

Data Validation Package

September 2007

**Groundwater and Surface Water Sampling
at the Shiprock, New Mexico, Disposal Site**

January 2008



**U.S. Department of Energy
Office of Legacy Management**

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Contents

Sampling Event Summary	1
Shiprock, New Mexico, Disposal Site Sample Monitoring Locations	5
Data Assessment Summary.....	7
Water Sampling Field Activities Verification Checklist	9
Laboratory Performance Assessment	11
Sampling Quality Control Assessment	30
Certification	44

Attachment 1—Assessment of Anomalous Data

Outliers Report
Anomalous Data Review Checksheet

Attachment 2—Data Presentation

Groundwater Quality Data Floodplain Locations
Groundwater Quality Data Terrace Locations
Surface Water Quality Data Floodplain Locations
Surface Water Quality Data Terrace Locations
Equipment Blank Data
Static Water Level Data
Time Versus Concentration Graphs Floodplain Locations
Time Versus Concentration Graphs Terrace Locations

Attachment 3—Sampling and Analysis Work Order

Attachment 4—Trip Report

End of current text

Sampling Event Summary

Site: Shiprock, New Mexico, Disposal Site

Sampling Period: September 10–13, 2007

Groundwater and surface water sampling and analysis are performed semiannually at the Shiprock Disposal Site as specified in the *Refinement of Conceptual Model and Recommendations for Improving Remediation Efficiency at the Shiprock, New Mexico, Site* (July 2005). Sampling and analysis was conducted as specified in *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites* (October 2006) and the *Environmental Procedures Catalog* (STO 6). Additional locations were sampled for this event to update plume maps. Monitoring of terrace locations is performed to determine the effectiveness of active remediation. Monitoring of floodplain locations is performed to determine the progress of the natural flushing process and the effectiveness of groundwater removal to prevent contaminants from reaching the San Juan River.

The contaminants of concern (COCs) for the Shiprock Disposal Site are ammonia, manganese, nitrate + nitrite as N, selenium, strontium, sulfate, and uranium. Wells with contaminant concentrations that exceeded groundwater standards or proposed alternate concentration limits are listed in Table 1. Review of these data does not indicate any unexpected movement of contaminated groundwater. Time-concentration graphs of the COCs for the groundwater locations listed in Table 1 (with the exception of extraction wells) are included in this report.

Floodplain surface water analyte concentrations were compared to statistical benchmark values derived using data from 20 samplings (December 9, 1998 through September 12, 2007) of location 0898, which is upstream of the site on the San Juan River. Benchmark values were not exceeded for the point-of-exposure river locations adjacent to or downstream from the site.

Table 1. Shiprock Locations that Exceed Standards

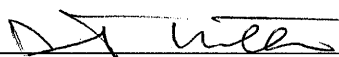
Analyte	Standard ^a	Site Code	Location	Concentration
Nitrate + Nitrite as Nitrogen	10	SHP01	0608	450
			0610	780
			0614	820
			0618	360
			0735	330
			0793	140
			1009	130
			1089	28
			1089	33
			1104	110
			1111	43
			1114	61
			1115	150
Selenium	0.01	SHP01	0610	0.026
			0614	0.059
			0618	0.24
			0622	0.29

Analyte	Standard ^a	Site Code	Location	Concentration
			0630	0.047
			0735	0.024
			0792	1.3
			0793	0.37
			0798	0.52
			0855	0.02
			0855	0.023
			1009	0.17
			1089	0.025
			1089	0.022
			1104	0.014
			1111	0.73
			1115	0.035
Uranium	0.044	SHP01	0608	1.8
			0610	2.1
			0612	0.074
			0614	2.8
			0618	2.5
			0619	0.27
			0622	0.44
			0626	0.052
			0628	0.045
			0734	0.073
			0735	0.19
			0792	2.7
			0793	1.7
			0798	2
			0850	0.071
			0853	0.052
			0855	0.085
			0855	0.092
			0856	0.076
			0857	0.3
			1009	0.58
			1089	0.89
			1089	0.9
			1104	1.5
			1111	1
			1114	0.33
			1115	0.55
Nitrate + Nitrite as Nitrogen	10	SHP02	0600	160
			0602	19
			0603	780
			0726	27
			0728	48
			0730	160
			0731	140
			0812	1400
			0813	2300
			0814	970
			0815	560
			0816	24
			0817	610
			0818	1500
			0819	67
			0826	40
			0827	13
			0830	63
			0832	680
			0833	510
			0835	88

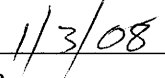
Analyte	Standard ^a	Site Code	Location	Concentration
			0836	14
			0838	110
			0839	550
			0841	640
			0843	26
			0844	650
			0846	28
			1007	490
			1057	2400
			1057	1700
			1059	290
			1060	450
			1068	220
			1070	850
			1071	3400
			1072	1400
			1073	1300
			1074	1100
			1078	830
			1079	44
			1091	1500
			1092	890
			1093	2600
			1095	930
			1096	690
			DM7	220
Selenium	0.01	SHP02	0603	0.087
			0731	0.013
			0812	4.9
			0813	0.039
			0814	2.1
			0815	0.054
			0816	0.015
			0818	2
			0827	0.012
			0830	0.028
			0832	4.1
			0833	0.64
			0835	0.26
			0836	0.11
			0837	0.099
			0838	0.5
			0841	3.4
			0843	0.22
			0844	1.8
			0846	0.21
			0848	0.035
			1007	0.11
			1057	0.21
			1057	0.23
			1059	0.021
			1060	3.2
			1068	0.03
			1070	2.5
			1071	0.15
			1073	1.9
			1074	0.29
			1078	3.3
			1079	0.25
			1091	0.66

Analyte	Standard ^a	Site Code	Location	Concentration
			1092	1.4
			1093	0.38
			1095	0.2
			1096	2.3
			1120	0.022
			1122	0.039
			DM7	0.011
Uranium	0.044	SHP02	0600	1.1
			0602	0.7
			0725	0.099
			0728	0.32
			0731	0.049
			0812	0.13
			0813	0.13
			0814	0.12
			0815	0.33
			0817	9.3
			0818	0.12
			0819	1.3
			0826	3.5
			0827	0.65
			0832	0.15
			0833	0.26
			0835	0.076
			0836	0.053
			0837	0.045
			0838	0.047
			0839	0.41
			0841	0.14
			0844	0.15
			1007	2.5
			1057	0.051
			1057	0.046
			1059	0.061
			1060	0.22
			1068	0.63
			1070	0.11
			1071	0.059
			1072	0.16
			1073	0.06
			1074	1.7
			1078	0.15
			1091	0.13
			1092	0.13
			1093	0.063
			1095	0.06
			1096	0.12
			1120	0.056
			DM7	0.056

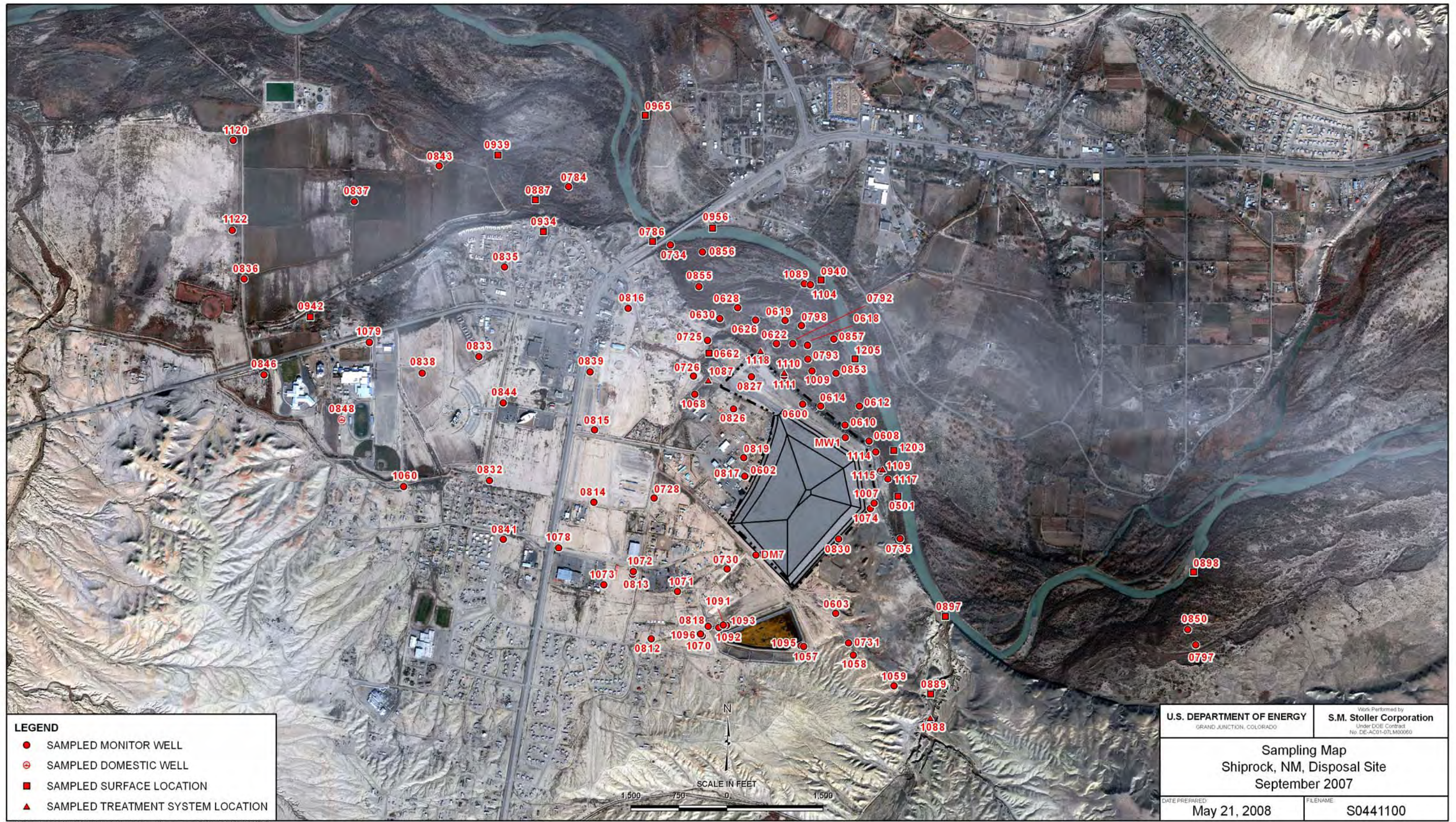
^aStandards are listed in 40 CFR 192.02 Table 1 to Subpart A; units are in mg/L.



