UMTRA GROUND WATER PROJECT

# DATA VALIDATION FOR THE MONUMENT VALLEY, ARIZONA UMTRA SITE

**FEBRUARY 1998**
**Water Sampling**

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

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*MONUMENT VALLEY*
Sampled February 1998

**DATA PACKAGE CONTENTS**

This data package includes the following information:

| Item No. | Description of Contents |
|---|---|
| 1. | **Site Hydrologist 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 validators findings. |
| 5. | **Anomalous Data Review Checksheets** which list the subset of data from sampling event 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** |
| | a. Ground-Water Quality Data (included on disk) |
| | b. Surface-Water Quality Data (included on disk) |
| | c. Field QC Sample Data (included on disk) |
| | d. Water Level Data |
| 7. | **Sampling and Analysis Work Order and Trip Report.** |

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## Site Hydrologist Summary

**Site:** Monument Valley

**Sampling Period:** February 1998

SUMMARY CRITERIA

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

   Domestic well 200 was the only domestic well sampled during this sampling event. Sample concentrations from this well did not exceed a ground water standard, primary drinking water standard, or health advisory.

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

   There are no point-of-compliance wells established at the Monument Valley Site.

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

   There is no indication of unexpected contaminated ground water movement from this sampling event; however, a field investigation has been completed at the Monument Valley site, and a Site Observational Work Plan will be completed in the near future, which will describe contaminant plume movement.

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

   There are not enough historical data points (less than 10) from upstream locations to make a valid statistical comparison between upstream and downstream water quality.

SUMMARY CRITERIA (continued)

Wells with sample concentrations that exceeded UMTRA ground water standards are listed in Table 1.

*Table 1. Monument Valley Wells with Samples that Exceeded UMTRA Standards in February 1998.*

| Analyte | Standard[1] | Wells Exceeding Standards (Concentration[1]) |
|---|---|---|
| Gross Alpha[2] | 15 | 407 (16.29) |
| Nitrate | 44.27 | 606 (1,010), 653 (130), 655 (387), 656 (246), 662 (53.6), 669 (51.3), 761 (76.5), 762 (76.9), 764 (108), 765 (680), 770 (183), 771 (585), 772 (109), 777 (746) |
| Ra-226 + Ra-228 | 5 | 659 (7.36) |
| Uranium | 0.044 | 407 (0.0672), 619 (0.0846), 774 (0.0726) |

[1]Units are in mg/L (inorganic) or pCi/L (radiological)
[2,2] Uranium activities were subtracted from the gross alpha results in order to compare to the standard, which excludes uranium and radon.

Ken Karp
Site Hydrologist

4/28/98
Date

# DATA ASSESSMENT

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# UGW Water Sampling Field Activities Verification Checklist

Project Monument Valley

Date(s) of Ground Water Sampling Feb 23 through Feb 27, 1998

Date(s) of Verification 4-22-98

Name of Verifier Sam Campbell

| | Response (Yes, No, N/A) | Comments |
|---|---|---|
| 1. Is the SAP the primary document directing field procedures? | Yes | |
| List other documents, SOPs, Instructions. | | Work Order memo dated 1-14-98 |
| 2. Were the sampling locations specified in the planning documents sampled? | No | Well 402 did not recover sufficiently after purging<br>Private well 640 did not have access through the surface casin |
| 3. Was field equipment calibrated as specified in the above named documents? | Yes | Except for the pre-trip temperature probe op-check |
| Were the number and types (alkalinity, temperature, conductivity pH, turbidity, DO, Eh) of field measurements taken as specified? | Yes | |
| 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? | Yes | Except for wells 650 and 765 |
| Was the calibration information recorded on the field data sheets? | Yes | |
| 4. Was a duplicate alkalinity measurement conducted on a frequency of one duplicate per 20 samples? | Yes | |
| 5. Was depth to water measured before purging? | Yes | |
| Was this information used to calculate the purge volume? | Yes | |
| 6. If conventional purging was used, were the wells purged until parameters stabilized and 3 casing volumes were removed or until the well was purged dry? | Yes | Except for well 615 – 38 gal calculated, 36 gal purged<br>Turbidity criteria was not met at wells 774 and 604 |
| 7. If low-flow purging was used, was the purge rate less than 0.125 gal/min, and was the drawdown less than 0.3 feet? | Yes | |

| | | |
|---|---|---|
| 8. Were duplicates taken at a frequency of one per 20 samples? | Yes | |
| 9. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment? | Yes | |
| 10. Were trip blanks prepared and included with each shipment of VOC samples? | NA | |
| 11. Were QC samples assigned a fictitious site identification number? | Yes | |
| Was the true identity of the samples recorded in the field notes? | Yes | |
| 12. Were samples collected in the containers specified? | Yes | |
| Were certified pre-cleaned containers used for the sampling? | Yes | |
| 13. Were samples filtered and preserved as specified? | Yes | Except private well 200, which was mistakenly filtered |
| 14. Were the number and types of samples collected as specified? | Yes | TOS was measured in the field with a portable meter. |
| 15. Were chain of custody records completed and was sample custody maintained? | Yes | |
| 16. Were sample ticket book numbers recorded in the field notebook, on field data forms, and on the chain of custody? | Yes | New Field Data sheets were used in lieu of a field notebook |
| 17. Are field notebooks and field data sheets signed and dated by the field team leader? | Yes | |
| 18. Was all other pertinent information documented on the field data sheets/forms? | Yes | |
| 19. Was the presence or absence of ice in the cooler documented in the field notebook for every sample location? | Yes | |
| 20. Were water levels measured at the locations specified in the planning documents? | Yes | |

# DATA PACKAGE ASSESSMENT

REQUISITION NUMBERS: 15888 SITE: Monument Valley LABORATORY: GJO ANALYSIS DATES: 3-4-98 to 4-8-98

REVIEWER: Sam Campbell Sam Campbell
NAME (print) SIGNATURE DATE

| | ICP-MS | ICP-AES | GFAA | FAA | $NaBH_4$ | AS | LSc | PC | IC | Gravimetric | Colorimetric | Other β-γCC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHAIN OF CUSTODY | OK | OK | NA | OK | NA | OK | OK | OK | OK | NA | OK | OK | |
| HOLDING TIME | OK | OK | | OK | | OK | OK | OK | OK | ↓ | OK | OK | |
| CALIB. VERIFICATION (For AS, internal tracer) | OK | OK | | OK | | OK | OK | OK | OK | NA | OK | OK | |
| PREP. BLANKS (Only if digestion) | NA | NA | | NA | | OK | OK | OK | OK | NA | OK | OK | |
| INT. CAL. BLANKS | OK | ① | | OK | | NA | NA | NA | OK | NA | OK | NA | |
| CONT. CAL. BLANKS | OK | ② | ↓ | OK | ↓ | NA | NA | NA | OK | NA | OK | NA | |
| ICS (ICP only) | OK | OK | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| LAB. CONTROL SAMPLE | OK | OK | | OK | | OK | OK | OK | OK | | OK | OK | |
| DUPLICATES | OK | OK | | OK | | OK | OK | OK | OK | ↓ | OK | OK | |
| POSTDIGEST. SPKS. (Only if MS fails) | NA | NA | | NA | | NA | NA | NA | NA | NA | NA | NA | |
| MATRIX SPKS. | OK | OK | | OK | | NA | NA | ③ | OK | NA | OK | NA | |
| OVERALL ASSESS. | OK | OK | ↓ | OK | ↓ | OK | OK | OK | OK | ↓ | OK | OK | |

REVIEWER COMMENTS: ① Na detected in the ICB - No samples affected

ITEMS REQUIRING ATTENTION: ② U flag Ca and Na results for samples 250050, 250056, and 250080 because of CCB contamination ③ J flag gross alpha results 250037 through 250049 and 250070 through 250080 because of matrix spike recovery.

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**MONUMENT VALLEY, AZ**
**FEBRUARY 1998 SAMPLING EVENT**
**DATA ASSESSMENT SUMMARY**

The DOE-GJO Analytical Laboratory analyzed samples and reported results for this sampling event under requisition number 15888.

## RADIOCHEMICAL ANALYSIS

The determination of gross alpha was performed by gas proportional counting (PC). Radium-226 was analyzed by alpha spectrometry (AS) and radium-228 by beta/gamma coincidence counting ($\beta$-$\gamma$ CC). Lead-210 was determined by liquid scintillation spectrometry (LSc). The detection limits for gross alpha are higher than those specified in the planning documents due to high TDS in the samples. Although not requested, gross beta results are included in this report because gross beta activity is determined concurrently with gross alpha activity. Except as noted, all quality control requirements were met during the course of these analyses.

All radiochemical results that were less than the minimum detectable activity (MDA) and/or the 3-sigma counting statistic range ($3\sigma$) were qualified with a non-detect flag (U) in the database, as reflected on the data base printouts.

The following gross alpha results were flagged with a "J" flag (estimated) because the matrix spike recovery did not meet criteria: 250037 through 250049 (775, 776, 619, 657, 657 duplicate, 606, 650, 765, 660, 653, 659, 654, and 760) and 250070 through 250080 (615, 662, 602, 604, 605, 400, 200, 403, 407, 409, and equipment blank).

## METALS/MAJOR CATIONS ANALYSIS

The determination of calcium, magnesium, potassium, sodium, strontium, and vanadium was performed by inductively coupled plasma-atomic emission spectrometer (ICP-AES). Cadmium and uranium were analyzed by inductively coupled plasma-mass spectrometry (ICP-MS), and potassium was analyzed by flame atomic absorption spectrometry (FAA). Except as noted, all quality control requirements were met during the course of these analyses.

Calcium and sodium results for samples 250050, 250056, and 250080 were qualified with a "U" flag in the data base because of continuing calibration blank (CCB) contamination

## INORGANIC ANALYSIS

Chloride, nitrate, and sulfate were determined by ion chromatography (IC), and ammonium was determined by spectrophotometry (Colorimetric). All quality control requirements were met during the course of these analyses

## FIELD ANALYSIS/ACTIVITIES

Low-flow purging was used at wells 775, 776, 619, and 657; therefore, results from these wells were qualified with an "F" flag in the data base. There were no wells with a measured pH greater than 9; therefore "G" flags indicating potential grout contamination were not required.

Wells purged dry prior to removal of three casing volumes included wells 400, 403, 407, 409, and 602. Although the stagnant water in the well casing was removed, and the samples collected were assumed to be representative of the formation water, results from these wells will be qualified with a "L" flag in the database indicating less than three casing volumes were removed prior to sampling..

The purging stabilization criteria for turbidity (10 NTUs or 10 percent over three readings) was not met at wells 774 and 604..

Three equipment blanks were collected for the 34 locations where samples were collected using non-dedicated equipment. The equipment blanks were analyzed for the same constituents as the Monument Valley environmental samples. All analytes were below their respective contract required detection limit (CRDL) or MDA/3$\sigma$.

Three field duplicates were collected for the 38 sampled locations. Duplicate samples were collected from wells 657 and 669, and surface location 623. There is no established regulatory criteria for the evaluation of field duplicate samples. However, using the EPA guidance for *laboratory* duplicates (which is conservative for field duplicates), duplicate sample results met the laboratory duplicate criteria and are considered acceptable.

## SAR

Problems in the SEE UMTRA data base precluded the production of a SAR for the Monument Valley site . ***Instead, historical data were reviewed as part of the evaluation of suspected anomalous data.*** Data from this sampling event were compared to historical minimum and maximum values. Results from this sampling event that varied more than 50 percent from historical minimum or maximum concentration (excluding results with less than 5 historical data points) are listed on the Anomalous Data Review Checksheet and will be compared to the next sampling event to make a final determination of validity.

**SUMMARY**

All analytical quality control criteria were met except as qualified on the Ground Water Quality Data by Parameter, Surface Water Quality Data by Parameter, or Equipment Blank data base printouts. The meaning of data qualifiers is defined on the UMTRA data base printouts or 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.

