895.71	08/19/97		14.41	4881.30
0602	U	4875.26	08/19/97		9.60	4865.66
0603	U	4860.24	08/19/97		10.80	4849.44
		4860.24	08/27/97		10.85	4849.39
0604	C	4851.25	08/19/97		8.45	4842.80
		4851.25	08/27/97		8.54	4842.71
0605	D	4845.90	08/19/97		10.10	4835.80
		4845.90	08/28/97		10.13	4835.77
0606	D	4875.56	08/19/97		35.13	4840.43
		4875.56	08/28/97		35.33	4840.23
0607	D	4882.22	08/19/97		-	
0609	O	4890.82	08/19/97		-	
0610	N	4874.04	08/19/97		-	
0611	U	4860.14	08/19/97		11.13	4849.01
		4860.14	09/02/97		11.22	4848.92
0612	U	5018.65	08/19/97		161.68	4856.97
		5018.65	09/03/97		162.19	4856.46
0613	U	4875.10	08/19/97		0.00	4875.10
		4875.10	08/28/97		0.00	4875.10

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MON01, MONUMENT VALLE
 REPORT DATE: 11/3/97 12:30:35 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)
			DATE	TIME		
0614	D	4867.64	08/19/97		50.00	4817.64
		4867.64	09/03/97		50.02	4817.62
0615	U	4860.99	08/19/97		0.00	4860.99
0618	O	4924.81	08/19/97		92.40	4832.41
		4924.81	08/27/97		93.07	4831.74
0619	O	4899.46	08/19/97		57.13	4842.33
		4899.46	08/27/97		57.89	4841.57
0650	D	4805.11	08/19/97		19.50	4785.61
		4805.11	09/03/97		19.54	4785.57
0651	D	4798.70	08/19/97		8.90	4789.80
0652	D	4819.76	08/19/97		19.00	4800.76
		4819.76	09/04/97		19.05	4800.71
0653	D	4847.90	08/19/97		35.11	4812.79
		4847.90	08/29/97		35.17	4812.73
0654	C	4835.19	08/19/97		1.70	4833.49
0655	D	4872.89	08/18/97		39.45	4833.44
		4872.89	08/20/97		38.37	4834.52
0656	D	4867.16	08/19/97		35.75	4831.41
		4867.16	08/29/97		35.77	4831.39
0657	O	4889.81	08/19/97		49.73	4840.08
		4889.81	08/25/97		49.66	4840.15
0658	U	4890.79	08/19/97		9.85	4880.94
		4890.79	08/28/97		9.94	4880.85
0659	D	4875.80	08/19/97		35.66	4840.14
0660	D	4847.15	08/19/97		31.39	4815.76
0661	U	5073.31	08/19/97		163.50	4909.81
		5073.31	09/03/97		163.62	4909.69
0662	D	4889.39	08/19/97		49.15	4840.24
0663	D	4876.50	08/19/97		33.39	4843.11
		4876.50	08/28/97		34.78	4841.72
0664	D	4848.18	08/19/97		30.00	4818.18

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MON01, MONUMENT VALLE
 REPORT DATE: 11/3/97 12:30:35 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)
			DATE	TIME		
0668	D	4878.63	08/19/97		40.95	4837.68
		4878.63	08/26/97		41.18	4837.45
0669	D	4878.02	08/19/97		49.47	4828.55
		4878.02	08/26/97		49.47	4828.55
0760	N	4825.63	08/18/97		24.96	4800.67
		4825.63	08/21/97		24.94	4800.69
0761	N	4845.85	08/18/97		42.29	4803.56
		4845.85	09/03/97		42.26	4803.59
0762	N	4831.57	08/18/97		31.65	4799.92
		4831.57	09/04/97		31.68	4799.89
0764	N	4862.36	08/19/97		49.06	4813.30
		4862.36	09/04/97		49.08	4813.28
0765	N	4859.28	08/18/97		35.30	4823.98
		4859.28	08/20/97		34.74	4824.54
0766	N	4858.80	08/18/97		35.30	4823.50
0767	N	4819.08	08/18/97		6.75	4812.33
		4819.08	08/21/97		6.77	4812.31
0768	N	4831.56	08/18/97		13.59	4817.97
		4831.56	09/02/97		13.63	4817.93
0769	N	4872.13	08/12/97		39.00	4833.13
0770	N	4868.09	08/18/97		32.35	4835.74
0771	N	4874.09	08/18/97		41.61	4832.48
		4874.09	08/26/97		41.85	4832.24
0772	N	4858.43	08/12/97		11.61	4846.82
		4858.43	09/02/97		11.70	4846.73
0774	N	4890.97	08/12/97		49.07	4841.90
		4890.97	08/26/97		49.49	4841.48
0775	N	4890.51	08/12/97		49.50	4841.01
		4890.51	09/03/97		52.27	4838.24
0776	N	-	08/26/97		55.78	-55.78
0777	N	4859.07	08/18/97		35.02	4824.05