 David Miller
 Site Lead, S.M. Stoller



 Date



Shiprock, New Mexico, Disposal Site Sample Monitoring Locations

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Data Assessment Summary

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Water Sampling Field Activities Verification Checklist

Project	Shiprock, New Mexico	Date(s) of Water Sampling	Sept. 10-13, 2007
Date(s) of Verification	12/27/07	Name of Verifier	Gretchen Baer
		Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures? List other documents, SOP's, instructions.	Yes		Work order letter dated August 7, 2007
2. Were the sampling locations specified in the planning documents sampled?	No		Surface waters 0655, 0885, 0884, 0933, 0936, 0937, 0938, and 0959 were dry. Wells 0736, 0768, 0775, 0804, 0822, 1006, 1067, 1069, 1112, 1113, & 1116 were dry. Wells 0783 & 0782 could not be found and are presumed destroyed. Well 0828 had a casing that was 10 feet above ground due to soil grading work around it, so it could not be sampled. Wells 0615 & 1105 may have water but were clogged with roots. Well 0829 was not sampled and the reason was not documented.
3. Was a pre-trip calibration conducted as specified in the above named documents?	Yes		
4. Was an operational check of the field equipment conducted twice daily? Did the operational checks meet criteria?	Yes		Exceptions: On 9/13/07, a turbidimeter and specific conductivity were checked only once, and only 2 points were checked for another turbidimeter. All adjacent checks were well within criteria.
5. Were the number and types (alkalinity, temperature, Ec, pH, turbidity, DO, ORP) of field measurements taken as specified?	Yes		A YSI was recalibrated for specific conductivity on 9/11/07.
6. Was the Category of the well documented?	No		Insufficient volume was available for some or all field parameters at: 0734, 0786, & 1058. Some parameters were not recorded inadvertently at: 0730, 0846, 0889, 1059, & 1117. Phenolphthalein alk was not recorded at: 0897 & 1203.
7. Were the following conditions met when purging a Category I well: Was one pump/tubing volume purged prior to sampling?	No		Some wells (1060, 1091, 1092, & 1093) were not categorized or were mis-categorized by the samplers.
Did the water level stabilize prior to sampling?	Yes		
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	No		Water levels were not recorded at 0730 & 0816. At 0817 the water level drop exceeded category I requirements. Data are qualified as "Q."
Was the flow rate less than 500 mL/min?	No		Turbidity was >10 NTU at 0843 & 1068. Data are qualified as "Q."
If a portable pump was used, was there a 4 hour delay between pump installation and sampling?	Yes		
	NA		

Water Sampling Field Activities Verification Checklist (continued)

	Response (Yes, No, NA)	Comments
8. Were the following conditions met when purging a Category II well: Was the flow rate less than 500 mL/min?	Yes	
Was one pump/tubing volume removed prior to sampling?	Yes	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	Yes	
11. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
12. Were QC samples assigned a fictitious site identification number?	Yes	
Was the true identity of the samples recorded on the Quality Assurance Sample Log?	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	Yes	
15. Were the number and types of samples collected as specified?	Yes	
16. Were chain of custody records completed and was sample custody maintained?	Yes	
17. Are field data sheets signed and dated by both team members?	No	Location 0730 was missing one signature.
18. Was all other pertinent information documented on the field data sheets?	Yes	
19. Was the presence or absence of ice in the cooler documented at every sample location?	No	Presence of ice was not documented at location 1104.
20. Were water levels measured at the locations specified in the planning documents?	NA	

Laboratory Performance Assessment

General Information

Report Number (RIN): 07081119
Sample Event: September 10–13, 2007
Site(s): Shiprock, New Mexico
Laboratory: Paragon Analytics, Fort Collins, Colorado
Work Order No.: 0709086
Analysis: Metals and Wet Chemistry
Validator: Gretchen Baer
Review Date: November 7, 2007

This validation was performed according to the *Environmental Procedures Catalog* (STO 6), “Standard Practice for Validation of Laboratory Data,” GT-9(P) (2006). The procedure was applied at Level 3, Data Validation. See attached Data Validation Worksheets for supporting documentation on the data review and validation. All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures based on methods specified by line item code, which are listed in Table 2.

Table 2. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Ammonia as N	WCH-A-005	MCAWW 350.1	MCAWW 350.1
Calcium, Magnesium, Potassium, Sodium, Strontium	MET-A-020	SW-846 3005A	SW-846 6010B
Chloride	MIS-A-039	SW-846 9056	SW-846 9056
Manganese	GJO-17	SW-846 3005A	SW-846 6010B
Nitrate + Nitrite as N	WCH-A-022	MCAWW 353.2	MCAWW 353.2
Selenium	GJO-14	SW-846 3005A	SW-846 6020A
Sulfate	MIS-A-044	SW-846 9056	SW-846 9056
Total Dissolved Solids	WCH-A-033	MCAWW 160.1	MCAWW 160.1
Uranium	GJO-01	SW-846 3005A	SW-846 6020A

Data Qualifier Summary

Analytical results were qualified as listed in Table 3. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 3. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0709086-1	0501	Chloride	J	Improper storage at laboratory
0709086-1	0501	Sulfate	J	Improper storage at laboratory
0709086-6	0735	Total Dissolved Solids	J	Exceeded holding time
0709086-10	1114	Total Dissolved Solids	J	Exceeded holding time
0709086-11	1115	Total Dissolved Solids	J	Exceeded holding time
0709086-12	1117	Total Dissolved Solids	J	Exceeded holding time
0709086-13	1203	Chloride	J	Improper storage at laboratory
0709086-13	1203	Sulfate	J	Improper storage at laboratory
0709086-14	2608 (1203 dup)	Chloride	J	Improper storage at laboratory
0709086-14	2608 (1203 dup)	Sulfate	J	Improper storage at laboratory
0709086-27	0830	Total Dissolved Solids	J	Exceeded holding time
0709086-32	1058	Total Dissolved Solids	J	Exceeded holding time
0709086-33	1059	Total Dissolved Solids	J	Exceeded holding time
0709086-34	1060	Manganese	J	Negative CCB greater than MDL
0709086-37	1074	Total Dissolved Solids	J	Exceeded holding time
0709086-38	1091	Total Dissolved Solids	J	Exceeded holding time
0709086-39	1092	Total Dissolved Solids	J	Exceeded holding time
0709086-40	1093	Total Dissolved Solids	J	Exceeded holding time
0709086-49	0662	Manganese	U	Less than 5 times the equipment blank
0709086-60	0816	Manganese	J	Negative CCB greater than MDL
0709086-67	0838	Manganese	J	Negative CCB greater than MDL
0709086-69	0844	Manganese	J	Negative CCB greater than MDL
0709086-72	0853	Sodium	J	Serial dilution failure
0709086-76	0887	Manganese	U	Less than 5 times the equipment blank
0709086-77	0889	Manganese	J	Negative CCB greater than MDL
0709086-78	0897	Manganese	U	Less than 5 times the equipment blank
0709086-79	0898	Manganese	U	Less than 5 times the equipment blank
0709086-92	1079	Manganese	J	Negative CCB greater than MDL
0709086-106	2535 (equip blank)	Potassium	U	Less than 5 times the calibration blank
0709086-106	2535 (equip blank)	Sodium	U	Less than 5 times the calibration blank
0709086-106	2535 (equip blank)	Uranium	U	Less than 5 times the calibration blank
0709086-109	2609 (equip blank)	Potassium	U	Less than 5 times the calibration blank
0709086-109	2609 (equip blank)	Sodium	U	Less than 5 times the calibration blank
0709086-109	2609 (equip blank)	Uranium	U	Less than 5 times the calibration blank

Sample Shipping/Receiving

Paragon Analytics in Fort Collins, Colorado, received 109 water samples on September 13, 14, and 15, 2007, accompanied by Chain of Custody (COC) forms. (One of the coolers shipped on September 12, 2008, was delayed during shipping and was received one day late on September 14, 2008.) The COC forms were checked to confirm that all of the samples were and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents including the COC forms and the sample tickets had no errors or omissions, with these exceptions: two sample times were either incorrect or missing on a COC and a location ID was incorrect on a COC and ticket. The laboratory corrected these errors.

Preservation and Holding Times

The sample shipments were received intact with the temperatures within the chilled coolers of 1.6, 1.8, 2.8, 2.2, and 1.8 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses. The bottle containing the total dissolved solids (TDS) fraction for location 0728 was received with a hole. Approximately 75 percent of the sample had leaked out but sufficient volume remained for analysis. All 11 samples that were collected on September 10, 2007, exceeded the 7-day holding time for TDS analysis by one day. These samples were delivered in the cooler that was delayed by FedEx during shipping; therefore, the laboratory received the samples after over one-half of the holding time had expired. No error was made by the sampling team or the laboratory. These TDS results are qualified with a “J” flag as estimated values. All other samples were analyzed within the applicable holding times. All sample aliquots for all analyses were filtered in the field.

Laboratory personnel inadvertently left some of the bottles for chloride and sulfate (Cl and SO₄) analysis out of cold storage overnight. For most of these samples, sufficient volume from a properly chilled TDS bottle was available for the Cl and SO₄ analysis. For three samples (locations 0501, 1203, and the 1203 field duplicate), no other bottles were available and the Cl and SO₄ analysis was performed on the aliquots that had been left out; these results are qualified with a “J” flag (estimated).

Laboratory Instrument Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for all analytes. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear curve. Compliance requirements for continuing calibration checks are established to ensure that the instrument continues to be capable of producing acceptable qualitative and quantitative data. All laboratory instrument calibrations were performed correctly in accordance with the cited methods.