Sam Campbell
Data Validation Lead

4-27-98
Date

Ken Karp
Site Hydrologist

4-28-98
Date

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# DATA REVIEW CHECKLIST

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# ANOMALOUS DATA REVIEW CHECKSHEET

SITE: Monument Valley SAMPLING DATA: Ground Water/Surface Water

REVIEWER(s): Sam Campbell Sam Campbell 4-27-98
NAME (print) SIGNATURE DATE

SITE HYDROLOGIST: Kenneth E Karp Kenneth E Karp 4-28-98
NAME (print) SIGNATURE DATE

SITE GEOCHEMIST: _____
NAME (print) SIGNATURE DATE

DATE OF REVIEW: 4-27-98

| WELL NO. | ANALYTE | TYPE OF ANOMALY | DISPOSITION |
|---|---|---|---|
| 657 | Gross α | All time low | Compare to next sampling round |
| ↓ | Gross β | | |
| ↓ | sulfate | | |
| 657 · Dup | Gross α | | |
| | Gross β | | |
| ↓ | sulfate | ↓ | ↓ |

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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: 4/27/98 12:48:33

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity as CaCO3 | mg/L | 0200 | 02/26/98 | N001 | AL | U | 234 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | N001 | AL | U | 350 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | N001 | AL | U | 309 | | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | N001 | AL | C | 408 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | N001 | AL | C | 161 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | N001 | AL | U | 266 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | N001 | AL | C | 256 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | N001 | AL | C | 289 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | N001 | AL | D | 259 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | N001 | SR | U | 190 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | N001 | DC | O | 172 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | N001 | AL | D | 220 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | N001 | AL | D | 217 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | N001 | AL | C | 175 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | N001 | AL | D | 299 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | N001 | AL | D | 246 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | N001 | DC | O | 156 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | N001 | SR | D | 205 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | N001 | SR | D | 225 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | N001 | AL | D | 184 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | N001 | AL | D | 197 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | N001 | AL | D | 168 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | N001 | AL | D | 181 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | N001 | AL | D | 197 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | N001 | AL | D | 201 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | N001 | AL | D | 276 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | N001 | AL | D | 218 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:37

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity as CaCO3 | mg/L | 0768 | 02/25/98 | N001 | AL | D | 176 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | N001 | AL | D | 228 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | N001 | AL | D | 392 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | N001 | AL | O | 296 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | N001 | AL | O | 164 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | N001 | DC | D | 217 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | N001 | DC | O | 183 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | N001 | AL | D | 326 | | | # | - | - |
| Ammonia as NH4 | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 0.0070 | U | | # | 0.007 | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 0.426 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 0.0197 | B | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 0.0097 | B | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 0.0221 | B | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 0.0070 | U | L | # | 0.007 | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 0.0444 | B | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 0.193 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 271.000 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 0.0070 | U | | # | 0.007 | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 0.0073 | B | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 0.0097 | B | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 0.0070 | U | | # | 0.007 | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 0.0791 | B | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 67.100 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 91.200 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 0.0070 | U | F | # | 0.007 | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 0.0070 | U | F | # | 0.007 | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 0.902 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:40

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as NH4 | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 0.0197 | B | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 0.0070 | U | | # | 0.007 | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 0.922 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 0.788 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 0.151 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 0.0070 | U | | # | 0.007 | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 0.0147 | B | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 2.080 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 188.000 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 0.233 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 0.704 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 50.300 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 286.000 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 11.900 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 0.0070 | U | | # | 0.007 | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 0.0246 | B | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 0.0070 | U | F | # | 0.007 | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 208.000 | | | # | - | - |
| Cadmium | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 0.0010 | U | L | # | 0.001 | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 0.0010 | U | L | # | 0.001 | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 0.0010 | U | L | # | 0.001 | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 0.0010 | U | L | # | 0.001 | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 0.0010 | U | L | # | 0.001 | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:42

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 0.0010 | U | F | # | 0.001 | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 0.0010 | U | F | # | 0.001 | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 0.0010 | U | F | # | 0.001 | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 0.0010 | U | F | # | 0.001 | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 0.0010 | U | F | # | 0.001 | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:45

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| Calcium | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 67.000 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 28.400 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 28.000 | | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 106.000 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 25.000 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 28.000 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 19.200 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 128.000 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 180.000 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 16.200 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 42.900 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 8.810 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 258.000 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 39.600 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 387.000 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 50.700 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 31.700 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 31.800 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 27.800 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 2.750 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 238.000 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 73.200 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 71.800 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 20.100 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 124.000 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 111.000 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:48

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 119.000 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 166.000 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 35.400 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 85.700 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 62.600 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 534.000 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 23.800 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 43.300 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 12.200 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 27.800 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 169.000 | | | # | - | - |
| Chloride | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 153.000 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 35.900 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 10.800 | | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 285.000 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 7.830 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 16.000 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 11.700 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 204.000 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 17.700 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 9.780 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 5.610 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 8.940 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 35.900 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 5.720 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 29.300 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 17.500 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:50

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 5.250 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 5.240 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 10.600 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 8.610 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 8.870 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 17.100 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 16.900 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 9.730 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 16.400 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 62.700 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 13.900 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 21.400 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 5.310 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 105.000 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 18.600 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 32.400 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 20.600 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 7.370 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 8.600 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 6.320 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 20.500 | | | # | - | - |
| Gross Alpha | pCi/L | 0200 | 02/26/98 | 0001 | AL | U | 11.05 | U | J | # | 11.05 | ± 6.72 |
| | pCi/L | 0400 | 02/26/98 | 0001 | AL | U | 7.91 | U | JL | # | 7.91 | ± 3.74 |
| | pCi/L | 0403 | 02/26/98 | 0001 | AL | U | 7.74 | U | JL | # | 7.74 | ± 4.41 |
| | pCi/L | 0407 | 02/26/98 | 0001 | AL | C | 62.46 | | JL | # | 26.62 | ± 22.02 |
| | pCi/L | 0409 | 02/27/98 | 0001 | AL | C | 2.68 | U | JL | # | 2.68 | ± 1.42 |
| | pCi/L | 0602 | 02/26/98 | 0001 | AL | U | 7.00 | U | JL | # | 7 | ± 4.11 |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:53

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gross Alpha | pCi/L | 0604 | 02/26/98 | 0001 | AL | C | 3.46 | U | J | # | 3.46 | ± 2.29 |
| | pCi/L | 0605 | 02/26/98 | 0001 | AL | C | 24.82 | U | J | # | 24.82 | ± 13.97 |
| | pCi/L | 0606 | 02/24/98 | 0001 | AL | D | 12.61 | U | J | # | 12.61 | ± 7.61 |
| | pCi/L | 0615 | 02/25/98 | 0001 | SR | U | 10.32 | | J | # | 6.61 | ± 4.88 |
| | pCi/L | 0619 | 02/24/98 | 0001 | DC | O | 37.17 | | JF | # | 2.79 | ± 5.03 |
| | pCi/L | 0650 | 02/25/98 | 0001 | AL | D | 2.47 | U | J | # | 2.47 | ± 1.42 |
| | pCi/L | 0653 | 02/25/98 | 0001 | AL | D | 19.11 | U | J | # | 19.11 | ± 10.36 |
| | pCi/L | 0654 | 02/26/98 | 0001 | AL | C | 2.19 | U | J | # | 2.19 | ± 1.48 |
| | pCi/L | 0655 | 02/24/98 | 0001 | AL | D | 26.38 | U | | # | 26.38 | ± 16.52 |
| | pCi/L | 0656 | 02/24/98 | 0001 | AL | D | 7.27 | | | # | 6.33 | ± 4.35 |
| | pCi/L | 0657 | 02/24/98 | 0001 | DC | O | 3.51 | | JF | # | 2.19 | ± 1.70 |
| | pCi/L | 0657 | 02/24/98 | 0002 | DC | O | 2.19 | U | JF | # | 2.19 | ± 1.48 |
| | pCi/L | 0659 | 02/26/98 | 0001 | SR | D | 13.61 | | J | # | 3.27 | ± 3.52 |
| | pCi/L | 0660 | 02/25/98 | 0001 | SR | D | 2.87 | | J | # | 2.58 | ± 1.81 |
| | pCi/L | 0662 | 02/25/98 | 0001 | AL | D | 21.36 | | J | # | 11.65 | ± 8.97 |
| | pCi/L | 0669 | 02/25/98 | 0001 | AL | D | 6.98 | | | # | 5.51 | ± 3.87 |
| | pCi/L | 0669 | 02/25/98 | 0002 | AL | D | 4.77 | U | | # | 4.77 | ± 3.15 |
| | pCi/L | 0760 | 02/26/98 | 0001 | AL | D | 2.67 | U | J | # | 2.67 | ± 1.63 |
| | pCi/L | 0761 | 02/24/98 | 0001 | AL | D | 9.81 | | | # | 8.36 | ± 5.78 |
| | pCi/L | 0762 | 02/24/98 | 0001 | AL | D | 12.53 | U | | # | 12.53 | ± 7.42 |
| | pCi/L | 0764 | 02/24/98 | 0001 | AL | D | 7.76 | U | | # | 7.76 | ± 5.04 |
| | pCi/L | 0765 | 02/25/98 | 0001 | AL | D | 13.47 | U | J | # | 13.47 | ± 8.88 |
| | pCi/L | 0767 | 02/25/98 | 0001 | AL | D | 2.34 | U | | # | 2.34 | ± 1.39 |
| | pCi/L | 0768 | 02/25/98 | 0001 | AL | D | 12.28 | U | | # | 12.28 | ± 6.91 |
| | pCi/L | 0770 | 02/24/98 | 0001 | AL | D | 8.38 | U | | # | 8.38 | ± 5.47 |
| | pCi/L | 0771 | 02/27/98 | 0001 | AL | D | 44.51 | U | | # | 44.51 | ± 28.78 |
| | pCi/L | 0772 | 02/25/98 | 0001 | AL | O | 11.59 | | | # | 6.42 | ± 4.93 |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:56

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gross Alpha | pCi/L | 0774 | 02/25/98 | 0001 | AL | O | 31.80 | | | # | 3.2 | ± 4.48 |
| | pCi/L | 0775 | 02/23/98 | 0001 | DC | D | 5.65 | | JF | # | 2.55 | ± 2.19 |
| | pCi/L | 0776 | 02/24/98 | 0001 | DC | O | 13.62 | | JF | # | 2.67 | ± 3.12 |
| | pCi/L | 0777 | 02/25/98 | 0001 | AL | D | 18.13 | U | | # | 18.13 | ± 11.31 |
| Gross Beta | pCi/L | 0200 | 02/26/98 | 0001 | AL | U | 11.00 | U | | # | 11 | ± 6.49 |
| | pCi/L | 0400 | 02/26/98 | 0001 | AL | U | 10.77 | U | L | # | 10.77 | ± 6.06 |
| | pCi/L | 0403 | 02/26/98 | 0001 | AL | U | 10.79 | U | L | # | 10.79 | ± 6.12 |
| | pCi/L | 0407 | 02/26/98 | 0001 | AL | C | 27.67 | U | L | # | 27.67 | ± 16.31 |
| | pCi/L | 0409 | 02/27/98 | 0001 | AL | C | 3.34 | | L | # | 2.74 | ± 1.72 |
| | pCi/L | 0602 | 02/26/98 | 0001 | AL | U | 10.74 | U | L | # | 10.74 | ± 6.48 |
| | pCi/L | 0604 | 02/26/98 | 0001 | AL | C | 3.66 | U | | # | 3.66 | ± 2.23 |
| | pCi/L | 0605 | 02/26/98 | 0001 | AL | C | 27.30 | U | | # | 27.3 | ± 15.63 |
| | pCi/L | 0606 | 02/24/98 | 0001 | AL | D | 15.13 | U | | # | 15.13 | ± 9.15 |
| | pCi/L | 0615 | 02/25/98 | 0001 | SR | U | 10.77 | U | | # | 10.77 | ± 6.60 |
| | pCi/L | 0619 | 02/24/98 | 0001 | DC | O | 18.75 | | F | # | 3.4 | ± 2.76 |
| | pCi/L | 0650 | 02/25/98 | 0001 | AL | D | 3.02 | U | | # | 3.02 | ± 1.82 |
| | pCi/L | 0653 | 02/25/98 | 0001 | AL | D | 24.02 | U | | # | 24.02 | ± 13.93 |
| | pCi/L | 0654 | 02/26/98 | 0001 | AL | C | 2.45 | U | | # | 2.45 | ± 1.52 |
| | pCi/L | 0655 | 02/24/98 | 0001 | AL | D | 27.44 | U | | # | 27.44 | ± 16.37 |
| | pCi/L | 0656 | 02/24/98 | 0001 | AL | D | 8.38 | | | # | 6.86 | ± 4.32 |
| | pCi/L | 0657 | 02/24/98 | 0001 | DC | O | 2.67 | | F | # | 2.47 | ± 1.55 |
| | pCi/L | 0657 | 02/24/98 | 0002 | DC | O | 2.95 | | F | # | 2.45 | ± 1.55 |
| | pCi/L | 0659 | 02/26/98 | 0001 | SR | D | 10.40 | | | # | 4.15 | ± 2.88 |
| | pCi/L | 0660 | 02/25/98 | 0001 | SR | D | 3.05 | U | | # | 3.05 | ± 1.84 |
| | pCi/L | 0662 | 02/25/98 | 0001 | AL | D | 11.10 | U | | # | 11.1 | ± 6.77 |
| | pCi/L | 0669 | 02/25/98 | 0001 | AL | D | 5.52 | U | | # | 5.52 | ± 3.28 |
| | pCi/L | 0669 | 02/25/98 | 0002 | AL | D | 4.43 | U | | # | 4.43 | ± 2.74 |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:48:59