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MON01, MONUMENT VALLE
REPORT DATE: 11/3/97 12:30:36 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)
			DATE	TIME		

RECORDS: SELECTED FROM USEE700 WHERE site_code='MON01' AND LOG_DATE between #8/1/97# and #9/30/97#

FLOW CODES:

C CROSS GRADIENT	D DOWN GRADIENT	N UNKNOWN
O ON-SITE	U UPGRAIDENT	

TRIP REPORT/WORK ORDER

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CONTRACT NO.: DE-AC13-96GJ87335
TASK ORDER NO.: 96-5.5
CONTROL NO.: 3100-T97-1284

August 20, 1997

Technical Manager
Department of Energy
Grand Junction Office
2597 B^{3/4} Road
Grand Junction, CO 81503
ATTN: Don Metzler

SUBJECT: Contract No. DE-AC13-96GJ87335— August 1997 UMTRA Ground Water
Semi-annual Sampling at Monument Valley, Arizona

Dear Mr. Metzler:

Attached are the revised map and tables specifying the sampling locations and analytes for semi-annual monitoring at the Monument Valley, AZ, UMTRA site. Water quality data will be collected from monitoring wells at this site as part of the routine UMTRA Ground Water Sampling. Sampling is scheduled to begin August 20, 1997. Also attached is the *Sampling and Analysis Plan for the UMTRA Ground Water Project* which describes the procedures for sampling and managing waste.

The following lists show the well locations (with the associated zone of completion) and surface locations that will be sampled during the semi-annual monitoring event.

Ground Water Project Monitor Wells (filtered)*

603 Al	611 Dc	619 Dc	656 Al	668 Dc	764 Al	772 Al
604 Al	612 Dc	650 Al	657 Dc	669 Al	765 Al	774 Al
605 Al	613 Dc	652 Al	658 Sr	726 Al	767 Al	775 Dc
606 Al	614 Sr	653 Al	661 Dc	760 Al	768 Al	776 Dc
610 Sr	618 Dc	655 Al	663 Dc	761 Al	771 Al	

Well Points (filtered)*

407 Al 409 Al

*NOTE: Al = Alluvium; Dc = DeChelly Member of the Cutler Formation; Sr = Shinarump Member of the Chinle Formation

Surface Water (filtered)

626 627 632 Frog Ponds

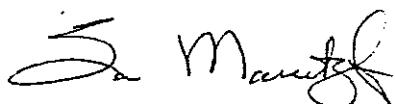
Don Metzler
Page 2
August 20, 1997
Control No.: 3100-1284

One QA/QC sample will be collected for every 20 water samples. Samples collected for alkalinity will not be filtered. Access for the Monument Valley site is covered under the cooperative agreement. Water level information will be collected from all wells and the stakes in the frog ponds at the Monument Valley site and monitor well inspections will be conducted and documented to confirm the status of all existing wells.

The point of contact for the Monument Valley site is Madeline Roanhorse. A letter explaining the details of this sampling event has been sent to her. Ms. Roanhorse's phone number is: (520) 871-6982. The field crew will contact Ms. Roanhorse at least two days prior to beginning sampling at the site.

If you have any questions, please call me at extension 6059 or Dave Miller at extension 6652.

Sincerely,



Sam Marutzky
Project Manager

SM/lcg
Attachments

cc w/o att: R. Bowen
K. E. Karp
D. E. Miller
K. E. Miller
D. G. Traub
Contract File (C. Spor)
cc w/att: GWMON 14.6

**Sampling Frequencies for Locations at
Monument Valley, Arizona**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Ground Water Project Monitor Wells</i>						
601			X			
602			X			
603				X		
604				X		
605		X				
606		X				
610				X		
611				X		
612			X			
614		X				
615			X			
618				X		
619		X				Unable to locate
650				X		
651				X		
652				X		Unable to locate 1/97
653		X				
654			X			
655		X				Added by K.Karp - 7/97
656		X				
657		X				
658				X		
659			X			
660			X			
661		X				
662			X			
663				X		
664			X			
668				X		
669		X				
726	X					Alluvial well added - 7/97
760	X					Alluvial well added - 7/97
761	X					Alluvial well added - 7/97
764	X					Alluvial well added - 7/97
765	X					Alluvial well added - 7/97
767	X					Alluvial well added - 7/97
768	X					Alluvial well added - 7/97
771	X					Alluvial well added - 7/97
772	X					Alluvial well added - 7/97
774	X					Alluvial well added - 7/97
775	X					DeChelly well added - 7/97
776	X					DeChelly well added - 7/97
<i>Private Wells</i>						
613			X			
616				X		
640			X			Broken pump 1/97, couldn't sample