Method MCAWW 160.1

There are no initial or continuing calibration requirements associated with the determination of TDS.

Method MCAWW 350.1

Calibrations were performed for ammonia as N on September 24, 2007, using six calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the method detection limit (MDL). Initial and continuing calibration verification checks were made at the required frequency resulting in 22 verification checks. All calibration checks met the acceptance criteria.

Method MCAWW 353.2

Calibrations were performed for nitrate + nitrite as N on September 19, 20, and 21, 2007, using seven calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency resulting in 17 verification checks. All calibration checks met the acceptance criteria.

Method SW-846 6010B

Calibrations for calcium, magnesium, manganese, potassium, sodium, and strontium were performed on October 5 and 8, 2007, using four calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the reporting limits. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 35 verification checks. All calibration checks met the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit (PQL) and all results were within the acceptance range.

Method SW-846 6020A

Calibrations were performed for selenium on October 1 and 2, 2007, and for uranium on September 20, 26, and 27, 2007, using seven calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 18 verification checks for selenium and 31 checks for uranium. All calibration checks met the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the PQL and all results were within the acceptance range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries associated with requested analytes were stable and within acceptable ranges.

Method SW-846 9056

Calibrations were performed for chloride and sulfate on September 14, 2007, using five calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 22 verification checks. All calibration checks met the acceptance criteria.

Method and Calibration Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. Calibration blanks are analyzed to assess instrument contamination prior to and

during sample analysis. All method blank and initial and continuing calibration blank (ICB and CCB) results associated with the samples were below the PQL with the exception of CCB1 (September 20, 2007) and CCB2 (September 21, 2007) analyzed for sulfate. The samples associated with these CCBs had sulfate concentrations greater than 10 times the blanks. In cases where a blank concentration exceeds the MDL, the associated sample results are qualified with a “U” flag (not detected) when the sample result is greater than the MDL but less than 5 times the blank concentration.

For magnesium, manganese, and strontium, some calibration blanks were negative and the absolute values were greater than the MDL but less than the PQL. All magnesium and strontium results were greater than 5 times the MDL, so no results are qualified. Manganese results less than 5 times the MDL are qualified with a “J” flag (estimated).

Inductively Coupled Plasma (ICP) Interference Check Sample (ICS) Analysis

Inductively coupled plasma interference check samples were analyzed at the required frequency to verify the instrumental interelement and background correction factors. All check sample results met the acceptance criteria.

Matrix Spike Analysis

Matrix spike and matrix spike duplicate (MS/MSD) pairs were analyzed for all analytes as a measure of method performance in the sample matrix. Matrix spikes are not required for sodium, potassium, magnesium, and calcium; these results were evaluated only for acceptable precision. The MS data are not evaluated when the concentration of the unspiked sample is greater than 4 times the spike concentration. Spikes that were performed on samples from other clients were not evaluated. The spike recoveries met the recovery criteria for all analytes evaluated. Some strontium spike recoveries exceeded the laboratory’s acceptance criteria, but were within the ± 25 percent requirement.

Laboratory Replicate Analysis

The laboratory replicate sample results demonstrate acceptable laboratory precision. The relative percent difference (RPD) values for the laboratory replicate sample and matrix spike duplicate sample results for all analytes were less than 20 percent, indicating acceptable laboratory precision.

Laboratory Control Samples (LCSs)

LCSs were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. The LCS results were acceptable for all analytes.

Metals Serial Dilution

Serial dilutions were prepared and analyzed for the metals analyses to monitor chemical or physical interferences in the sample matrix. Serial dilution data are evaluated when the

concentration of the undiluted sample is greater than 100 times the PQL for ICP-MS or greater than 50 times the PQL for ICP. All evaluated serial dilution data were acceptable with the following exception. One serial dilution result did not meet the acceptance criteria for sodium. The associated result is qualified with a “J” flag as an estimated value.

The laboratory flagged the ICP results for location 1109 for serial dilution failure. The serial dilution results were very low and were similar to the calibration blanks while the sample results were more than 50 times the PQLs. This suggests analyst error rather than a serial dilution failure. Instrument error is not suspected because all calibration verifications and matrix spikes that bracket the serial dilution were within acceptance limits. No qualification for serial dilution failure for this sample is necessary.

Detection Limits/Dilutions

Samples were diluted in a consistent and acceptable manner when required. The samples were diluted prior to analysis of uranium to reduce interferences. The required detection limits were achieved for all analytes.

Completeness

Results were reported in the correct units for all analytes requested using contract-required laboratory qualifiers.

Chromatography Peak Integration

The integration of analyte peaks was reviewed for all chloride and sulfate data. There were no manual integrations performed and all peak integrations were satisfactory.

Electronic Data Deliverable (EDD) File

The EDD file arrived on October 15, 2007. The Sample Management System EDD validation module was used to verify that the EDD file was complete and in compliance with requirements. The module compares the contents of the file to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

Anion/Cation Balance

The anion/cation balance is used to determine if major ion concentrations have been quantified correctly. The total anions should balance with (be equal to) the total cations when expressed in milliequivalents per liter (meq/L). Table 4 shows the total cation and anion results from this event and the charge balance, which is an RPD calculation. Typically, a charge balance difference of 10 percent is considered acceptable.

Table 4. Comparison of Major Anions and Cations

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
------------------	-----------------	----------------------------	---------------------------	-------------------------------

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP01	0501	4.6	4.3	2.7
SHP01	0608	250.4	283.5	6.2
SHP01	0610	293.9	305.8	2.0
SHP01	0612	11.6	11.8	0.8
SHP01	0614	361.5	401.6	5.3
SHP01	0618	302.6	333.8	4.9
SHP01	0619	85.1	116.9	15.8
SHP01	0622	112.2	136.8	9.9
SHP01	0626	64.5	78.0	9.5
SHP01	0628	70.8	82.8	7.8
SHP01	0630	45.5	59.3	13.2
SHP01	0735	153.1	175.7	6.9
SHP01	0784	10.3	10.1	1.0
SHP01	0792	486.7	603.0	10.7
SHP01	0793	160.7	183.1	6.5
SHP01	0797	89.0	107.5	9.4
SHP01	0798	358.1	425.4	8.6
SHP01	0850	40.6	49.9	10.3
SHP01	0853	15.8	15.7	0.3
SHP01	0855	120.5	139.9	7.5
SHP01	0856	57.2	72.4	11.7
SHP01	0857	49.4	60.1	9.8
SHP01	0887	4.6	20.0	62.3
SHP01	0897	4.9	4.8	0.5
SHP01	0898	4.4	4.7	3.0
SHP01	0939	4.8	4.5	3.8
SHP01	0940	4.5	4.5	0.2
SHP01	0956	4.4	4.4	0.6
SHP01	0965	4.5	4.5	0.4
SHP01	1009	105.8	111.4	2.6
SHP01	1089	337.3	376.1	5.4
SHP01	1104	225.4	241.5	3.4
SHP01	1109	27.9	26.1	3.4
SHP01	1110	254.3	278.7	4.6
SHP01	1111	201.6	223.6	5.2
SHP01	1114	45.2	46.0	0.9
SHP01	1115	88.5	99.8	6.0
SHP01	1117	5.1	4.7	3.9
SHP01	1118	107.7	118.3	4.7
SHP01	1203	9.0	6.5	15.9
SHP01	1205	4.7	4.6	1.5
SHP02	0600	213.9	238.9	5.5
SHP02	0602	384.1	424.6	5.0
SHP02	0603	144.3	127.1	6.3
SHP02	0662	73.7	91.9	11.0
SHP02	0725	77.0	84.6	4.7
SHP02	0726	126.7	166.1	13.5

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP02	0728	121.5	123.5	0.8
SHP02	0731	123.5	129.3	2.3
SHP02	0812	441.6	514.8	7.7
SHP02	0813	400.6	411.5	1.3
SHP02	0814	335.0	405.6	9.5
SHP02	0815	342.9	403.5	8.1
SHP02	0816	19.7	23.4	8.6
SHP02	0817	255.4	293.1	6.9
SHP02	0818	350.0	402.0	6.9
SHP02	0819	280.1	309.1	4.9
SHP02	0826	323.8	367.1	6.3
SHP02	0827	197.4	221.2	5.7
SHP02	0830	46.1	44.0	2.4
SHP02	0832	287.1	316.7	4.9
SHP02	0833	229.7	256.2	5.5
SHP02	0835	88.1	92.7	2.5
SHP02	0836	63.8	68.4	3.5
SHP02	0837	54.4	54.7	0.2
SHP02	0838	74.4	77.7	2.2
SHP02	0839	267.3	298.4	5.5
SHP02	0841	317.2	400.3	11.6
SHP02	0843	53.5	54.2	0.6
SHP02	0844	233.0	256.7	4.8
SHP02	0848	303.9	390.3	12.4
SHP02	0934	5.2	4.7	4.5
SHP02	0942	60.5	36.7	24.5
SHP02	1007	317.4	350.1	4.9
SHP02	1057	480.9	592.5	10.4
SHP02	1059	185.7	240.5	12.9
SHP02	1060	239.5	288.8	9.3
SHP02	1068	160.3	169.3	2.7
SHP02	1070	348.5	449.1	12.6
SHP02	1071	258.0	343.5	14.2
SHP02	1072	375.0	404.3	3.8
SHP02	1073	270.3	327.3	9.5
SHP02	1074	272.5	290.5	3.2
SHP02	1078	314.5	393.1	11.1
SHP02	1079	48.1	46.4	1.8
SHP02	1087	249.4	271.9	4.3
SHP02	1088	387.3	475.3	10.2
SHP02	1091	368.5	410.0	5.3
SHP02	1092	370.7	410.1	5.1
SHP02	1093	297.8	287.2	1.8
SHP02	1095	252.2	223.3	6.1
SHP02	1096	293.0	381.0	13.1
SHP02	1120	58.6	56.6	1.7
SHP02	1122	40.0	40.9	1.1
SHP02	DM7	201.2	272.7	15.1

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP02	MW1	159.2	205.6	12.7

The charge balance value was greater than ten percent for 21 locations. Further review of the data for these locations did not indicate any errors in the data. Most were only slightly above ten percent, but two (0887 and 0942) were considerably higher. Locations 0887 and 0942 are surface waters. High turbidity at these may have constituted an interference during the alkalinity measurement resulting in higher charge balance differences.