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gross Beta | pCi/L | 0760 | 02/26/98 | 0001 | AL | D | 3.63 | | | # | 3.04 | ± 1.93 |
| | pCi/L | 0761 | 02/24/98 | 0001 | AL | D | 9.14 | U | | # | 9.14 | ± 5.46 |
| | pCi/L | 0762 | 02/24/98 | 0001 | AL | D | 13.72 | | | # | 13.66 | ± 8.47 |
| | pCi/L | 0764 | 02/24/98 | 0001 | AL | D | 7.86 | U | | # | 7.86 | ± 4.74 |
| | pCi/L | 0765 | 02/25/98 | 0001 | AL | D | 17.51 | | | # | 17.23 | ± 10.74 |
| | pCi/L | 0767 | 02/25/98 | 0001 | AL | D | 2.21 | U | | # | 2.21 | ± 1.32 |
| | pCi/L | 0768 | 02/25/98 | 0001 | AL | D | 13.64 | U | | # | 13.64 | ± 7.87 |
| | pCi/L | 0770 | 02/24/98 | 0001 | AL | D | 13.06 | | | # | 10.85 | ± 6.82 |
| | pCi/L | 0771 | 02/27/98 | 0001 | AL | D | 71.78 | | | # | 54.41 | ± 34.50 |
| | pCi/L | 0772 | 02/25/98 | 0001 | AL | O | 6.89 | U | | # | 6.89 | ± 4.09 |
| | pCi/L | 0774 | 02/25/98 | 0001 | AL | O | 19.68 | | | # | 2.89 | ± 2.45 |
| | pCi/L | 0775 | 02/23/98 | 0001 | DC | D | 3.46 | | F | # | 3.08 | ± 1.93 |
| | pCi/L | 0776 | 02/24/98 | 0001 | DC | O | 7.04 | | F | # | 3.17 | ± 2.15 |
| | pCi/L | 0777 | 02/25/98 | 0001 | AL | D | 21.77 | U | | # | 21.77 | ± 13.49 |
| Lead-210 | pCi/L | 0200 | 02/26/98 | 0001 | AL | U | 1.03 | U | | # | 1.03 | ± 0.59 |
| | pCi/L | 0400 | 02/26/98 | 0001 | AL | U | 1.09 | U | L | # | 1.09 | ± 0.63 |
| | pCi/L | 0403 | 02/26/98 | 0001 | AL | U | 1.17 | U | L | # | 1.17 | ± 0.67 |
| | pCi/L | 0407 | 02/26/98 | 0001 | AL | C | 1.02 | U | L | # | 1.02 | ± 0.60 |
| | pCi/L | 0409 | 02/27/98 | 0001 | AL | C | 1.10 | U | L | # | 1.1 | ± 0.64 |
| | pCi/L | 0602 | 02/26/98 | 0001 | AL | U | 1.04 | U | L | # | 1.04 | ± 0.61 |
| | pCi/L | 0604 | 02/26/98 | 0001 | AL | C | 1.05 | U | | # | 1.05 | ± 0.60 |
| | pCi/L | 0605 | 02/26/98 | 0001 | AL | C | 1.06 | U | | # | 1.06 | ± 0.62 |
| | pCi/L | 0606 | 02/24/98 | 0001 | AL | D | 1.28 | U | | # | 1.28 | ± 0.74 |
| | pCi/L | 0615 | 02/25/98 | 0001 | SR | U | 1.28 | | | # | 0.99 | ± 0.61 |
| | pCi/L | 0619 | 02/24/98 | 0001 | DC | O | 0.93 | U | F | # | 0.93 | ± 0.55 |
| | pCi/L | 0650 | 02/25/98 | 0001 | AL | D | 0.88 | U | | # | 0.88 | ± 0.53 |
| | pCi/L | 0653 | 02/25/98 | 0001 | AL | D | 1.38 | U | | # | 1.38 | ± 0.83 |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:01

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL.. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead-210 | pCi/L | 0654 | 02/26/98 | 0001 | AL | C | 0.93 | U | | # | 0.93 | ± 0.55 |
| | pCi/L | 0655 | 02/24/98 | 0001 | AL | D | 0.98 | U | | # | 0.98 | ± 0.57 |
| | pCi/L | 0656 | 02/24/98 | 0001 | AL | D | 0.99 | U | | # | 0.99 | ± 0.58 |
| | pCi/L | 0657 | 02/24/98 | 0001 | DC | O | 0.95 | U | F | # | 0.95 | ± 0.56 |
| | pCi/L | 0657 | 02/24/98 | 0002 | DC | O | 1.00 | U | F | # | 1 | ± 0.59 |
| | pCi/L | 0659 | 02/26/98 | 0001 | SR | D | 1.29 | | | # | 0.92 | ± 0.57 |
| | pCi/L | 0660 | 02/25/98 | 0001 | SR | D | 1.00 | | | # | 0.94 | ± 0.57 |
| | pCi/L | 0662 | 02/25/98 | 0001 | AL | D | 1.07 | U | | # | 1.07 | ± 0.61 |
| | pCi/L | 0669 | 02/25/98 | 0001 | AL | D | 0.95 | U | | # | 0.95 | ± 0.56 |
| | pCi/L | 0669 | 02/25/98 | 0002 | AL | D | 1.00 | U | | # | 1 | ± 0.58 |
| | pCi/L | 0760 | 02/26/98 | 0001 | AL | D | 0.94 | U | | # | 0.94 | ± 0.55 |
| | pCi/L | 0761 | 02/24/98 | 0001 | AL | D | 1.02 | U | | # | 1.02 | ± 0.60 |
| | pCi/L | 0762 | 02/24/98 | 0001 | AL | D | 1.02 | U | | # | 1.02 | ± 0.60 |
| | pCi/L | 0764 | 02/24/98 | 0001 | AL | D | 0.99 | U | | # | 0.99 | ± 0.58 |
| | pCi/L | 0765 | 02/25/98 | 0001 | AL | D | 0.94 | U | | # | 0.94 | ± 0.56 |
| | pCi/L | 0767 | 02/25/98 | 0001 | AL | D | 0.97 | U | | # | 0.97 | ± 0.56 |
| | pCi/L | 0768 | 02/25/98 | 0001 | AL | D | 1.13 | U | | # | 1.13 | ± 0.66 |
| | pCi/L | 0770 | 02/24/98 | 0001 | AL | D | 1.36 | | | # | 1.01 | ± 0.62 |
| | pCi/L | 0771 | 02/27/98 | 0001 | AL | D | 1.06 | U | | # | 1.06 | ± 0.63 |
| | pCi/L | 0772 | 02/25/98 | 0001 | AL | O | 0.97 | U | | # | 0.97 | ± 0.56 |
| | pCi/L | 0774 | 02/25/98 | 0001 | AL | O | 1.05 | U | | # | 1.05 | ± 0.63 |
| | pCi/L | 0775 | 02/23/98 | 0001 | DC | D | 1.04 | U | F | # | 1.04 | ± 0.60 |
| | pCi/L | 0776 | 02/24/98 | 0001 | DC | O | 0.92 | U | F | # | 0.92 | ± 0.55 |
| | pCi/L | 0777 | 02/25/98 | 0001 | AL | D | 1.01 | U | | # | 1.01 | ± 0.58 |
| Magnesium | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 79.300 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 53.000 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 57.200 | | L | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:04

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Magnesium | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 229.000 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 12.700 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 19.900 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 11.700 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 150.000 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 105.000 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 22.800 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 23.700 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 6.190 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 211.000 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 16.900 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 290.000 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 42.200 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 22.100 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 21.800 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 32.000 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 1.580 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 135.000 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 53.900 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 52.800 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 15.400 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 85.000 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 100.000 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 75.300 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 140.000 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 16.700 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 118.000 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:07

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Magnesium | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 54.000 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 543.000 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 12.900 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 28.200 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 11.700 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 22.900 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 156.000 | | | # | - | - |
| Nitrate | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 11.100 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 0.0584 | B | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 0.103 | B | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 0.101 | B | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 0.0520 | B | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 3.580 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 0.219 | B | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 0.0542 | B | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 1010.000 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 0.129 | B | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 12.100 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 1.150 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 130.000 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 0.0866 | B | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 387.000 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 246.000 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 9.320 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 9.320 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 6.850 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 0.0735 | B | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:09

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 53.600 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 51.300 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 51.200 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 0.103 | B | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 76.500 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 76.900 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 108.000 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 680.000 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 0.143 | B | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 0.0832 | B | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 183.000 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 585.000 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 109.000 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 14.700 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 0.230 | B | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 3.840 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 746.000 | | | # | - | - |
| pH | s.u. | 0200 | 02/26/98 | N001 | AL | U | 7.47 | | | # | - | - |
| | s.u. | 0400 | 02/26/98 | N001 | AL | U | 8.01 | | L | # | - | - |
| | s.u. | 0403 | 02/26/98 | N001 | AL | U | 8.44 | | L | # | - | - |
| | s.u. | 0407 | 02/26/98 | N001 | AL | C | 6.40 | | L | # | - | - |
| | s.u. | 0409 | 02/27/98 | N001 | AL | C | 7.83 | | L | # | - | - |
| | s.u. | 0602 | 02/26/98 | N001 | AL | U | 7.51 | | L | # | - | - |
| | s.u. | 0604 | 02/26/98 | N001 | AL | C | 7.42 | | | # | - | - |
| | s.u. | 0605 | 02/26/98 | N001 | AL | C | 6.99 | | | # | - | - |
| | s.u. | 0606 | 02/24/98 | N001 | AL | D | 6.97 | | | # | - | - |
| | s.u. | 0615 | 02/25/98 | N001 | SR | U | 6.98 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:12