**Sampling Frequencies for Locations at
Monument Valley, Arizona**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Surface Water/Sediment Locations</i>						
620				X		SPRING DOWNGRADIENT
621			X			
622			X			
623			X			
624				X		
626				X		Frozen 1/97
627				X		Frozen 1/97
631				X		
632				X		Dry 1/97
Frog Ponds						Added 7/97
<i>Well Points</i>						
407	X					Added by K. Karp - 7/97
409	X					Added by K. Karp - 7/97

**Constituent Sampling Breakdown
For Individual UMTRA Sites**

Site	Monument Valley	
Analyte	Ground Water	Surface Water
Approx. No. Samples/yr.	92	7
<i>Field Measurements</i>		
Alkalinity	X	X
Dissolved Oxygen		
Redox Potential	X	X
pH	X	X
Specific Conductance	X	X
Turbidity	X	X
Temperature	X	X
<i>Laboratory Measurements</i>		
Aluminum		
Ammonium	X	X
Antimony		
Arsenic		
Barium		
Beryllium		
Bromide		
Cadmium	X	X
Calcium	X	X
Chloride	X	X
Chromium		
Cobalt		
Copper		
Cyanide		
Fluoride		
Gross Alpha	X	X
Gross Beta		
Iron		
Lead		
Lead-210	X	X
Magnesium	X	X
Manganese		
Molybdenum		

**Constituent Sampling Breakdown
For Individual UMTRA Sites**

Site	Monument Valley	
Analyte	Ground Water	Surface Water
Laboratory Measurements (Continued):		
Nickel		
Nitrate	X	X
PCBs		
Phosphate		
Polonium-210		
Potassium	X	X
Radium-226	X	X
Radium-228	X	X
Selenium	X	X
Semi VOC		
Silica		
Silver		
Sodium	X	X
Strontium	X	X
Sulfate	X	X
Sulfide		
Thallium		
Thorium-230		
Tin		
Total Dissolved Solids	X	X
Total Organic Carbon		
TPH		
Uranium	X	X
Vanadium	X	X
Zinc		
Total Analytes	18	18

Note: All analyte samples are considered filtered unless stated otherwise.

All private well samples are to be unfiltered. The identity of the private wells are available in the "Sampling Frequencies for Locations" worksheet.

The total number of analytes does not include the field parameters.

All single numbers in the "Approximate No. Samples/yr" category are considered Ground Water Project samples.

* The left number represents Ground Water Project samples and the right number represents Surface or LTSM Project samples.

CONTRACT NO.: DE-AC13-96GJ87335
TASK ORDER NO.: 96-5.5
CONTROL NO.: 3100-N/A

MEMO TO: Sam Marutzky
FROM: Sam Campbell *JC*
DATE: September 26, 1997
SUBJECT: UMTRA Ground Water Trip Report

Site: Monument Valley, Arizona

Dates of Sampling Event: August 20, 1997 to September 4, 1997

Team Members: Sam Campbell, Jeff Price, Dave Traub, Ken Pill

Number of Locations Sampled: 36 monitoring wells and 2 surface water locations

Locations Not Sampled/Reason: Surface locations 626 and 632 were dry; well 610 was plugged.

Field Variance: The 3 point conductivity check on YSI X14719 did not meet the specification ($\pm 10\%$) in the 99.6 $\mu\text{mhos}/\text{cm}$ solution.

Wells purged dry prior to removing 3 casing volumes: 409, 407, 771, 669, and 775

Quality Control Sample Cross Reference:

Following are the false identifications assigned to the quality control samples:

False ID	True ID	Sample Type	Associated Matrix	Ticket Number
900	760	Duplicate	Ground water	NDC-222
901	Equipment Blank	Equipment Blank	Surface water	NDC-224
902	657	Duplicate	Ground water	NDC-416
903	Equipment Blank	Equipment Blank	Ground water	NDC-417
904	623	Duplicate	Surface water	NDC-424

Requisition Numbers Assigned: All samples were assigned to requisition 15618.

Water Level Measurements: Water level measurements were completed on 58 wells; wells 608, 616, and 617 were not located in the field.

Sam Marutzky
Page 2
September 26, 1997
Control No.: 3100-N/A

Well Inspection Summary: Well 610 is plugged with sand at 2.95 feet below the top of casing.

Equipment: The pH probe malfunctioned and was replaced with the backup probe to complete the sampling event.

The HACH digital titrator used for the alkalinity test was not registering a hundreds unit when passing the 99 mark.

Regulatory: None.

Site Issues: A map of our well locations was provided to a contractor working on an irrigation project in the area. After returning to the GJO, I was contacted, and a request was made for an electronic version of the well location map. The request was forwarded to Sam Marutzky and maps were provided to John Milligan, Navajo Utilities Association.

Samples were collected from the recently installed well at Ben Stanley's residence.

Corrective Action Required/Taken : Well 610 should be abandoned.

SC/lcg

Distribution:

cc: R. Bowen
D. Metzler
K. Miller
GWMON 14.12