Alkalinity results for these locations were not determined: 0730, 0734, 0786, 0846, 0889, and 1058; therefore, the charge balance is not applicable.

SAMPLE MANAGEMENT SYSTEM

EDD Non-Conformance Report

Report Date: 11/2/2007

EDD File: \\condor\sms\07081119\07081119.txt

EDD Errors:

Record	Error Type	Field	Error Description
			NO ERRORS DETECTED

SAMPLE MANAGEMENT SYSTEM

General Data Validation Report

RIN: 07081119 Lab Code: PAR Validator: Gretchen Baer Validation Date: 11/5/2007
Project: Shiprock Analysis Type: Metals General Chem Rad Organics
of Samples: 109 Matrix: WATER Requested Analysis Completed: Yes

Chain of Custody

Present: OK Signed: OK Dated: OK

Sample

Integrity: OK Preservation: OK Temperature: OK

Select Quality Parameters

Holding Times

There are 11 holding time failures.

Detection Limits

The reported detection limits are equal to or below contract requirements.

Field/Trip Blanks

There were 2 trip/equipment blanks evaluated.

Field Duplicates

There were 5 duplicates evaluated.

SAMPLE MANAGEMENT SYSTEM

Non-Compliance Report: Holding Times

RIN: 07081119 Lab Code: PAR

Project: Shiprock

Validation Date: 11/5/2007

Ticket	Location	Lab Sample ID	Method Code	Holding Times		Criteria		Reported Dates		
				Collection to Preparation	Preparation to Analysis	Collection to Preparation	Preparation to Analysis	Collection Date	Preparation Date	Analysis Date
NFD 076	1074	0709086-37	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFD 077	830	0709086-27	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFD 078	1058	0709086-32	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFD 079	1059	0709086-33	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFD 301	735	0709086-6	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFD 303	1117	0709086-12	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFD 304	1115	0709086-11	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFD 305	1114	0709086-10	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFJ 127	1091	0709086-38	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFJ 128	1092	0709086-39	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007
NFJ 129	1093	0709086-40	WCH-A-033		8		7	9/10/2007	9/18/2007	9/19/2007

**SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet**

RIN: 07081119 Lab Code: PAR Date Due: 10/13/2007
 Matrix: Water Site Code: SHP Date Completed: 9/29/2007

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R ²	ICV	CCV	ICB	CCB								
Calcium	10/05/2007										0.0	104.0	1.0	104.0	
Calcium	10/05/2007										2.0	105.0		103.0	
Calcium	10/05/2007										3.0		1.0	106.0	
Calcium	10/05/2007	-0.0350	1.0000	OK	OK	OK	OK				2.0	104.0	2.0		
Calcium	10/08/2007	-0.0230	1.0000	OK	OK	OK	OK				1.0	103.0	1.0	104.0	
Calcium	10/08/2007										1.0	104.0	4.0	104.0	
Calcium	10/08/2007											112.0		110.0	
Magnesium	10/05/2007	-0.0070	1.0000	OK	OK	OK	OK				1.0	104.0	3.0	102.0	
Magnesium	10/05/2007										2.0	104.0	1.0	101.0	
Magnesium	10/05/2007										3.0	103.0		101.0	
Magnesium	10/05/2007										2.0		1.0		
Magnesium	10/08/2007	-0.0050	1.0000	OK	OK	OK	OK				3.0	102.0	0.0	100.0	
Magnesium	10/08/2007										0.0	102.0	3.0	100.0	
Magnesium	10/08/2007											106.0		101.0	
Manganese	10/05/2007										96.0	97.0	1.0	97.0	
Manganese	10/05/2007										88.0	92.0	2.0	96.0	
Manganese	10/05/2007										94.0	94.0	0.0	97.0	

**SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet**

RIN: 07081119 Lab Code: PAR Date Due: 10/13/2007
 Matrix: Water Site Code: SHP Date Completed: 9/29/2007

Analyte	Date Analyzed	CALIBRATION										MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R	
		Int.	R^2	ICV	CCV	ICB	CCB	Blank	Method	LCS %R	MS %R						
Manganese	10/05/2007	-0.0010	1.0000	OK	OK	OK	OK					100.0	106.0	6.0	92.0		
Manganese	10/08/2007	-0.0010	1.0000	OK	OK	OK	OK					89.0	95.0	3.0	90.0	3.0	97.0
Manganese	10/08/2007											99.0	100.0	1.0	90.0		96.0
Manganese	10/08/2007														95.0		101.0
Potassium	10/05/2007	-0.9160	1.0000	OK	OK	OK	OK							1.0		10.0	85.0
Potassium	10/05/2007													0.0		15.0	85.0
Potassium	10/05/2007													2.0			85.0
Potassium	10/05/2007													2.0		7.0	
Potassium	10/08/2007	-0.9180	1.0000	OK	OK	OK	OK							4.0		19.0	83.0
Potassium	10/08/2007													0.0		13.0	84.0
Potassium	10/08/2007																84.0
Selenium	10/01/2007	0.0000	1.0000	OK	OK	OK	OK					113.0	102.0	103.0	106.0		106.0
Selenium	10/01/2007											111.0	102.0	103.0	1.0		
Selenium	10/02/2007	0.0000	1.0000	OK	OK	OK	OK					106.0	102.0	104.0	1.0	104.0	6.0
Selenium	10/02/2007											105.0	101.0	103.0	2.0		7.0
Selenium	10/02/2007											106.0	103.0	100.0	1.0		4.0
Selenium	10/02/2007											98.0	105.0	105.0	0.0		11.0

**SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet**

RIN: 07081119 Lab Code: PAR Date Due: 10/13/2007
 Matrix: Water Site Code: SHP Date Completed: 9/29/2007

Analyte	Date Analyzed	CALIBRATION							Method	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R ²	ICV	CCV	ICB	CCB	Blank								
Sodium	10/05/2007	0.1420	1.0000	OK	OK	OK	OK					0.0			13.0	86.0
Sodium	10/05/2007											0.0			10.0	86.0
Sodium	10/05/2007											1.0				83.0
Sodium	10/05/2007											1.0			10.0	
Sodium	10/08/2007	0.1270	1.0000	OK	OK	OK	OK					1.0			12.0	85.0
Sodium	10/08/2007											0.0			12.0	85.0
Sodium	10/08/2007															85.0
Strontium	10/05/2007	-0.0010	1.0000	OK	OK	OK	OK			89.0	94.0	2.0	91.0	3.0		92.0
Strontium	10/05/2007									87.0	89.0	1.0	91.0	1.0		92.0
Strontium	10/05/2007									76.0	80.0	1.0	88.0			88.0
Strontium	10/05/2007									92.0	91.0	0.0		1.0		
Strontium	10/08/2007	-0.0010	1.0000	OK	OK	OK	OK			77.0	84.0	2.0	88.0	0.0		93.0
Strontium	10/08/2007									91.0	89.0	1.0	89.0	2.0		93.0
Strontium	10/08/2007															94.0
Uranium	09/20/2007	0.0000	1.0000	OK	OK	OK	OK			105.0	104.0	0.0	104.0	6.0		126.0
Uranium	09/26/2007	0.0000	1.0000	OK	OK	OK	OK						109.0			127.0
Uranium	09/27/2007	0.0000	1.0000	OK	OK	OK	OK			101.0	101.0	0.0	108.0	6.0		112.0

**SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet**

RIN: 07081119 Lab Code: PAR Date Due: 10/13/2007
 Matrix: Water Site Code: SHP Date Completed: 9/29/2007

Analyte	Date Analyzed	CALIBRATION						LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB							
Uranium	09/27/2007							114.0	113.0	1.0		3.0		
Uranium	09/27/2007							115.0	115.0	0.0		7.0		
Uranium	09/27/2007							111.0	112.0	1.0		4.0		
Uranium	09/27/2007							103.0	105.0	1.0		6.0		

SAMPLE MANAGEMENT SYSTEM
Wet Chemistry Data Validation Worksheet

RIN: 07081119 Lab Code: PAR Date Due: 10/13/2007
 Matrix: Water Site Code: SHP Date Completed: 9/29/2007

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
Ammonia as N	09/24/2007							OK	101.0	93.0	95.0	1.00	
Ammonia as N	09/24/2007							OK	101.0	81.0	81.0	0	
Ammonia as N	09/24/2007							OK	103.0				
Ammonia as N	09/24/2007							OK	101.0	98.0	99.0	1.00	
Ammonia as N	09/24/2007							OK	101.0	78.0	79.0	0	
Ammonia as N	09/24/2007	0.019	0.9999	OK	OK	OK	OK	OK	100.0	100.0	97.0	2.00	
Chloride	09/14/2007	-0.068	1.0000	OK									
Chloride	09/18/2007			OK				OK	95.0	94.0	97.0	3.00	
Chloride	09/18/2007							OK	96.0	91.0	89.0	1.00	
Chloride	09/19/2007			OK				OK	98.0	89.0	91.0	1.00	
Chloride	09/19/2007							OK	94.0	99.0	96.0	2.00	
Chloride	09/19/2007							OK	91.0				
Chloride	09/20/2007			OK				OK	94.0	94.0	90.0	3.00	
Chloride	09/21/2007			OK				OK					
Nitrate+Nitrite as N	09/19/2007	-0.003	0.9998	OK	OK	OK	OK	OK	98.0	107.0	81.0	8.00	

SAMPLE MANAGEMENT SYSTEM
Wet Chemistry Data Validation Worksheet

RIN: 07081119 Lab Code: PAR Date Due: 10/13/2007
 Matrix: Water Site Code: SHP Date Completed: 9/29/2007