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | s.u. | 0619 | 02/24/98 | N001 | DC | O | 7.63 | | F | # | - | - |
| | s.u. | 0650 | 02/25/98 | N001 | AL | D | 8.44 | | | # | - | - |
| | s.u. | 0653 | 02/25/98 | N001 | AL | D | 7.33 | | | # | - | - |
| | s.u. | 0654 | 02/26/98 | N001 | AL | C | 7.68 | | | # | - | - |
| | s.u. | 0655 | 02/24/98 | N001 | AL | D | 7.09 | | | # | - | - |
| | s.u. | 0656 | 02/24/98 | N001 | AL | D | 6.95 | | | # | - | - |
| | s.u. | 0657 | 02/24/98 | N001 | DC | O | 7.79 | | F | # | - | - |
| | s.u. | 0659 | 02/26/98 | N001 | SR | D | 7.27 | | | # | - | - |
| | s.u. | 0660 | 02/25/98 | N001 | SR | D | 8.56 | | | # | - | - |
| | s.u. | 0662 | 02/25/98 | N001 | AL | D | 6.35 | | | # | - | - |
| | s.u. | 0669 | 02/25/98 | N001 | AL | D | 7.12 | | | # | - | - |
| | s.u. | 0760 | 02/26/98 | N001 | AL | D | 8.20 | | | # | - | - |
| | s.u. | 0761 | 02/24/98 | N001 | AL | D | 6.91 | | | # | - | - |
| | s.u. | 0762 | 02/24/98 | N001 | AL | D | 7.36 | | | # | - | - |
| | s.u. | 0764 | 02/24/98 | N001 | AL | D | 7.28 | | | # | - | - |
| | s.u. | 0765 | 02/25/98 | N001 | AL | D | 7.34 | | | # | - | - |
| | s.u. | 0767 | 02/25/98 | N001 | AL | D | 7.21 | | | # | - | - |
| | s.u. | 0768 | 02/25/98 | N001 | AL | D | 7.01 | | | # | - | - |
| | s.u. | 0770 | 02/24/98 | N001 | AL | D | 6.95 | | | # | - | - |
| | s.u. | 0771 | 02/27/98 | N001 | AL | D | 6.95 | | | # | - | - |
| | s.u. | 0772 | 02/25/98 | N001 | AL | O | 7.46 | | | # | - | - |
| | s.u. | 0774 | 02/25/98 | N001 | AL | O | 7.13 | | | # | - | - |
| | s.u. | 0775 | 02/23/98 | N001 | DC | D | 8.08 | | F | # | - | - |
| | s.u. | 0776 | 02/24/98 | N001 | DC | O | 7.61 | | F | # | - | - |
| | s.u. | 0777 | 02/25/98 | N001 | AL | D | 6.57 | | | # | - | - |
| Potassium | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 2.460 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 2.620 | | L | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:14

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 2.560 | | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 0.831 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 2.560 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 1.940 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 1.760 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 2.980 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 9.320 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 2.730 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 1.800 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 1.020 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 4.340 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 2.520 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 20.500 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 11.900 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 1.690 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 1.720 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 3.770 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 0.778 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 3.010 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 2.910 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 2.890 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 2.230 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 0.875 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 2.860 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 2.470 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 18.600 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 2.320 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:17

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 2.470 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 6.840 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 52.900 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 1.320 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 1.980 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 3.410 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 2.420 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 24.600 | | | # | - | - |
| Radium-226 | pCi/L | 0200 | 02/26/98 | 0001 | AL | U | 0.12 | | | # | 0.01 | ± 0.06 |
| | pCi/L | 0400 | 02/26/98 | 0001 | AL | U | 0.11 | | L | # | 0.02 | ± 0.06 |
| | pCi/L | 0403 | 02/26/98 | 0001 | AL | U | 0.13 | | L | # | 0.02 | ± 0.06 |
| | pCi/L | 0407 | 02/26/98 | 0001 | AL | C | 0.10 | | L | # | 0.01 | ± 0.05 |
| | pCi/L | 0409 | 02/27/98 | 0001 | AL | C | 0.11 | | L | # | 0.02 | ± 0.05 |
| | pCi/L | 0602 | 02/26/98 | 0001 | AL | U | 0.51 | | L | # | 0.02 | ± 0.13 |
| | pCi/L | 0604 | 02/26/98 | 0001 | AL | C | 0.11 | | | # | 0.01 | ± 0.05 |
| | pCi/L | 0605 | 02/26/98 | 0001 | AL | C | 0.07 | | | # | 0.01 | ± 0.04 |
| | pCi/L | 0606 | 02/24/98 | 0001 | AL | D | 0.26 | | | # | 0.01 | ± 0.07 |
| | pCi/L | 0615 | 02/25/98 | 0001 | SR | U | 2.09 | | | # | 0.01 | ± 0.31 |
| | pCi/L | 0619 | 02/24/98 | 0001 | DC | O | 0.08 | | F | # | 0.02 | ± 0.05 |
| | pCi/L | 0650 | 02/25/98 | 0001 | AL | D | 0.12 | | | # | 0.02 | ± 0.05 |
| | pCi/L | 0653 | 02/25/98 | 0001 | AL | D | 0.09 | | | # | 0.02 | ± 0.04 |
| | pCi/L | 0654 | 02/26/98 | 0001 | AL | C | 0.41 | | | # | 0.01 | ± 0.09 |
| | pCi/L | 0655 | 02/24/98 | 0001 | AL | D | 0.19 | | | # | 0.01 | ± 0.07 |
| | pCi/L | 0656 | 02/24/98 | 0001 | AL | D | 0.14 | | | # | 0.01 | ± 0.06 |
| | pCi/L | 0657 | 02/24/98 | 0001 | DC | O | 0.10 | | F | # | 0.01 | ± 0.05 |
| | pCi/L | 0657 | 02/24/98 | 0002 | DC | O | 0.09 | | F | # | 0.01 | ± 0.04 |
| | pCi/L | 0659 | 02/26/98 | 0001 | SR | D | 5.96 | | | # | 0.02 | ± 0.68 |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:20

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | pCi/L | 0660 | 02/25/98 | 0001 | SR | D | 0.79 | | | # | 0.01 | ± 0.16 |
| | pCi/L | 0662 | 02/25/98 | 0001 | AL | D | 0.11 | | | # | 0.02 | ± 0.05 |
| | pCi/L | 0669 | 02/25/98 | 0001 | AL | D | 0.20 | | | # | 0.02 | ± 0.07 |
| | pCi/L | 0669 | 02/25/98 | 0002 | AL | D | 0.23 | | | # | 0.02 | ± 0.08 |
| | pCi/L | 0760 | 02/26/98 | 0001 | AL | D | 0.26 | | | # | 0.01 | ± 0.08 |
| | pCi/L | 0761 | 02/24/98 | 0001 | AL | D | 0.27 | | | # | 0.01 | ± 0.08 |
| | pCi/L | 0762 | 02/24/98 | 0001 | AL | D | 0.25 | | | # | 0.02 | ± 0.08 |
| | pCi/L | 0764 | 02/24/98 | 0001 | AL | D | 0.19 | | | # | 0.02 | ± 0.07 |
| | pCi/L | 0765 | 02/25/98 | 0001 | AL | D | 0.29 | | | # | 0.01 | ± 0.08 |
| | pCi/L | 0767 | 02/25/98 | 0001 | AL | D | 0.30 | | | # | 0.02 | ± 0.08 |
| | pCi/L | 0768 | 02/25/98 | 0001 | AL | D | 0.15 | | | # | 0.02 | ± 0.06 |
| | pCi/L | 0770 | 02/24/98 | 0001 | AL | D | 0.44 | | | # | 0.01 | ± 0.11 |
| | pCi/L | 0771 | 02/27/98 | 0001 | AL | D | 0.21 | | | # | 0.02 | ± 0.08 |
| | pCi/L | 0772 | 02/25/98 | 0001 | AL | O | 0.19 | | | # | 0.01 | ± 0.07 |
| | pCi/L | 0774 | 02/25/98 | 0001 | AL | O | 0.04 | | U | # | 0.01 | ± 0.03 |
| | pCi/L | 0775 | 02/23/98 | 0001 | DC | D | 0.28 | | F | # | 0.01 | ± 0.08 |
| | pCi/L | 0776 | 02/24/98 | 0001 | DC | O | 0.14 | | F | # | 0.02 | ± 0.06 |
| | pCi/L | 0777 | 02/25/98 | 0001 | AL | D | 0.16 | | | # | 0.01 | ± 0.06 |
| Radium-228 | pCi/L | 0200 | 02/26/98 | 0001 | AL | U | 0.4 | U | | # | 0.4 | ± 0.20 |
| | pCi/L | 0400 | 02/26/98 | 0001 | AL | U | 0.7 | U | L | # | 0.7 | ± 0.40 |
| | pCi/L | 0403 | 02/26/98 | 0001 | AL | U | 0.9 | U | L | # | 0.9 | ± 0.50 |
| | pCi/L | 0407 | 02/26/98 | 0001 | AL | C | 0.3 | U | L | # | 0.3 | ± 0.20 |
| | pCi/L | 0409 | 02/27/98 | 0001 | AL | C | 0.8 | U | L | # | 0.8 | ± 0.40 |
| | pCi/L | 0602 | 02/26/98 | 0001 | AL | U | 0.9 | U | L | # | 0.9 | ± 0.40 |
| | pCi/L | 0604 | 02/26/98 | 0001 | AL | C | 0.5 | U | | # | 0.5 | ± 0.30 |
| | pCi/L | 0605 | 02/26/98 | 0001 | AL | C | 0.4 | U | | # | 0.4 | ± 0.20 |
| | pCi/L | 0606 | 02/24/98 | 0001 | AL | D | 1.0 | U | | # | 1 | ± 0.60 |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:22

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | pCi/L | 0615 | 02/25/98 | 0001 | SR | U | 0.9 | U | | # | 0.9 | ± 0.60 |
| | pCi/L | 0619 | 02/24/98 | 0001 | DC | O | 0.9 | U | F | # | 0.9 | ± 0.50 |
| | pCi/L | 0650 | 02/25/98 | 0001 | AL | D | 0.4 | | U | # | 0.4 | ± 0.30 |
| | pCi/L | 0653 | 02/25/98 | 0001 | AL | D | 0.6 | U | | # | 0.6 | ± 0.30 |
| | pCi/L | 0654 | 02/26/98 | 0001 | AL | C | 1.0 | U | | # | 1 | ± 0.50 |
| | pCi/L | 0655 | 02/24/98 | 0001 | AL | D | 1.0 | U | | # | 1 | ± 0.60 |
| | pCi/L | 0656 | 02/24/98 | 0001 | AL | D | 1.0 | U | | # | 1 | ± 0.60 |
| | pCi/L | 0657 | 02/24/98 | 0001 | DC | O | 0.9 | U | F | # | 0.9 | ± 0.60 |
| | pCi/L | 0657 | 02/24/98 | 0002 | DC | O | 1.0 | U | F | # | 1 | ± 0.50 |
| | pCi/L | 0659 | 02/26/98 | 0001 | SR | D | 1.4 | | | # | 0.8 | ± 0.50 |
| | pCi/L | 0660 | 02/25/98 | 0001 | SR | D | 0.9 | U | | # | 0.9 | ± 0.50 |
| | pCi/L | 0662 | 02/25/98 | 0001 | AL | D | 0.7 | U | | # | 0.7 | ± 0.40 |
| | pCi/L | 0669 | 02/25/98 | 0001 | AL | D | 1.0 | U | | # | 1 | ± 0.50 |
| | pCi/L | 0669 | 02/25/98 | 0002 | AL | D | 0.9 | U | | # | 0.9 | ± 0.50 |
| | pCi/L | 0760 | 02/26/98 | 0001 | AL | D | 0.5 | | | # | 0.5 | ± 0.30 |
| | pCi/L | 0761 | 02/24/98 | 0001 | AL | D | 1.0 | U | | # | 1 | ± 0.60 |
| | pCi/L | 0762 | 02/24/98 | 0001 | AL | D | 1.0 | U | | # | 1 | ± 0.60 |
| | pCi/L | 0764 | 02/24/98 | 0001 | AL | D | 0.6 | U | | # | 0.6 | ± 0.40 |
| | pCi/L | 0765 | 02/25/98 | 0001 | AL | D | 0.9 | U | | # | 0.9 | ± 0.60 |
| | pCi/L | 0767 | 02/25/98 | 0001 | AL | D | 0.5 | U | | # | 0.5 | ± 0.30 |
| | pCi/L | 0768 | 02/25/98 | 0001 | AL | D | 0.8 | U | | # | 0.8 | ± 0.50 |
| | pCi/L | 0770 | 02/24/98 | 0001 | AL | D | 0.7 | | | # | 0.6 | ± 0.40 |
| | pCi/L | 0771 | 02/27/98 | 0001 | AL | D | 0.6 | U | | # | 0.6 | ± 0.40 |
| | pCi/L | 0772 | 02/25/98 | 0001 | AL | O | 0.9 | U | | # | 0.9 | ± 0.50 |
| | pCi/L | 0774 | 02/25/98 | 0001 | AL | O | 0.7 | U | | # | 0.7 | ± 0.40 |
| | pCi/L | 0775 | 02/23/98 | 0001 | DC | D | 0.6 | | F | # | 0.5 | ± 0.30 |
| | pCi/L | 0776 | 02/24/98 | 0001 | DC | O | 0.8 | U | F | # | 0.8 | ± 0.50 |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:25