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
Nitrate+Nitrite as N	09/19/2007							OK	97.0	94.0	75.0	4.00	
Nitrate+Nitrite as N	09/20/2007	0.003	1.0000	OK	OK	OK	OK	OK	100.0	87.0	84.0	1.00	
Nitrate+Nitrite as N	09/20/2007							OK	94.0	107.0	88.0	5.00	
Nitrate+Nitrite as N	09/20/2007							OK	99.0	103.0	103.0	0	
Nitrate+Nitrite as N	09/21/2007	-0.003	1.0000	OK	OK	OK	OK	OK	101.0	97.0	99.0	1.00	
Sulfate	09/14/2007	0.420	0.9999	OK		OK							
Sulfate	09/18/2007					OK		OK	97.0	92.0	95.0	1.00	
Sulfate	09/18/2007							OK	97.0	93.0	91.0	0	
Sulfate	09/19/2007					OK		OK	100.0	97.0	100.0	1.00	
Sulfate	09/19/2007							OK	95.0	103.0	100.0	2.00	
Sulfate	09/19/2007							OK	93.0				
Sulfate	09/20/2007					OK		OK	96.0	102.0	97.0	1.00	
Sulfate	09/21/2007					OK		OK					
Total Dissolved Solids	09/19/2007							OK	97.0			0	
Total Dissolved Solids	09/19/2007							OK	98.0			1.00	

SAMPLE MANAGEMENT SYSTEM
Wet Chemistry Data Validation Worksheet

RIN: 07081119 **Lab Code:** PAR **Date Due:** 10/13/2007
Matrix: Water **Site Code:** SHP **Date Completed:** 9/29/2007

Analyte	Date Analyzed	CALIBRATION				Method	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R ²	ICV	CCV						
Total Dissolved Solids	09/19/2007					OK	98.0			1.00	
Total Dissolved Solids	09/20/2007					OK	98.0			1.00	
Total Dissolved Solids	09/20/2007					OK	95.0			3.00	
Total Dissolved Solids	09/20/2007					OK	99.0			0	

Sampling Quality Control Assessment

The following information summarizes and assesses quality control for this sampling event.

Sampling Protocol

Sample results for monitor wells that met the Category I, II, or III low-flow sampling criteria were qualified with an “F” flag in the database, indicating the wells were purged and sampled using the low-flow sampling method.

All wells met the Category I criteria and were sampled with dedicated tubing using the low-flow purge procedure with the following exceptions:

- Wells 0610, 0797, 1058, 1059, 1060, and 1074 were classified as Category II.
- Wells 0600, 0726, 0728, 0731, 0734, 0812, 0814, 0815, 0827, 0832, 0833, 0839, 0844, 1007, 1072, 1073, 1120, DM7, and MW1 were classified as Category III.
- Turbidity requirements were not met for wells 0843 and 1068.
- Water levels were not measured for wells 0730 and 0816.
- The water level drop exceeded the Category I criterion for well 0817.

The sample results for these wells were qualified with a “Q” flag, indicating the data are qualitative because of the sampling technique.

Equipment Blank

An equipment blank was collected after completion of decontamination and prior to collection of environmental samples. This blank is useful in documenting adequate decontamination of sampling equipment. The following analytes were detected in the equipment blank (2535) that was associated with samples collected using a bailer: calcium, magnesium, manganese, potassium, sodium, strontium, sulfate, and uranium. The following analytes were detected in the equipment blank (2609) that was associated with surface water samples collected using a hose reel: calcium, magnesium, manganese, potassium, sodium, strontium, and uranium. Sample results that are less than 5 times the equipment blank concentration are qualified with a “U” flag as not detected. Most sample results for these analytes were more than 5 times the equipment blank concentrations and do not require further qualification.

Field Duplicate Assessment

Field duplicate samples are collected and analyzed as an indication of overall precision of the measurement process. The precision observed includes both field and laboratory precision and has more variability than laboratory duplicates, which measure only laboratory performance. Duplicate samples were collected from locations 0662, 0855, 1057, 1089, and 1203. The U.S. Environmental Protection Agency recommended laboratory duplicate criterion is less than 20 percent relative difference for results that are greater than 5 times the PQL. The duplicate results were acceptable, with the following exceptions. For location 0662 (surface water), the potassium and uranium relative differences were 29 percent and 23 percent, respectively. For

location 1057 (groundwater), the ammonia as N and nitrate + nitrite as N relative differences were 31 percent and 34 percent, respectively. There were no analytical errors identified during the review of the data. The field notes did not describe any unusual conditions during sampling at these locations.

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 6010	CALCIUM	560	B	1.6	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	560000	2			
0709086-15	340000	10			
0709086-18	490000	5			
0709086-20	450000	5			
0709086-21	460000	10			
0709086-23	410000	10			
0709086-26	440000	5			
0709086-36	520000	10			
0709086-41	400000	10			
0709086-42	65000	10			
0709086-51	140000	5			
0709086-59	430000	10			
0709086-64	450000	10			
0709086-69	510000	10			
0709086-86	450000	10			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 6010	MAGNESIUM	89	B	4.5	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	220000	2			
0709086-15	510000	10			
0709086-18	730000	5			
0709086-20	600000	5			
0709086-21	2200000	10			
0709086-23	2300000	10			
0709086-26	1200000	5			
0709086-36	1600000	10			
0709086-41	390000	10			
0709086-42	32000	10			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106		MAGNESIUM				

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-51	120000	5			
0709086-59	2200000	10			
0709086-64	1500000	10			
0709086-69	1500000	10			
0709086-86	2200000	10			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 6010	MANGANESE	4.2	B	0.15	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	72	2			
0709086-15	690	10			
0709086-18	880	5			
0709086-20	230	5			
0709086-21	260	10			
0709086-23	1200	10			
0709086-26	530	5			
0709086-36	1100	10			
0709086-41	250	10			
0709086-42	130	10			
0709086-51	100	5			
0709086-59	1300	10			
0709086-64	37	10	B		
0709086-69	1.5	10	U		
0709086-86	1500	10			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 6010	POTASSIUM	270	B	22	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	8500	2			
0709086-15	79000	10			
0709086-18	91000	5			
0709086-20	54000	5			
0709086-21	100000	10			
0709086-23	99000	10			
0709086-26	75000	5			
0709086-36	130000	10			
0709086-41	38000	10			
0709086-42	23000	10			
0709086-51	31000	5			
0709086-59	130000	10			
0709086-64	41000	10			
0709086-69	51000	10			
0709086-86	130000	10			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 6010	SODIUM	280	B	2.3	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	280000	2			
0709086-15	3300000	50			
0709086-18	580000	5			
0709086-20	1100000	5			
0709086-21	5400000	100			
0709086-23	3000000	50			
0709086-26	1700000	100			
0709086-36	2400000	10			
0709086-41	3400000	100			
0709086-42	3500000	50			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106		SODIUM				

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-51	2500000	100			
0709086-59	2900000	100			
0709086-64	1900000	10			
0709086-69	1900000	10			
0709086-86	2500000	10			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 6010	STRONTIUM	2.1	B	0.032	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	5100	2			
0709086-15	7500	10			
0709086-18	6800	5			
0709086-20	8700	5			
0709086-21	13000	10			
0709086-23	11000	10			
0709086-26	8600	5			
0709086-36	9200	10			
0709086-41	15000	10			
0709086-42	6400	10			
0709086-51	6500	5			
0709086-59	12000	10			
0709086-64	10000	10			
0709086-69	11000	10			
0709086-86	11000	10			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 9056	SULFATE	0.56		0.5	MG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	2200	50			
0709086-15	8900	200			
0709086-18	5200	100			
0709086-20	5100	100			
0709086-21	16000	200			
0709086-23	15000	200			
0709086-26	8600	100			
0709086-36	8800	200			
0709086-41	10000	200			
0709086-42	1800	200			
0709086-51	6200	100			
0709086-59	14000	200			
0709086-64	9200	200			
0709086-69	8400	200			
0709086-86	13000	200			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106	EPA 6020	URANIUM	0.027	B	0.0059	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-101	56	50			
0709086-15	1100	500			
0709086-18	320	50			
0709086-20	49	10			
0709086-21	130	100			
0709086-23	330	500			
0709086-26	650	500			
0709086-36	60	50			
0709086-41	56	50			
0709086-42	0.87	10			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-106		URANIUM				

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-51	32	10			
0709086-59	120	100			
0709086-64	260	100			
0709086-69	150	500			
0709086-86	2500	1000			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109	EPA 6010	CALCIUM	340	B	1.6	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-49	110000	2			
0709086-76	57000	1			
0709086-77	440000	25			
0709086-78	54000	1			
0709086-79	53000	1			
0709086-80	59000	1			
0709086-81	60000	1			
0709086-83	530000	100			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109	EPA 6010	MAGNESIUM	260	B	4.5	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-49	14000	2			
0709086-76	8500	1			
0709086-77	1600000	25			
0709086-78	9800	1			
0709086-79	8400	1			
0709086-80	9000	1			
0709086-81	8700	1			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109		MAGNESIUM				

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-83	190000	1			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109	EPA 6010	MANGANESE	2.6	B	0.15	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-49	6.1	2	B	U	
0709086-76	2.1	1	B	U	
0709086-77	3.8	25	U		
0709086-78	6.1	1		U	
0709086-79	1.6	1	B	U	
0709086-80	220	1			
0709086-81	33	1			
0709086-83	25	1			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109	EPA 6010	POTASSIUM	290	B	22	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-49	12000	2			
0709086-76	2800	1	EN		
0709086-77	95000	25			
0709086-78	2700	1			
0709086-79	2600	1			
0709086-80	15000	1			
0709086-81	3200	1			
0709086-83	17000	1			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109	EPA 6010	SODIUM	400	B	2.3	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-49	640000	50			
0709086-76	23000	1	E		
0709086-77	9200000	100			
0709086-78	30000	1			
0709086-79	23000	1			
0709086-80	25000	1			
0709086-81	23000	1			
0709086-83	410000	100			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109	EPA 6010	STRONTIUM	2.2	B	0.032	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-49	11000	2			
0709086-76	610	1			
0709086-77	9200	25			
0709086-78	590	1			
0709086-79	590	1			
0709086-80	620	1			
0709086-81	640	1			
0709086-83	5400	1			

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109	EPA 6020	URANIUM	0.03	B	0.0059	UG/L

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-49	0.34	10			
0709086-76	1.4	10			
0709086-77	280	100			
0709086-78	1.2	10			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Equipment/Trip Blanks

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0709086-109		URANIUM				

Sample ID	Result	Dilution Factor	Lab Qualifier	Validation Qualifier	Comment
0709086-79	1.1	10			
0709086-80	1.2	10			
0709086-81	1.4	10			
0709086-83	37	10			

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Duplicate: 2533

Sample: 1089

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
AMMONIA AS N	0.44			0.53					MG/L
CALCIUM	400000			400000			0		UG/L
CHLORIDE	290			290			0		MG/L
MAGNESIUM	750000			740000			1.34		UG/L
MANGANESE	1500			1500			0		UG/L
NITRATE/NITRITE AS N	33			28			16.39		MG/L
POTASSIUM	96000			93000			3.17		UG/L
SELENIUM	22			25			12.77		UG/L
SODIUM	2000000			1900000			5.13		UG/L
STRONTIUM	6500			6400			1.55		UG/L
SULFATE	8200			8200			0		MG/L
TOTAL DISSOLVED SOLIDS	14000			14000			0		MG/L
URANIUM	900			890			1.12		UG/L

Duplicate: 2534

Sample: 855

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
AMMONIA AS N	0.1	U		0.1	U				MG/L
CALCIUM	290000			290000			0		UG/L
CHLORIDE	82			84			2.41		MG/L
MAGNESIUM	64000			64000			0		UG/L
MANGANESE	1200			1200			0		UG/L
NITRATE/NITRITE AS N	0.048			0.049					MG/L
POTASSIUM	21000			21000			0		UG/L
SELENIUM	20			23			13.95		UG/L
SODIUM	950000			880000			7.65		UG/L
STRONTIUM	6900			6800			1.46		UG/L
SULFATE	3100			3100			0		MG/L
TOTAL DISSOLVED SOLIDS	5100			5100			0		MG/L
URANIUM	92			85			7.91		UG/L

Duplicate: 2604

Sample: 662

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
AMMONIA AS N	0.1	U		0.1	U				MG/L
CALCIUM	110000			120000			8.70		UG/L
CHLORIDE	58			54			7.14		MG/L

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Duplicate: 2604

Sample: 662

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
MAGNESIUM	14000			14000			0		UG/L
MANGANESE	6.1	B		8.4			31.72		UG/L
NITRATE/NITRITE AS N	0.64			0.64			0		MG/L
POTASSIUM	12000			16000			28.57		UG/L
SELENIUM	1.3			1.4			7.41		UG/L
SODIUM	640000			710000			10.37		UG/L
STRONTIUM	11000			11000			0		UG/L
SULFATE	2200			2000			9.52		MG/L
TOTAL DISSOLVED SOLIDS				3200					MG/L
URANIUM	0.34			0.27			22.95		UG/L

Duplicate: 2605

Sample: 1057

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
AMMONIA AS N	410			560			30.93		MG/L
CALCIUM	680000			710000			4.32		UG/L
CHLORIDE	390			390			0		MG/L
MAGNESIUM	1400000			1400000			0		UG/L
MANGANESE	13000			14000			7.41		UG/L
NITRATE/NITRITE AS N	2400			1700			34.15		MG/L
POTASSIUM	210000			240000			13.33		UG/L
SELENIUM	230			210			9.09		UG/L
SODIUM	1200000			1100000			8.70		UG/L
STRONTIUM	8100			7300			10.39		UG/L
SULFATE	6000			6200			3.28		MG/L
TOTAL DISSOLVED SOLIDS	21000			20000			4.88		MG/L
URANIUM	51			46			10.31		UG/L

Duplicate: 2608

Sample: 1203

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
AMMONIA AS N	0.1	U		0.1	U				MG/L
CALCIUM	52000			53000			1.90		UG/L
CHLORIDE	9.1			9.3			2.17		MG/L
MAGNESIUM	8700			8800			1.14		UG/L
MANGANESE	2.8	B		2.8	B		0		UG/L
NITRATE/NITRITE AS N	0.2			0.2			0		MG/L

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

RIN: 07081119 Lab Code: PAR Project: Shiprock Validation Date: 11/5/2007

Duplicate: 2608

Sample: 1203

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
POTASSIUM	2700			2700			0		UG/L
SELENIUM	0.44			0.39			12.05		UG/L
SODIUM	24000			24000			0		UG/L
STRONTIUM	590			600			1.68		UG/L
SULFATE	96			98			2.06		MG/L
URANIUM	1.1			1.1			0		UG/L

Certification

All laboratory analytical quality control criteria were met except as qualified in this report. The data qualifiers listed on the SEEPro database reports are defined on the last page of each report. All data in this package are considered validated and available for use.

Laboratory Coordinator:

Steve Donovan
Steve Donovan

1-18-2008
Date

Data Validation Lead:

Gretchen Baer
Gretchen Baer

1/18/08
Date

Attachment 1
Assessment of Anomalous Data

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Outliers Report

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Outliers Report

Potential outliers are measurements that are extremely large or small relative to the rest of the data and, therefore, are suspected of misrepresenting the population from which they were collected. Potential outliers may result from transcription errors, data-coding errors, or measurement system problems. However, outliers may also represent true extreme values of a distribution and indicate more variability in the population than was expected.

Statistical outlier tests give probabilistic evidence that an extreme value does not "fit" with the distribution of the remainder of the data and is therefore a statistical outlier. These tests should only be used to identify data points that require further investigation. The tests alone cannot determine whether a statistical outlier should be discarded or corrected within a data set.

There are three steps involved in identifying extreme values or outliers:

1. Identify extreme values that may be potential outliers by generating the Outliers Report using the Sample Management System from data in the SEEPro database. The application compares the new data set with historical data and lists all new data that fall outside the historical data range. Data listed in the report are highlighted if the concentration detected is not within 50 percent of historical minimum or maximum values. A determination is also made if the data are normally distributed using the Studentized Range Test.
2. Apply the appropriate statistical test. Dixon's Extreme Value test is used to test for statistical outliers when the sample size is less than or equal to 25. This test considers both extreme values that are much smaller than the rest of the data (case 1) and extreme values that are much larger than the rest of the data (case 2). This test is valid only if the data without the suspected outlier are normally distributed. Rosner's Test is a parametric test that is used to detect outliers for sample sizes of 25 or more. This test also assumes that the data without the suspected outliers are normally distributed.
3. Scientifically review statistical outliers and decide on their disposition.

Sixty-six results are listed on the Anomalous Data Review Checksheet for further review. All other sample results meet these criteria and are acceptable for use as qualified. At this time, all data from this sampling event may be treated as validated results.

Most of the anomalies appeared in locations that have not been sampled since 2002 or earlier. Because the gaps between the September 2007 data and the previous data are greater than five years for these locations, high or low points may not necessarily indicate errors in the data. Future measurements should be closely examined.

Anomalous results for locations 0618, 1057, 1089, and 1093 may indicate trends in the data. Anomalous results also appeared in locations 0610, 0726, 0734, 0786, 0817, 0818, 0832, 0934, 1071, and 1092; definitive trending at these locations is not recognized.

Table 5 summarizes the anomalies identified in a previous report (March 2007). The right-hand column describes the result for this sampling event (September 2007).

Table 5. Comparison of March 2007 Anomalies with September 2007 Results

Loc. No.	Site Code	Analyte	Type of Anomaly in March 2007	September 2007 Measurement
0614	SHP01	Selenium	High	Measurement is lower & within historical range
0797	SHP01	Nitrate	High	Measurement is lower & near historical range
0797	SHP01	Uranium	High	Measurement is lower but still elevated
1089	SHP01	Nitrate	Low	Measurement is higher but still low; possible downward trend
1079	SHP02	Manganese	Low	Measurement is lower; possible downward trend
1088	SHP02	Manganese	Low	Measurement is higher & within historical range
1093	SHP02	Ammonia	High	Measurement is lower but still elevated

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect		
SHP01	0501	09/10/2007	Sodium	24	E		59.3			30.8			7	0	Yes	No
SHP01	0501	09/10/2007	Sulfate	96		J	216			96.9			7	0	Yes	No
SHP01	0501	09/10/2007	Uranium	0.0011			0.0027			0.0014		J	7	0	Yes	No
SHP01	0608	09/11/2007	Magnesium	1400		F	2620			1500		F	39	0	No	No
SHP01	0608	09/11/2007	Manganese	3.9		F	9.85			4		F	39	0	Yes	No
SHP01	0608	09/11/2007	Nitrate + Nitrite as Nitrogen	450		F	650		F	470		F	7	0	Yes	No
SHP01	0610	09/11/2007	Chloride	410		FQ	400			240		N	17	0	Yes	No
SHP01	0610	09/11/2007	Magnesium	2100		FQ	1910		L	1100			17	0	Yes	No
SHP01	0610	09/11/2007	Manganese	1.2		FQ	3.71		L	1.53			18	0	No	Yes
SHP01	0610	09/11/2007	Potassium	180		FQ	152			93.6		J	17	0	Yes	No
SHP01	0610	09/11/2007	Uranium	2.1		FQ	2.05		L	0.92			18	0	Yes	No
SHP01	0612	09/11/2007	Calcium	64		F	432			67.6			9	0	Yes	No
SHP01	0612	09/11/2007	Chloride	16		F	150			22.7			9	0	Yes	No
SHP01	0612	09/11/2007	Magnesium	36		F	407			46.7			9	0	Yes	No
SHP01	0612	09/11/2007	Potassium	6.7	EN	F	31.6			7.1			9	0	Yes	No
SHP01	0612	09/11/2007	Sodium	120		F	908			133			9	0	Yes	No
SHP01	0612	09/11/2007	Strontium	0.76		F	5.64			0.845			9	0	Yes	No
SHP01	0612	09/11/2007	Sulfate	310		F	3750			423			9	0	Yes	No