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | pCi/L | 0777 | 02/25/98 | 0001 | AL | D | 0.7 | U | | # | 0.7 | ± 0.40 |
| Redox Potential | mV | 0200 | 02/26/98 | N001 | AL | U | 4 | | | # | - | - |
| | mV | 0400 | 02/26/98 | N001 | AL | U | 60 | | L | # | - | - |
| | mV | 0403 | 02/26/98 | N001 | AL | U | 82 | | L | # | - | - |
| | mV | 0407 | 02/26/98 | N001 | AL | C | 165 | | L | # | - | - |
| | mV | 0409 | 02/27/98 | N001 | AL | C | 26 | | L | # | - | - |
| | mV | 0602 | 02/26/98 | N001 | AL | U | 25 | | L | # | - | - |
| | mV | 0604 | 02/26/98 | N001 | AL | C | -76 | | | # | - | - |
| | mV | 0605 | 02/26/98 | N001 | AL | C | -129 | | | # | - | - |
| | mV | 0606 | 02/24/98 | N001 | AL | D | 147 | | | # | - | - |
| | mV | 0615 | 02/25/98 | N001 | SR | U | -55 | | | # | - | - |
| | mV | 0619 | 02/24/98 | N001 | DC | O | 46 | | F | # | - | - |
| | mV | 0650 | 02/25/98 | N001 | AL | D | -25 | | | # | - | - |
| | mV | 0653 | 02/25/98 | N001 | AL | D | 22 | | | # | - | - |
| | mV | 0654 | 02/26/98 | N001 | AL | C | -165 | | | # | - | - |
| | mV | 0655 | 02/24/98 | N001 | AL | D | 69 | | | # | - | - |
| | mV | 0656 | 02/24/98 | N001 | AL | D | 34 | | | # | - | - |
| | mV | 0657 | 02/24/98 | N001 | DC | O | 57 | | F | # | - | - |
| | mV | 0659 | 02/26/98 | N001 | SR | D | -106 | | | # | - | - |
| | mV | 0660 | 02/25/98 | N001 | SR | D | -255 | | | # | - | - |
| | mV | 0662 | 02/25/98 | N001 | AL | D | 28 | | | # | - | - |
| | mV | 0669 | 02/25/98 | N001 | AL | D | 50 | | | # | - | - |
| | mV | 0760 | 02/26/98 | N001 | AL | D | -161 | | | # | - | - |
| | mV | 0761 | 02/24/98 | N001 | AL | D | -17 | | | # | - | - |
| | mV | 0762 | 02/24/98 | N001 | AL | D | -13 | | | # | - | - |
| | mV | 0764 | 02/24/98 | N001 | AL | D | 70 | | | # | - | - |
| | mV | 0765 | 02/25/98 | N001 | AL | D | 82 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:28

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Redox Potential | mV | 0767 | 02/25/98 | N001 | AL | D | -191 | | | # | - | - |
| | mV | 0768 | 02/25/98 | N001 | AL | D | -230 | | | # | - | - |
| | mV | 0770 | 02/24/98 | N001 | AL | D | 81 | | | # | - | - |
| | mV | 0771 | 02/27/98 | N001 | AL | D | 117 | | | # | - | - |
| | mV | 0772 | 02/25/98 | N001 | AL | O | -42 | | | # | - | - |
| | mV | 0774 | 02/25/98 | N001 | AL | O | -26 | | | # | - | - |
| | mV | 0775 | 02/23/98 | N001 | DC | D | -69 | | F | # | - | - |
| | mV | 0776 | 02/24/98 | N001 | DC | O | 52 | | F | # | - | - |
| | mV | 0777 | 02/25/98 | N001 | AL | D | 44 | | | # | - | - |
| Sodium | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 292.000 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 113.000 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 47.700 | | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 604.000 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 51.500 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 108.000 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 103.000 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 645.000 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 93.000 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 82.500 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 16.000 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 95.100 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 254.000 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 26.100 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 176.000 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 106.000 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 7.590 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 7.650 | | F | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:30

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | SAMPLE: ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | QUALIFIERS: DATA | QUALIFIERS: QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 82.200 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 111.000 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 35.400 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 44.700 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 43.300 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 72.000 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 56.200 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 247.000 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 51.900 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 122.000 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 28.100 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 220.000 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 112.000 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 159.000 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 210.000 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 20.300 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 76.900 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 29.000 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 148.000 | | | # | - | - |
| Specific Conductance | umhos/ | 0200 | 02/26/98 | N001 | AL | U | 2166 | | | # | - | - |
| | umhos/ | 0400 | 02/26/98 | N001 | AL | U | 776 | | L | # | - | - |
| | umhos/ | 0403 | 02/26/98 | N001 | AL | U | 577 | | L | # | - | - |
| | umhos/ | 0407 | 02/26/98 | N001 | AL | C | 3830 | | L | # | - | - |
| | umhos/ | 0409 | 02/27/98 | N001 | AL | C | 442 | | L | # | - | - |
| | umhos/ | 0602 | 02/26/98 | N001 | AL | U | 756 | | L | # | - | - |
| | umhos/ | 0604 | 02/26/98 | N001 | AL | C | 638 | | | # | - | - |
| | umhos/ | 0605 | 02/26/98 | N001 | AL | C | 4050 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:33

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | umhos/ | 0606 | 02/24/98 | N001 | AL | D | 3570 | | | # | - | - |
| | umhos/ | 0615 | 02/25/98 | N001 | SR | U | 557 | | | # | - | - |
| | umhos/ | 0619 | 02/24/98 | N001 | DC | O | 442 | | F | # | - | - |
| | umhos/ | 0650 | 02/25/98 | N001 | AL | D | 480 | | | # | - | - |
| | umhos/ | 0653 | 02/25/98 | N001 | AL | D | 3130 | | | # | - | - |
| | umhos/ | 0654 | 02/26/98 | N001 | AL | C | 423 | | | # | - | - |
| | umhos/ | 0655 | 02/24/98 | N001 | AL | D | 4160 | | | # | - | - |
| | umhos/ | 0656 | 02/24/98 | N001 | AL | D | 1712 | | | # | - | - |
| | umhos/ | 0657 | 02/24/98 | N001 | DC | O | 397 | | F | # | - | - |
| | umhos/ | 0659 | 02/26/98 | N001 | SR | D | 747 | | | # | - | - |
| | umhos/ | 0660 | 02/25/98 | N001 | SR | D | 489 | | | # | - | - |
| | umhos/ | 0662 | 02/25/98 | N001 | AL | D | 1850 | | | # | - | - |
| | umhos/ | 0669 | 02/25/98 | N001 | AL | D | 922 | | | # | - | - |
| | umhos/ | 0760 | 02/26/98 | N001 | AL | D | 401 | | | # | - | - |
| | umhos/ | 0761 | 02/24/98 | N001 | AL | D | 1378 | | | # | - | - |
| | umhos/ | 0762 | 02/24/98 | N001 | AL | D | 2010 | | | # | - | - |
| | umhos/ | 0764 | 02/24/98 | N001 | AL | D | 688 | | | # | - | - |
| | umhos/ | 0765 | 02/25/98 | N001 | AL | D | 3340 | | | # | - | - |
| | umhos/ | 0767 | 02/25/98 | N001 | AL | D | 420 | | | # | - | - |
| | umhos/ | 0768 | 02/25/98 | N001 | AL | D | 2090 | | | # | - | - |
| | umhos/ | 0770 | 02/24/98 | N001 | AL | D | 1609 | | | # | - | - |
| | umhos/ | 0771 | 02/27/98 | N001 | AL | D | 6500 | | | # | - | - |
| | umhos/ | 0772 | 02/25/98 | N001 | AL | O | 1232 | | | # | - | - |
| | umhos/ | 0774 | 02/25/98 | N001 | AL | O | 517 | | | # | - | - |
| | umhos/ | 0775 | 02/23/98 | N001 | DC | D | 486 | | F | # | - | - |
| | umhos/ | 0776 | 02/24/98 | N001 | DC | O | 425 | | F | # | - | - |
| | umhos/ | 0777 | 02/25/98 | N001 | AL | D | 3920 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:36

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Strontium | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 1.070 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 0.588 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 0.721 | | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 3.500 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 0.378 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 0.302 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 0.192 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 2.140 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 1.590 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 0.378 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 0.348 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 0.100 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 2.100 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 0.377 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 2.680 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 0.530 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 0.311 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 0.311 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 0.297 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 0.0418 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 1.490 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 0.584 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 0.572 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 0.265 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 0.953 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 1.330 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 1.010 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:38

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Strontium | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 1.430 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 0.357 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 1.850 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 0.648 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 4.950 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 0.251 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 0.402 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 0.179 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 0.337 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 1.620 | | | # | - | - |
| Sulfate | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 657.000 | | | # | - | - |
| | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 92.200 | | L | # | - | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 30.000 | | L | # | - | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 1770.000 | | L | # | - | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 42.300 | | L | # | - | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 136.000 | | L | # | - | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 113.000 | | | # | - | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 1740.000 | | | # | - | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 671.000 | | | # | - | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 72.400 | | | # | - | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 49.700 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 27.300 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 1680.000 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 38.600 | | | # | - | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 2150.000 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 339.000 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 15.000 | | F | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:41

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 15.000 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 181.000 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 27.100 | | | # | - | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 894.000 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 217.000 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 216.000 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 88.000 | | | # | - | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 506.000 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 870.000 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 424.000 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 929.000 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 29.600 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 825.000 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 389.000 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 3710.000 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 181.000 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 70.100 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 52.700 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 37.200 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 1030.000 | | | # | - | - |
| Temperature | C | 0200 | 02/26/98 | N001 | AL | U | 15.7 | | | # | - | - |
| | C | 0400 | 02/26/98 | N001 | AL | U | 8.0 | | L | # | - | - |
| | C | 0403 | 02/26/98 | N001 | AL | U | 6.5 | | L | # | - | - |
| | C | 0407 | 02/26/98 | N001 | AL | C | 11.6 | | L | # | - | - |
| | C | 0409 | 02/27/98 | N001 | AL | C | 9.6 | | L | # | - | - |
| | C | 0602 | 02/26/98 | N001 | AL | U | 13.2 | | L | # | - | - |
| | C | 0604 | 02/26/98 | N001 | AL | C | 15.2 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:43