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0612	09/11/2007	Total Dissolved Solids	740		F	6900			888			9	0	Yes	No
SHP01	0618	09/12/2007	Nitrate + Nitrite as Nitrogen	360		F	320		F	6.1			11	0	No	Yes
SHP01	0619	09/12/2007	Magnesium	230		F	2210			290		F	39	0	No	No
SHP01	0619	09/12/2007	Manganese	1.7		F	8.65			1.8		F	39	0	No	No
SHP01	0619	09/12/2007	Sodium	1100		F	3800			1180		F	39	0	No	No
SHP01	0619	09/12/2007	Uranium	0.27		F	3.14			0.32		F	39	0	Yes	No
SHP01	0626	09/13/2007	Magnesium	54		F	938			72.7			24	0	No	No
SHP01	0626	09/13/2007	Selenium	0.00046		F	0.24			0.007		NS	25	2	No	No
SHP01	0626	09/13/2007	Uranium	0.052		F	1.22			0.0788			25	0	No	No
SHP01	0628	09/13/2007	Selenium	0.00029		F	0.204			0.0015		B	17	5	Yes	No
SHP01	0628	09/13/2007	Strontium	15		F	13.6			4.1		N	16	0	Yes	No
SHP01	0630	09/13/2007	Magnesium	37		F	264			64.8		J	15	0	Yes	No
SHP01	0630	09/13/2007	Sodium	720		F	1440			873			17	0	Yes	No
SHP01	0630	09/13/2007	Sulfate	2500		F	4860			2580		H	16	0	Yes	No
SHP01	0630	09/13/2007	Total Dissolved Solids	3900		F	7870		J	4040			16	0	Yes	No
SHP01	0734	09/13/2007	Chloride	31		FQ	373		F	140			20	0	Yes	No
SHP01	0734	09/13/2007	Magnesium	150		FQ	928		F	230			19	0	Yes	No
SHP01	0734	09/13/2007	Potassium	8.1		FQ	37	EN	JFQ	10.4			18	0	Yes	No

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0734	09/13/2007	Sodium	500		FQ	3430		F	790			21	0	No	No
SHP01	0734	09/13/2007	Sulfate	2200		FQ	11800			3900			21	0	Yes	No
SHP01	0734	09/13/2007	Total Dissolved Solids	3600		FQ	17000		FQ	5310	H		18	0	No	Yes
SHP01	0735	09/10/2007	Selenium	0.024		F	0.27		F	0.0264		F	29	1	Yes	No
SHP01	0797	09/12/2007	Calcium	460		FQ	450		F	42		F	13	0	No	No
SHP01	0797	09/12/2007	Chloride	210		FQ	200		FQ	16.7		F	13	0	No	No
SHP01	0797	09/12/2007	Sulfate	4300		FQ	4000		F	427		L	13	0	No	No
SHP01	0797	09/12/2007	Total Dissolved Solids	7300		FQ	6900		F	1100		QF	9	0	No	No
SHP01	0850	09/12/2007	Uranium	0.071		F	0.068		F	0.0069		F	19	0	Yes	No
SHP01	0853	09/12/2007	Calcium	120		F	466			302			5	0	Yes	No
SHP01	0853	09/12/2007	Chloride	19		F	49.4			29.3			5	0	Yes	No
SHP01	0853	09/12/2007	Magnesium	38		F	170			114			5	0	Yes	No
SHP01	0853	09/12/2007	Manganese	0.55		F	2.49			1.6			5	0	Yes	No
SHP01	0853	09/12/2007	Potassium	19	EN	F	32.1			19.2			5	0	Yes	No
SHP01	0853	09/12/2007	Sodium	110	E	FJ	250			193			5	0	Yes	No
SHP01	0853	09/12/2007	Strontium	1.3	N	F	4.21			3.06			5	0	Yes	No
SHP01	0853	09/12/2007	Sulfate	520		F	1980			1500			5	0	No	Yes
SHP01	0853	09/12/2007	Total Dissolved Solids	980		F	3250			2440			5	0	Yes	Yes

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0853	09/12/2007	Uranium	0.052		F	0.224			0.142			5	0	Yes	No
SHP01	0855	09/13/2007	Calcium	290		F	432			292			6	0	Yes	No
SHP01	0855	09/13/2007	Magnesium	64		F	174			112			6	0	No	No
SHP01	0855	09/13/2007	Manganese	1.2		F	2.62			2.16			7	0	Yes	Yes
SHP01	0855	09/13/2007	Potassium	21		F	14.1			11.9			6	0	Yes	Yes
SHP01	0855	09/13/2007	Selenium	0.023		F	0.122			0.0752			7	0	No	Yes
SHP01	0855	09/13/2007	Selenium	0.02		F	0.122			0.0752			7	0	No	Yes
SHP01	0855	09/13/2007	Sodium	950		F	1380			1000			6	0	Yes	No
SHP01	0855	09/13/2007	Sodium	880		F	1380			1000			6	0	Yes	No
SHP01	0855	09/13/2007	Strontium	6.9		F	10.5			8.83			6	0	Yes	No
SHP01	0855	09/13/2007	Strontium	6.8		F	10.5			8.83			6	0	Yes	No
SHP01	0855	09/13/2007	Sulfate	3100		F	3830			3210			7	0	Yes	No
SHP01	0855	09/13/2007	Total Dissolved Solids	5100		F	6230			5190			7	0	Yes	No
SHP01	0856	09/13/2007	Calcium	220		F	309			271			6	0	Yes	Yes
SHP01	0856	09/13/2007	Chloride	78		F	98.3			85.6			6	0	Yes	No
SHP01	0856	09/13/2007	Magnesium	67		F	119			104			6	0	Yes	Yes
SHP01	0856	09/13/2007	Manganese	1.3		F	1.51			1.38			6	0	Yes	No
SHP01	0856	09/13/2007	Potassium	24		F	18.8			17.7			6	0	Yes	Yes

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

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Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0856	09/13/2007	Selenium	0.0002		F	0.001	U	0.00029	B		6	3	Yes	No	
SHP01	0856	09/13/2007	Sodium	920		F	1220		1100			6	0	Yes	Yes	
SHP01	0856	09/13/2007	Strontium	4.9		F	4.43		3.84			6	0	Yes	No	
SHP01	0856	09/13/2007	Sulfate	3100		F	3470		3130			6	0	Yes	No	
SHP01	0856	09/13/2007	Total Dissolved Solids	4900		F	5510		5120			6	0	Yes	No	
SHP01	0856	09/13/2007	Uranium	0.076		F	0.162		0.13			6	0	No	Yes	
SHP01	0857	09/12/2007	Calcium	290		F	499		307			5	0	Yes	No	
SHP01	0857	09/12/2007	Chloride	110		F	105		64.1			5	0	No	No	
SHP01	0857	09/12/2007	Manganese	2.4		F	5.06		3.19			6	0	Yes	No	
SHP01	0857	09/12/2007	Potassium	32		F	24.8	E	19.5			5	0	Yes	No	
SHP01	0857	09/12/2007	Selenium	0.0014		F	0.001	U	0.0001	U		6	5	No	No	
SHP01	0857	09/12/2007	Sodium	370		F	586		373			5	0	No	No	
SHP01	0857	09/12/2007	Strontium	3.1		F	5.75		3.55			5	0	Yes	No	
SHP01	0887	09/12/2007	Manganese	0.0021	B	U	0.934		0.0065	B		18	0	Yes	No	
SHP01	0887	09/12/2007	Nitrate + Nitrite as Nitrogen	0.028			62	J	11			6	0	Yes	No	
SHP01	0887	09/12/2007	Selenium	0.00049			0.349		0.001	U		18	1	Yes	No	
SHP01	0939	09/12/2007	Nitrate + Nitrite as Nitrogen	0.014			45		0.1			6	0	Yes	No	
SHP01	0940	09/12/2007	Manganese	0.0012	B		0.107		0.0018	B		20	0	Yes	No	

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

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Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0956	09/13/2007	Chloride	9.1			34			11			19	0	No	No
SHP01	0956	09/13/2007	Magnesium	8.4			23.2			8.64			19	0	No	No
SHP01	0956	09/13/2007	Sodium	23			95.4			25.7			19	0	No	No
SHP01	0956	09/13/2007	Strontium	0.57			1.2			0.583			19	0	Yes	No
SHP01	0956	09/13/2007	Sulfate	99			330			102			19	0	No	No
SHP01	0956	09/13/2007	Uranium	0.0011			0.0037			0.0014			19	0	Yes	No
SHP01	0965	09/13/2007	Calcium	54			87			63			11	0	Yes	No
SHP01	0965	09/13/2007	Chloride	9.2			33.5			12			11	0	Yes	No
SHP01	0965	09/13/2007	Magnesium	8.6			25.6			8.7			11	0	No	No
SHP01	0965	09/13/2007	Manganese	0.0032	B		0.061			0.0043	B		11	0	Yes	No
SHP01	0965	09/13/2007	Potassium	2.7			3.8			2.92			11	0	No	No
SHP01	0965	09/13/2007	Sodium	24			102			32			11	0	Yes	No
SHP01	0965	09/13/2007	Strontium	0.59			1.23			0.73			11	0	Yes	No
SHP01	0965	09/13/2007	Sulfate	100			357			120			11	0	Yes	No
SHP01	0965	09/13/2007	Uranium	0.0012			0.0034			0.0015			11	0	Yes	No
SHP01	1089	09/12/2007	Ammonia Total as N	0.44			6			0.72	FJ		7	1	Yes	No
SHP01	1089	09/12/2007	Ammonia Total as N	0.53			6			0.72	FJ		7	1	Yes	No
SHP01	1089	09/12/2007	Chloride	290			690	F		480			10	0	Yes	Yes