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Temperature | C | 0605 | 02/26/98 | N001 | AL | C | 14.2 | | | # | - | - |
| | C | 0606 | 02/24/98 | N001 | AL | D | 16.4 | | | # | - | - |
| | C | 0615 | 02/25/98 | N001 | SR | U | 15.5 | | | # | - | - |
| | C | 0619 | 02/24/98 | N001 | DC | O | 16.1 | | F | # | - | - |
| | C | 0650 | 02/25/98 | N001 | AL | D | 16.6 | | | # | - | - |
| | C | 0653 | 02/25/98 | N001 | AL | D | 16.7 | | | # | - | - |
| | C | 0654 | 02/26/98 | N001 | AL | C | 15.8 | | | # | - | - |
| | C | 0655 | 02/24/98 | N001 | AL | D | 16.2 | | | # | - | - |
| | C | 0656 | 02/24/98 | N001 | AL | D | 16.3 | | | # | - | - |
| | C | 0657 | 02/24/98 | N001 | DC | O | 13.0 | | F | # | - | - |
| | C | 0659 | 02/26/98 | N001 | SR | D | 16.5 | | | # | - | - |
| | C | 0660 | 02/25/98 | N001 | SR | D | 17.1 | | | # | - | - |
| | C | 0662 | 02/25/98 | N001 | AL | D | 16.4 | | | # | - | - |
| | C | 0669 | 02/25/98 | N001 | AL | D | 16.4 | | | # | - | - |
| | C | 0760 | 02/26/98 | N001 | AL | D | 16.1 | | | # | - | - |
| | C | 0761 | 02/24/98 | N001 | AL | D | 16.3 | | | # | - | - |
| | C | 0762 | 02/24/98 | N001 | AL | D | 16.2 | | | # | - | - |
| | C | 0764 | 02/24/98 | N001 | AL | D | 15.9 | | | # | - | - |
| | C | 0765 | 02/25/98 | N001 | AL | D | 17.0 | | | # | - | - |
| | C | 0767 | 02/25/98 | N001 | AL | D | 15.5 | | | # | - | - |
| | C | 0768 | 02/25/98 | N001 | AL | D | 15.8 | | | # | - | - |
| | C | 0770 | 02/24/98 | N001 | AL | D | 16.1 | | | # | - | - |
| | C | 0771 | 02/27/98 | N001 | AL | D | 16.7 | | | # | - | - |
| | C | 0772 | 02/25/98 | N001 | AL | O | 14.9 | | | # | - | - |
| | C | 0774 | 02/25/98 | N001 | AL | O | 16.5 | | | # | - | - |
| | C | 0775 | 02/23/98 | N001 | DC | D | 13.0 | | F | # | - | - |
| | C | 0776 | 02/24/98 | N001 | DC | O | 15.9 | | F | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:46

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB DATA QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|
| Temperature | C | 0777 | 02/25/98 | N001 | AL | D | 16.3 | # | - | - |
| Total Dissolved Solids | mg/L | 0200 | 02/26/98 | N001 | AL | U | 978 | # | - | - |
| | mg/L | 0400 | 02/26/98 | N001 | AL | U | 414 | # | - | - |
| | mg/L | 0403 | 02/26/98 | N001 | AL | U | 322 | # | - | - |
| | mg/L | 0407 | 02/26/98 | N001 | AL | C | 2080 | # | - | - |
| | mg/L | 0409 | 02/27/98 | N001 | AL | C | 204 | # | - | - |
| | mg/L | 0602 | 02/26/98 | N001 | AL | U | 340 | # | - | - |
| | mg/L | 0604 | 02/26/98 | N001 | AL | C | 289 | # | - | - |
| | mg/L | 0605 | 02/26/98 | N001 | AL | C | 1940 | # | - | - |
| | mg/L | 0606 | 02/24/98 | N001 | AL | D | 1860 | # | - | - |
| | mg/L | 0615 | 02/25/98 | N001 | SR | U | 251 | # | - | - |
| | mg/L | 0619 | 02/24/98 | N001 | DC | O | 212 | # | - | - |
| | mg/L | 0650 | 02/25/98 | N001 | AL | D | 239 | # | - | - |
| | mg/L | 0653 | 02/25/98 | N001 | AL | D | 1590 | # | - | - |
| | mg/L | 0654 | 02/26/98 | N001 | AL | C | 209 | # | - | - |
| | mg/L | 0655 | 02/24/98 | N001 | AL | D | 2040 | # | - | - |
| | mg/L | 0656 | 02/24/98 | N001 | AL | D | 803 | # | - | - |
| | mg/L | 0657 | 02/24/98 | N001 | DC | O | 180 | # | - | - |
| | mg/L | 0659 | 02/26/98 | N001 | SR | D | 363 | # | - | - |
| | mg/L | 0660 | 02/25/98 | N001 | SR | D | 245 | # | - | - |
| | mg/L | 0662 | 02/25/98 | N001 | AL | D | 884 | # | - | - |
| | mg/L | 0669 | 02/25/98 | N001 | AL | D | 425 | # | - | - |
| | mg/L | 0760 | 02/26/98 | N001 | AL | D | 264 | # | - | - |
| | mg/L | 0761 | 02/24/98 | N001 | AL | D | 632 | # | - | - |
| | mg/L | 0762 | 02/24/98 | N001 | AL | D | 1020 | # | - | - |
| | mg/L | 0764 | 02/24/98 | N001 | AL | D | 603 | # | - | - |
| | mg/L | 0765 | 02/25/98 | N001 | AL | D | 1750 | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:49

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 0767 | 02/25/98 | N001 | AL | D | 186 | | | # | - | - |
| | mg/L | 0768 | 02/25/98 | N001 | AL | D | 964 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | N001 | AL | D | 760 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | N001 | AL | D | 3280 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | N001 | AL | O | 563 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | N001 | AL | O | 241 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | N001 | DC | D | 222 | | | # | - | - |
| | mg/L | 0776 | 02/24/98 | N001 | DC | O | 186 | | | # | - | - |
| | mg/L | 0777 | 02/25/98 | N001 | AL | D | 1850 | | | # | - | - |
| Turbidity | NTU | 0200 | 02/26/98 | N001 | AL | U | 3.14 | | | # | - | - |
| | NTU | 0400 | 02/26/98 | N001 | AL | U | 16.8 | | L | # | - | - |
| | NTU | 0403 | 02/26/98 | N001 | AL | U | 740 | | L | # | - | - |
| | NTU | 0407 | 02/26/98 | N001 | AL | C | 245 | | L | # | - | - |
| | NTU | 0409 | 02/27/98 | N001 | AL | C | 175 | | L | # | - | - |
| | NTU | 0602 | 02/26/98 | N001 | AL | U | 30 | | L | # | - | - |
| | NTU | 0604 | 02/26/98 | N001 | AL | C | 18.1 | | | # | - | - |
| | NTU | 0605 | 02/26/98 | N001 | AL | C | 9.60 | | | # | - | - |
| | NTU | 0606 | 02/24/98 | N001 | AL | D | 5.28 | | | # | - | - |
| | NTU | 0615 | 02/25/98 | N001 | SR | U | 0.68 | | | # | - | - |
| | NTU | 0619 | 02/24/98 | N001 | DC | O | 1.54 | | F | # | - | - |
| | NTU | 0650 | 02/25/98 | N001 | AL | D | 0.71 | | | # | - | - |
| | NTU | 0653 | 02/25/98 | N001 | AL | D | 1.77 | | | # | - | - |
| | NTU | 0654 | 02/26/98 | N001 | AL | C | 5.67 | | | # | - | - |
| | NTU | 0656 | 02/24/98 | N001 | AL | D | 9.41 | | | # | - | - |
| | NTU | 0657 | 02/24/98 | N001 | DC | O | 3.50 | | F | # | - | - |
| | NTU | 0659 | 02/26/98 | N001 | SR | D | 9.68 | | | # | - | - |
| | NTU | 0660 | 02/25/98 | N001 | SR | D | 5.21 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:54

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | SAMPLE: ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | QUALIFIERS: DATA | QUALIFIERS: QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Uranium | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 0.0023 | | | # | - | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 0.0124 | | | # | - | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 0.0232 | | | # | - | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 0.0070 | | | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 0.0037 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 0.0037 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 0.0018 | | | # | - | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 0.0273 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 0.0108 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 0.0111 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 0.0253 | | | # | - | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 0.0085 | | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 0.0124 | | | # | - | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 0.0150 | | | # | - | - |
| | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 0.0021 | | | # | - | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 0.0078 | | | # | - | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 0.0327 | | | # | - | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 0.0163 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 0.0726 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 0.0034 | | F | # | - | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 0.0299 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 0.0157 | | | # | - | - |
| Vanadium | mg/L | 0200 | 02/26/98 | 0001 | AL | U | 0.0044 | B | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:57

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vanadium | mg/L | 0400 | 02/26/98 | 0001 | AL | U | 0.0040 | U | L | # | 0.004 | - |
| | mg/L | 0403 | 02/26/98 | 0001 | AL | U | 0.0040 | U | L | # | 0.004 | - |
| | mg/L | 0407 | 02/26/98 | 0001 | AL | C | 0.0040 | U | L | # | 0.004 | - |
| | mg/L | 0409 | 02/27/98 | 0001 | AL | C | 0.0040 | U | L | # | 0.004 | - |
| | mg/L | 0602 | 02/26/98 | 0001 | AL | U | 0.0040 | U | L | # | 0.004 | - |
| | mg/L | 0604 | 02/26/98 | 0001 | AL | C | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0605 | 02/26/98 | 0001 | AL | C | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0606 | 02/24/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0615 | 02/25/98 | 0001 | SR | U | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0619 | 02/24/98 | 0001 | DC | O | 0.0194 | | F | # | - | - |
| | mg/L | 0650 | 02/25/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0653 | 02/25/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0654 | 02/26/98 | 0001 | AL | C | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0655 | 02/24/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0656 | 02/24/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0657 | 02/24/98 | 0001 | DC | O | 0.0640 | | F | # | - | - |
| | mg/L | 0657 | 02/24/98 | 0002 | DC | O | 0.0622 | | F | # | - | - |
| | mg/L | 0659 | 02/26/98 | 0001 | SR | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0660 | 02/25/98 | 0001 | SR | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0662 | 02/25/98 | 0001 | AL | D | 0.0179 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0001 | AL | D | 0.0557 | | | # | - | - |
| | mg/L | 0669 | 02/25/98 | 0002 | AL | D | 0.0481 | | | # | - | - |
| | mg/L | 0760 | 02/26/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0761 | 02/24/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0762 | 02/24/98 | 0001 | AL | D | 0.0041 | B | | # | - | - |
| | mg/L | 0764 | 02/24/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0765 | 02/25/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:49:59

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vanadium | mg/L | 0767 | 02/25/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0768 | 02/25/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0770 | 02/24/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0771 | 02/27/98 | 0001 | AL | D | 0.0040 | U | | # | 0.004 | - |
| | mg/L | 0772 | 02/25/98 | 0001 | AL | O | 0.0408 | | | # | - | - |
| | mg/L | 0774 | 02/25/98 | 0001 | AL | O | 0.0163 | | | # | - | - |
| | mg/L | 0775 | 02/23/98 | 0001 | DC | D | 0.0040 | U | F | # | 0.004 | - |
| | mg/L | 0776 | 02/24/98 | 0001 | DC | O | 0.0112 | | F | # | - | - |
| | mg/L | 0777 | 02/25/98 | 0001 | AL | D | 0.0100 | | | # | - | - |

GROUND WATER QUALITY DATA BY PARAMETER (USEE200) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:50:01

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | ZONE COMPL. | FLOW REL. | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

RECORDS: SELECTED FROM USEE200 WHERE site_code='MON01' AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE "*R" OR data_validation_qualifiers LIKE "*X" ) OR IsNull(data_validation_qualifiers)) AND DATE_SAMPLED between #2/22/98# and #2/28/98#

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 compund (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. |
| > | Result above upper detection limit. |

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.

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SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:47:00 PM

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity as CaCO3 | mg/L | 0621 | 02/23/98 | N001 | 492 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | N001 | 687 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | N001 | 246 | | | # | - | - |
| Ammonia as NH4 | mg/L | 0621 | 02/23/98 | 0001 | 0.0420 | B | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 0.0692 | B | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 0.0197 | B | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 0.0172 | B | | # | - | - |
| Cadmium | mg/L | 0621 | 02/23/98 | 0001 | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 0.0010 | U | | # | 0.001 | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 0.0010 | U | | # | 0.001 | - |
| Calcium | mg/L | 0621 | 02/23/98 | 0001 | 39.800 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 31.100 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 41.100 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 40.800 | | | # | - | - |
| Chloride | mg/L | 0621 | 02/23/98 | 0001 | 32.200 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 57.300 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 11.300 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 11.300 | | | # | - | - |
| Gross Alpha | pCi/L | 0621 | 02/23/98 | 0001 | 28.84 | | | # | 9.4 | ± 8.39 |
| | pCi/L | 0622 | 02/23/98 | 0001 | 43.45 | | | # | 11.73 | ± 11.12 |
| | pCi/L | 0623 | 02/23/98 | 0001 | 4.55 | U | | # | 4.55 | ± 3.00 |
| | pCi/L | 0623 | 02/23/98 | 0002 | 4.60 | U | | # | 4.6 | ± 3.01 |
| Gross Beta | pCi/L | 0621 | 02/23/98 | 0001 | 35.92 | | | # | 11.02 | ± 7.89 |
| | pCi/L | 0622 | 02/23/98 | 0001 | 53.57 | | | # | 11.18 | ± 8.69 |
| | pCi/L | 0623 | 02/23/98 | 0001 | 6.70 | | | # | 5.45 | ± 3.43 |
| | pCi/L | 0623 | 02/23/98 | 0002 | 5.45 | U | | # | 5.45 | ± 3.37 |
| Lead-210 | pCi/L | 0621 | 02/23/98 | 0001 | 1.04 | U | | # | 1.04 | ± 0.60 |
| | pCi/L | 0622 | 02/23/98 | 0001 | 1.27 | | | # | 0.99 | ± 0.61 |
| | pCi/L | 0623 | 02/23/98 | 0001 | 0.97 | U | | # | 0.97 | ± 0.57 |
| | pCi/L | 0623 | 02/23/98 | 0002 | 0.96 | U | | # | 0.96 | ± 0.57 |
| Magnesium | mg/L | 0621 | 02/23/98 | 0001 | 62.900 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 87.700 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 25.800 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 25.600 | | | # | - | - |

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:47:04 PM

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate | mg/L | 0621 | 02/23/98 | 0001 | 0.300 | B | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 0.286 | B | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 0.251 | B | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 0.326 | B | | # | - | - |
| pH | s.u. | 0621 | 02/23/98 | N001 | 8.41 | | | # | - | - |
| | s.u. | 0622 | 02/23/98 | N001 | 8.60 | | | # | - | - |
| | s.u. | 0623 | 02/23/98 | N001 | 8.00 | | | # | - | - |
| Potassium | mg/L | 0621 | 02/23/98 | 0001 | 24.500 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 37.700 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 4.470 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 4.510 | | | # | - | - |
| Radium-226 | pCi/L | 0621 | 02/23/98 | 0001 | 0.07 | U | | # | 0.07 | ± 0.00 |
| | pCi/L | 0622 | 02/23/98 | 0001 | 0.06 | U | | # | 0.06 | ± 0.00 |
| | pCi/L | 0623 | 02/23/98 | 0001 | 0.07 | U | | # | 0.07 | ± 0.00 |
| | pCi/L | 0623 | 02/23/98 | 0002 | 0.07 | U | | # | 0.07 | ± 0.00 |
| Radium-228 | pCi/L | 0621 | 02/23/98 | 0001 | 0.6 | U | | # | 0.6 | ± 0.30 |
| | pCi/L | 0622 | 02/23/98 | 0001 | 1.0 | U | | # | 1 | ± 0.60 |
| | pCi/L | 0623 | 02/23/98 | 0001 | 0.5 | U | | # | 0.5 | ± 0.30 |
| | pCi/L | 0623 | 02/23/98 | 0002 | 1.0 | U | | # | 1 | ± 0.60 |
| Redox Potential | mV | 0621 | 02/23/98 | N001 | 98 | | | # | - | - |
| | mV | 0622 | 02/23/98 | N001 | 93 | | | # | - | - |
| | mV | 0623 | 02/23/98 | N001 | 104 | | | # | - | - |
| Sodium | mg/L | 0621 | 02/23/98 | 0001 | 129.000 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 246.000 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 38.500 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 38.500 | | | # | - | - |
| Specific Conductance | umhos/ | 0621 | 02/23/98 | N001 | 1163 | | | # | - | - |
| | umhos/ | 0622 | 02/23/98 | N001 | 1736 | | | # | - | - |
| | umhos/ | 0623 | 02/23/98 | N001 | 548 | | | # | - | - |
| Strontium | mg/L | 0621 | 02/23/98 | 0001 | 0.777 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 0.906 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 0.525 | | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 0.523 | | | # | - | - |
| Sulfate | mg/L | 0621 | 02/23/98 | 0001 | 140.000 | | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 253.000 | | | # | - | - |

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:47:07 PM

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | RESULT | QUALIFIERS: LAB | DATA QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | mg/L | 0623 | 02/23/98 | 0001 | 36.200 | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 36.300 | | # | - | - |
| Temperature | C | 0621 | 02/23/98 | N001 | 12.4 | | # | - | - |
| | C | 0622 | 02/23/98 | N001 | 12.2 | | # | - | - |
| | C | 0623 | 02/23/98 | N001 | 12.2 | | # | - | - |
| Total Dissolved Solids | mg/L | 0621 | 02/23/98 | N001 | 535 | | # | - | - |
| | mg/L | 0622 | 02/23/98 | N001 | 796 | | # | - | - |
| | mg/L | 0623 | 02/23/98 | N001 | 247 | | # | - | - |
| Turbidity | NTU | 0621 | 02/23/98 | N001 | 2.79 | | # | - | - |
| | NTU | 0622 | 02/23/98 | N001 | 4.97 | | # | - | - |
| | NTU | 0623 | 02/23/98 | N001 | 6.99 | | # | - | - |
| Uranium | mg/L | 0621 | 02/23/98 | 0001 | 0.0517 | | # | - | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 0.0866 | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 0.0031 | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 0.0032 | | # | - | - |
| Vanadium | mg/L | 0621 | 02/23/98 | 0001 | 0.0040 U | | # | 0.004 | - |
| | mg/L | 0622 | 02/23/98 | 0001 | 0.0123 | | # | - | - |
| | mg/L | 0623 | 02/23/98 | 0001 | 0.0040 U | | # | 0.004 | - |
| | mg/L | 0623 | 02/23/98 | 0002 | 0.0040 U | | # | 0.004 | - |

SURFACE WATER QUALITY DATA BY PARAMETER (USEE800) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/27/98 12:47:09 PM

| PARAMETER | UNITS | LOCATION ID | SAMPLE: DATE | ID | RESULT | QUALIFIERS: LAB | DATA | QA | DETECTION LIMIT | UN-CERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|

RECORDS: SELECTED FROM USEE800 WHERE site_code='MON01' AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE "*R" OR data_validation_qualifiers LIKE "X" ) OR IsNull(data_validation_qualifiers)) AND DATE_SAMPLED between #2/22/98# and #2/28/98#

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 compund (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.
- > Result above upper detection limit.

DATA QUALIFIERS:

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

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

Equipment Blank Data for Monument Valley 2/98 Sampling Event

| ANALYTE | SITE_CODE | LOCATION_CODE | DATE | SAMPLE_ID | UNIT | RESULT | LAB_QUALIFIERS | DATA_VAL_QUALIFIERS | DETECTION_LIMIT | UNCERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as NH4 | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.007 | U | | 0.007 | |
| Ammonia as NH4 | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.007 | U | | 0.007 | |
| Ammonia as NH4 | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.007 | U | | 0.007 | |
| Cadmium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.001 | U | | 0.001 | |
| Cadmium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.001 | U | | 0.001 | |
| Cadmium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.001 | U | | 0.001 | |
| Calcium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.0101 | B | U | | |
| Calcium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.0419 | B | U | | |
| Calcium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.0811 | B | U | | |
| Chloride | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.004 | U | | 0.004 | |
| Chloride | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.004 | U | | 0.004 | |
| Chloride | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.004 | U | | 0.004 | |
| Gross Alpha | MON01 | 0999 | 2/23/98 | 0001 | pCi/L | 1.03 | U | | 1.03 | 0.56 |
| Gross Alpha | MON01 | 0999 | 2/27/98 | 0002 | pCi/L | 1.71 | U | J | 1.71 | 0.96 |
| Gross Alpha | MON01 | 0999 | 2/27/98 | 0003 | pCi/L | 1.04 | U | | 1.04 | 0.67 |
| Gross Beta | MON01 | 0999 | 2/23/98 | 0001 | pCi/L | 2.12 | U | | 2.12 | 1.25 |
| Gross Beta | MON01 | 0999 | 2/27/98 | 0002 | pCi/L | 3.53 | U | | 3.53 | 2.02 |
| Gross Beta | MON01 | 0999 | 2/27/98 | 0003 | pCi/L | 2.12 | U | | 2.12 | 1.3 |
| Lead-210 | MON01 | 0999 | 2/23/98 | 0001 | pCi/L | 0.93 | U | | 0.93 | 0.54 |
| Lead-210 | MON01 | 0999 | 2/27/98 | 0002 | pCi/L | 1.04 | U | | 1.04 | 0.62 |
| Lead-210 | MON01 | 0999 | 2/27/98 | 0003 | pCi/L | 0.95 | U | | 0.95 | 0.56 |
| Magnesium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.031 | U | | 0.031 | |
| Magnesium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.0333 | B | | | |
| Magnesium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.031 | U | | 0.031 | |
| Nitrate | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.18 | B | | | |
| Nitrate | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.15 | B | | | |
| Nitrate | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.0811 | B | | | |
| Potassium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.073 | U | | 0.073 | |
| Potassium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.073 | U | | 0.073 | |
| Potassium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.073 | U | | 0.073 | |
| Radium-226 | MON01 | 0999 | 2/23/98 | 0001 | pCi/L | 0.03 | | U | 0.01 | 0.03 |
| Radium-226 | MON01 | 0999 | 2/27/98 | 0002 | pCi/L | 0.02 | U | | 0.02 | 0.02 |
| Radium-226 | MON01 | 0999 | 2/27/98 | 0003 | pCi/L | 0.03 | | U | 0.01 | 0.03 |
| Radium-228 | MON01 | 0999 | 2/23/98 | 0001 | pCi/L | 0.7 | U | | 0.7 | 0.4 |
| Radium-228 | MON01 | 0999 | 2/27/98 | 0002 | pCi/L | 0.3 | U | | 0.3 | 0.2 |
| Radium-228 | MON01 | 0999 | 2/27/98 | 0003 | pCi/L | 0.6 | U | | 0.6 | 0.3 |
| Sodium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.0928 | B | U | | |
| Sodium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.135 | B | U | | |
| Sodium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.0793 | B | U | | |
| Strontium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.001 | U | | 0.001 | |
| Strontium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.001 | U | | 0.001 | |
| Strontium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.001 | U | | 0.001 | |
| Sulfate | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.027 | U | | 0.027 | |
| Sulfate | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.153 | B | | | |

Equipment Blank Data for Monument Valley 2/98 Sampling Event 4/27/98

| ANALYTE | SITE_CODE | LOCATION_CODE | DATE | SAMPLE_ID | UNIT | RESULT | LAB_QUALIFIERS | DATA_VAL_QUALIFIERS | DETECTION_LIMIT | UNCERTAINTY |
|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.027 | U | | 0.027 | |
| Uranium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.001 | U | | 0.001 | |
| Uranium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.001 | U | | 0.001 | |
| Uranium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.001 | U | | 0.001 | |
| Vanadium | MON01 | 0999 | 2/23/98 | 0001 | mg/L | 0.004 | U | | 0.004 | |
| Vanadium | MON01 | 0999 | 2/27/98 | 0002 | mg/L | 0.004 | U | | 0.004 | |
| Vanadium | MON01 | 0999 | 2/27/98 | 0003 | mg/L | 0.004 | U | | 0.004 | |

# WATER LEVELS

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STATIC GROUND WATER LEVELS (USEE700) FOR SITE MON01, MONUMENT VALLEY
*REPORT DATE: 4/28/98 8:42:20 AM*

| LOCATION CODE | FLOW CODE | TOP OF CASING ELEVATION (FT NGVD) | MEASUREMENT | | DEPTH FROM TOP OF CASING (FT) | GROUND WATER ELEVATION (FT NGVD) |
|---|---|---|---|---|---|---|
| | | | DATE | TIME | | |
| 0200 | U | - | 02/26/98 | | | -16.74 |
| 0400 | U | 4870.41 | 02/26/98 | | 1.90 | 4868.51 |
| 0401 | U | 4870.38 | 02/27/98 | | 1.96 | 4868.42 |
| 0403 | U | 4836.19 | 02/26/98 | | 1.05 | 4835.14 |
| 0404 | U | 4837.66 | 02/27/98 | | 2.90 | 4834.76 |
| 0405 | U | 4836.50 | 02/27/98 | | 0.57 | 4835.93 |
| 0407 | C | 4820.07 | 02/26/98 | | 5.74 | 4814.33 |
| 0408 | C | 4823.54 | 02/27/98 | | 0.24 | 4823.30 |
| 0409 | C | 4821.54 | 02/26/98 | | 1.10 | 4820.44 |
| 0410 | C | 4823.41 | 02/27/98 | | 3.94 | 4819.47 |
| 0411 | C | 4821.38 | 02/27/98 | | 1.10 | 4820.28 |
| 0413 | C | 4783.86 | 02/27/98 | | 3.74 | 4780.12 |
| 0414 | C | 4782.02 | 02/27/98 | | 1.84 | 4780.18 |
| 0415 | C | 4783.80 | 02/27/98 | | 2.87 | 4780.93 |
| 0416 | C | 4785.27 | 02/27/98 | | 4.12 | 4781.15 |
| 0417 | C | 4782.15 | 02/27/98 | | 0.95 | 4781.20 |
| 0601 | U | 4884.88 | 02/27/98 | | 13.95 | 4870.93 |
| 0602 | U | 4864.43 | 02/26/98 | | 8.68 | 4855.75 |
| 0604 | C | 4840.42 | 02/26/98 | | 8.20 | 4832.22 |
| 0605 | C | 4835.07 | 02/26/98 | | 9.53 | 4825.54 |
| 0606 | D | 4864.73 | 02/24/98 | | 35.06 | 4829.67 |
| 0613 | U | 4864.28 | 02/27/98 | | 0.00 | 4864.28 |
| 0614 | D | 4856.81 | 02/27/98 | | 49.74 | 4807.07 |
| 0615 | U | 4850.16 | 02/25/98 | | 10.82 | 4839.34 |
| 0619 | O | 4888.63 | 02/24/98 | | 57.34 | 4831.29 |
| 0625 | C | 4841.61 | 02/27/98 | | 0.00 | 4841.61 |
| 0650 | D | 4794.28 | 02/25/98 | | 19.25 | 4775.03 |
| 0651 | C | 4787.88 | 02/27/98 | | 8.52 | 4779.36 |
| 0652 | C | 4808.93 | 02/27/98 | | 18.70 | 4790.23 |

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/28/98 8:42:22 AM

| LOCATION CODE | FLOW CODE | TOP OF CASING ELEVATION (FT NGVD) | MEASUREMENT | | DEPTH FROM TOP OF CASING (FT) | GROUND WATER ELEVATION (FT NGVD) |
|---|---|---|---|---|---|---|
| | | | DATE | TIME | | |
| 0653 | D | 4837.08 | 02/25/98 | | 35.10 | 4801.98 |
| 0654 | C | 4824.36 | 02/26/98 | | 1.10 | 4823.26 |
| 0655 | D | 4862.06 | 02/24/98 | | 39.24 | 4822.82 |
| 0656 | D | 4856.33 | 02/24/98 | | 35.60 | 4820.73 |
| 0657 | O | 4878.99 | 02/24/98 | | 49.84 | 4829.15 |
| 0658 | U | 4879.96 | 02/27/98 | | 9.34 | 4870.62 |
| 0659 | D | 4864.97 | 02/26/98 | | 34.54 | 4830.43 |
| 0660 | D | 4836.32 | 02/25/98 | | 31.23 | 4805.09 |
| 0661 | U | 5062.49 | 02/27/98 | | 163.62 | 4898.87 |
| 0662 | D | 4878.56 | 02/25/98 | | 49.35 | 4829.21 |
| 0664 | D | 4837.35 | 02/27/98 | | 29.90 | 4807.45 |
| 0668 | D | 4867.80 | 02/27/98 | | 41.20 | 4826.60 |
| 0669 | D | 4867.19 | 02/25/98 | | 49.39 | 4817.80 |
| 0760 | D | 4814.80 | 02/26/98 | | 24.90 | 4789.90 |
| 0761 | D | 4835.02 | 02/24/98 | | 42.27 | 4792.75 |
| 0762 | D | 4820.74 | 02/24/98 | | 31.67 | 4789.07 |
| 0764 | D | 4851.53 | 02/24/98 | | 49.03 | 4802.50 |
| 0765 | D | 4848.45 | 02/25/98 | | 34.68 | 4813.77 |
| 0766 | D | 4847.97 | 02/24/98 | | 35.21 | 4812.76 |
| 0767 | D | 4808.25 | 02/25/98 | | 6.40 | 4801.85 |
| 0768 | D | 4820.73 | 02/25/98 | | 13.45 | 4807.28 |
| 0770 | D | 4857.26 | 02/24/98 | | 32.37 | 4824.89 |
| 0771 | D | 4863.26 | 02/27/98 | | 38.90 | 4824.36 |
| 0772 | O | 4847.60 | 02/25/98 | | 11.38 | 4836.22 |
| 0774 | O | 4880.14 | 02/25/98 | | 49.22 | 4830.92 |
| 0775 | D | 4879.68 | 02/23/98 | | 48.40 | 4831.28 |
| 0776 | O | 4883.33 | 02/24/98 | | 53.10 | 4830.23 |
| 0777 | D | 4848.24 | 02/25/98 | | 34.90 | 4813.34 |

STATIC GROUND WATER LEVELS (USEE700) FOR SITE MON01, MONUMENT VALLEY
REPORT DATE: 4/28/98 8:42:23 AM

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

RECORDS: SELECTED FROM USEE700 WHERE site_code='MON01' AND LOG_DATE between #2/22/98# and #2/28/98#

FLOW CODES:

C CROSS GRADIENT D DOWN GRADIENT O ON-SITE
U UPGRADIENT

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# TRIP REPORT/WORK ORDER

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MACTEC ENVIRONMENTAL RESTORATION SERVICES, LLC



CONTRACT NO.: DE-AC13-96GJ87335
TASK ORDER NO.: MAC98-05
CONTROL NO.: 3100-T98-0497

January 14, 1998

Project Manager
Department of Energy
Grand Junction Office
2597 B¾ Road
Grand Junction, CO 81503
ATTN: Donald Metzler

SUBJECT: Contract No. DE-AC13-96GJ87335—February 1998 UMTRA Ground Water Sampling at Monument Valley, Arizona

Dear Mr. Metzler:

Attached are the map and tables specifying the sampling locations and analytes for routine annual monitoring at the Monument Valley, Arizona, UMTRA site. Water quality data will be collected from monitoring wells at this site as part of the routine UMTRA Ground Water sampling which is scheduled to begin February 17, 1998.

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

**Ground Water Project Monitor Well (filtered)***

| | | | | | | |
|---|---|---|---|---|---|---|
| 601 Sr/Al | 614 Sr/Al | 655 Al | 661 Dc | 760 Al | 765 Al | 772 Al |
| 602 Al | 615 Sr | 656 Al | 662 Al | 761 Al | 767 Al | 774 Al |
| 605 Al | 619 Dc | 657 Dc | 664 Dc | 762 Al | 768 Al | 775 Dc |
| 606 Al | 653 Al | 659 Sr | 669 Al | 764 Al | 771 Al | 776 Dc |
| 612 Dc | 654 Al | 660 Sr | | | | |

**Private Wells (unfiltered)**

| | |
|---|---|
| 613 Dc | 640 Al |

**Surface Water (filtered)**

| | | | |
|---|---|---|---|
| 621 | 622 | 623 | Frog ponds |

**Well Points (filtered)***

| | |
|---|---|
| 407 | 409 |

RECORD COPY

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

C:\WP51\PEOPLE\SAM\9802MON.LTR

2597 B 3/4 ROAD
GRAND JUNCTION, COLORADO 81503
970/248-6000 (FAX) 970/248-6040

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. 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. The field crew will contact Ms. Roanhorse at (520) 871-6982 a minimum of 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/ld
Attachments

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

RECORD COPY

# Sampling Frequencies for Locations at Monument Valley, Arizona

| Wells | Quarterly | Semiannually | Annually | Biennially | Not Sampled | Notes |
|---|---|---|---|---|---|---|
| *Ground Water Project Monitor Wells* | | | | | | |
| 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 | | | | |
| 760 | | X | | | | Alluvial well added - 7/97 |
| 761 | | X | | | | Alluvial well added - 7/97 |
| 762 | | 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 |
| *Private Wells* | | | | | | |
| 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 |
|---|---|---|---|---|---|---|
| *Surface Water/Sediment Locations* | | | | | | |
| 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 | | X | | | | Added 7/97 |
| *Well Points* | | | | | | |
| 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 | 70 | 8 |
| *Field Measurements* | | |
| Alkalinity | X | X |
| Dissolved Oxygen | | |
| Redox Potential | X | X |
| pH | X | X |
| Specific Conductance | X | X |
| Turbidity | X | X |
| Temperature | X | X |
| *Laboratory Measurements* | | |
| 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 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.

1/14/98

MACTEC ENVIRONMENTAL RESTORATION SERVICES, LLC

CONTRACT NO.: DE-AC13-96GJ87335
TASK ORDER NO.: MAC98-05
CONTROL NO.: 3100-N/A

MEMO TO: Sam Marutzky

FROM: Jeff Price JP by LCA

DATE: March 4, 1998

SUBJECT: UMTRA Ground Water Trip Report

**Site:** Monument Valley, Arizona

***Dates of Sampling Event:*** *February 23 thru 27, 1998*

**Team Member:** Sam Campbell, Dan Sellers, Rick Ryan, and Jeff Price

**Number of Locations Sampled:** 34 UGW monitoring wells, 3 surface water sites, 1 private well.

**Locations Not Sampled/Reason:** UGW monitoring well 402 did not recover to a sufficient level after purging to collect a sample. Private well 640 was not sampled because of inaccessibility through surface casing. The well has an old style inoperable hand crank pump installed on top of the surface casing that blocks access for sampling.

**Location Specific Information:** Wells 400, 403, 407, 409, and 602 were purged dry prior to sampling. Dedicated bladder pumps were installed in wells 619, 657, 775, and 776.

**Field Variance:** Wells 774 and 604 were sampled without meeting the turbidity criteria. Well 774 was purged a total of 39 casing volumes, while well 604 was purged 23 casing volumes. The sample collected from private well 200 was mistakenly filtered.

**Quality Control Sample Cross Reference:** Following is the false identification assigned to the quality control samples:

| False ID | True ID | Sample Type | Associated Matrix | Ticket Number |
|---|---|---|---|---|
| 900 | 623 | Duplicate | Surface water | NDB-427 |
| 901 | Equipment Blank | Equipment Blank | Surface water | NDB-430 |
| 902 | 669 | Duplicate | Ground Water | NDB-438 |
| 903 | Equipment Blank | Equipment Blank | Ground Water | NDB-404 |
| 800 | 657 | Duplicate | Ground Water | NDB-380 |
| 801 | Equipment Blank | Equipment Blank | Ground Water | NDB-389 |

**Requisition Numbers Assigned:** 15888.

**Water Level Measurements:** Water level elevations were measured on all existing wells.

**Well Inspection Summary:** The surface casing on well 610 is leaning and the inner casing (2 inch pvc) is obstructed/broken at about 2 feet. However, it appears the well has not been damaged severely enough to allow surface water to infiltrate the aquifer. Based on discussion with Ken Karp, the well is currently low priority and therefore an immediate maintenance action is not required.

Wells 611 and 615 have for some time been mislabeled. Well 611 is really 615 and 615 is really 611. Both well were relabeled to reflect the proper I.D. All other wells were in satisfactory condition.

**Equipment:** All equipment operated properly. A recently purchased TDS meter was used during this trip. The TDS results were recorded on the field data sheets.

**Regulatory:** None.

**Site Issues:** None.

JP/lcg
Distribution:

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