Data Validation Outliers Report - No Field Parameters

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RIN: 07081119

Comparison: All Historical Data

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Site Code	Location Code	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect				
SHP01	1109	09/11/2007	Chloride	37		253		42		63	0	No	No		
SHP01	1109	09/11/2007	Sodium	190	E	4200		240		63	0	Yes	No		
SHP01	1109	09/11/2007	Sulfate	860		5748		863		63	0	No	No		
SHP01	1115	09/10/2007	Ammonia Total as N	150	F	380		180		5	0	No	No		
SHP01	1115	09/10/2007	Magnesium	410	F	2000		600		5	0	No	No		
SHP01	1115	09/10/2007	Sodium	690	F	2300		1050		5	0	Yes	No		
SHP01	1203	09/11/2007	Calcium	52		81		57.2		9	0	Yes	No		
SHP01	1203	09/11/2007	Calcium	53		81		57.2		9	0	Yes	No		
SHP01	1203	09/11/2007	Chloride	9.3	J	18		11		9	0	Yes	No		
SHP01	1203	09/11/2007	Chloride	9.1	J	18		11		9	0	Yes	No		
SHP01	1203	09/11/2007	Sodium	24		3000		36		9	0	Yes	No		
SHP01	1203	09/11/2007	Strontium	0.6		1		0.71		9	0	Yes	No		
SHP01	1203	09/11/2007	Strontium	0.59		1		0.71		9	0	Yes	No		
SHP01	1203	09/11/2007	Sulfate	98	J	209		110		11	0	Yes	No		
SHP01	1203	09/11/2007	Sulfate	96	J	209		110		11	0	Yes	No		
SHP01	1203	09/11/2007	Uranium	0.0011		0.0031		0.0015		11	0	Yes	No		
SHP01	1205	09/12/2007	Chloride	9.5		27		11		18	0	No	No		
SHP01	1205	09/12/2007	Sodium	24		67.5		32		18	0	Yes	No		

Data Validation Outliers Report - No Field Parameters

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RIN: 07081119

Comparison: All Historical Data

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Site Code	Location Code	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect				
SHP01	1205	09/12/2007	Strontium	0.6		1.1		0.686			18	0	Yes	No	
SHP01	1205	09/12/2007	Sulfate	100		235		110			20	0	Yes	No	
SHP01	1205	09/12/2007	Uranium	0.0011		0.0031		0.0014			20	0	Yes	No	
SHP02	0600	09/11/2007	Calcium	340	FQ	477		355			19	0	Yes	No	
SHP02	0600	09/11/2007	Magnesium	510	FQ	858		543			19	0	No	No	
SHP02	0602	09/11/2007	Chloride	1000	F	900		610	N		19	0	Yes	No	
SHP02	0603	09/11/2007	Calcium	710	F	561	F	367			11	0	No	Yes	
SHP02	0603	09/11/2007	Chloride	96	F	731		154	F		11	0	Yes	No	
SHP02	0603	09/11/2007	Magnesium	420	F	2690		557	F		11	0	Yes	No	
SHP02	0603	09/11/2007	Potassium	110	F	353		150	F		11	0	No	No	
SHP02	0603	09/11/2007	Selenium	0.087	F	0.455		0.185			11	0	Yes	No	
SHP02	0603	09/11/2007	Sodium	410	F	2070		646	F		11	0	Yes	No	
SHP02	0603	09/11/2007	Sulfate	3100	F	15900		5580	F		13	0	Yes	No	
SHP02	0603	09/11/2007	Total Dissolved Solids	9200	F	32700		10200			9	0	Yes	No	
SHP02	0603	09/11/2007	Uranium	0.0077	F	0.017		0.01			13	0	Yes	No	
SHP02	0662	09/13/2007	Nitrate + Nitrite as Nitrogen	0.64		0.47		0.099			8	0	Yes	No	
SHP02	0662	09/13/2007	Potassium	16		13	J	5.97			25	0	No	No	
SHP02	0725	09/13/2007	Manganese	0.51	F	0.1		0.0006	U		16	7	Yes	Yes	

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

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Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect				
SHP02	0725	09/13/2007	Potassium	18	F	15		10.6			11	0	Yes	Yes	
SHP02	0725	09/13/2007	Selenium	0.0061	F	0.0836		0.0159			16	1	No	No	
SHP02	0726	09/13/2007	Calcium	140	FQ	474		304			12	0	Yes	Yes	
SHP02	0726	09/13/2007	Chloride	820	FQ	343		64			12	0	Yes	Yes	
SHP02	0726	09/13/2007	Magnesium	120	FQ	504		224			10	0	Yes	Yes	
SHP02	0728	09/11/2007	Selenium	0.0017	FQ	0.084	+	0.0093			18	0	No	No	
SHP02	0730	09/11/2007	Calcium	650	FQ	640	F	477		L	12	0	No	No	
SHP02	0730	09/11/2007	Nitrate + Nitrite as Nitrogen	160	FQ	150	FQ	98		JF	6	0	Yes	No	
SHP02	0730	09/11/2007	Selenium	0.0087	FQ	0.0175		0.0092		FQ	13	0	No	No	
SHP02	0730	09/11/2007	Uranium	0.0063	FQ	0.0056		0.00056		F	16	0	Yes	No	
SHP02	0731	09/11/2007	Chloride	200	FQ	627		314			8	0	Yes	No	
SHP02	0731	09/11/2007	Selenium	0.013	FQ	0.554		0.123		N*	10	0	Yes	No	
SHP02	0786	09/13/2007	Manganese	0.31		0.021		0.001		B U	12	3	Yes	Yes	
SHP02	0786	09/13/2007	Potassium	33		28		17.6			12	0	No	No	
SHP02	0786	09/13/2007	Uranium	0.028		0.0442		0.03			12	0	No	No	
SHP02	0812	09/11/2007	Chloride	2400	FQ	2384		2160		L	8	0	Yes	No	
SHP02	0812	09/11/2007	Potassium	100	FQ	78.2		58.5		L	7	0	Yes	Yes	
SHP02	0812	09/11/2007	Selenium	4.9	FQ	7.02		5.78		L	8	0	Yes	No	

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

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Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	0812	09/11/2007	Sodium	5400		FQ	6360		L	5860		FQ	7	0	Yes	Yes
SHP02	0812	09/11/2007	Strontium	13		FQ	15.2			14		L	7	0	Yes	Yes
SHP02	0812	09/11/2007	Total Dissolved Solids	37000		FQ	35700		L	34200		L	6	0	Yes	No
SHP02	0813	09/11/2007	Potassium	170		F	125		F	87.3			8	0	Yes	Yes
SHP02	0813	09/11/2007	Total Dissolved Solids	33000		F	29600			26900			6	0	Yes	No
SHP02	0814	09/12/2007	Calcium	430		FQ	476			443		L	5	0	Yes	No
SHP02	0814	09/12/2007	Magnesium	2200		FQ	2530		L	2320		L	5	0	Yes	No
SHP02	0814	09/12/2007	Potassium	130		FQ	107	E	JL	84.6		L	5	0	Yes	No
SHP02	0814	09/12/2007	Selenium	2.1		FQ	3.3		L	2.35			6	0	Yes	No
SHP02	0814	09/12/2007	Sodium	2900		FQ	3450			3210		L	5	0	Yes	No
SHP02	0814	09/12/2007	Strontium	12		FQ	13.8			12.8		L	5	0	Yes	No
SHP02	0814	09/12/2007	Sulfate	14000		FQ	13800		L	10613			8	0	Yes	No
SHP02	0814	09/12/2007	Total Dissolved Solids	28000		FQ	27200			25900		L	6	0	No	No
SHP02	0814	09/12/2007	Uranium	0.12		FQ	0.281			0.125		L	8	0	Yes	No
SHP02	0815	09/11/2007	Calcium	410		FQ	466			430			5	0	No	No
SHP02	0815	09/11/2007	Chloride	650		FQ	866			745			5	0	Yes	No
SHP02	0815	09/11/2007	Manganese	1.2		FQ	1.46			1.32			6	0	Yes	No
SHP02	0815	09/11/2007	Potassium	99		FQ	82.5	E	J	67.5			5	0	Yes	No

Data Validation Outliers Report - No Field Parameters

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					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	0815	09/11/2007	Selenium	0.054		FQ	0.633		L	0.188			6	0	No	No
SHP02	0816	09/12/2007	Calcium	40		FQ	546			256			7	0	Yes	Yes
SHP02	0816	09/12/2007	Chloride	41		FQ	240			119			7	0	Yes	No
SHP02	0816	09/12/2007	Magnesium	58		FQ	702			330			7	0	Yes	No
SHP02	0816	09/12/2007	Potassium	11		FQ	17.8			15	E	J	7	0	Yes	Yes
SHP02	0816	09/12/2007	Selenium	0.015		FQ	0.242			0.0736		F	8	0	No	No
SHP02	0816	09/12/2007	Sodium	290		FQ	1200		F	807			7	0	Yes	Yes
SHP02	0816	09/12/2007	Strontium	0.75		FQ	8.58			4.29			7	0	Yes	Yes
SHP02	0816	09/12/2007	Sulfate	700		FQ	5450			1131			11	0	Yes	Yes
SHP02	0816	09/12/2007	Total Dissolved Solids	1500		FQ	8900			6140			6	0	Yes	Yes
SHP02	0817	09/12/2007	Ammonia Total as N	480		FQ	960		F	700		JF	7	0	Yes	Yes
SHP02	0818	09/12/2007	Ammonia Total as N	72			150			105			8	0	Yes	Yes
SHP02	0818	09/12/2007	Calcium	510			687			520			7	0	Yes	No
SHP02	0818	09/12/2007	Magnesium	2200			2780			2400			7	0	Yes	No
SHP02	0818	09/12/2007	Nitrate + Nitrite as Nitrogen	1500			1900			1600			7	0	Yes	No
SHP02	0819	09/11/2007	Calcium	410		F	475		L	421		L	6	0	Yes	No
SHP02	0819	09/11/2007	Chloride	720		F	830		L	751		L	6	0	Yes	No
SHP02	0819	09/11/2007	Magnesium	1500		F	1770		L	1570		L	6	0	Yes	No

Data Validation Outliers Report - No Field Parameters

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					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	0819	09/11/2007	Manganese	1.5		F	2.53			1.87		L	8	0	Yes	No
SHP02	0819	09/11/2007	Potassium	240		F	227		L	119		L	6	0	No	No
SHP02	0819	09/11/2007	Sodium	2100		F	3500		L	2180		FQ	6	0	Yes	No
SHP02	0819	09/11/2007	Strontium	8.7		F	11.1		L	10.1		L	6	0	No	Yes
SHP02	0826	09/11/2007	Calcium	400		F	457		F	416		L	8	0	Yes	No
SHP02	0826	09/11/2007	Chloride	620		F	792			637		F	9	0	Yes	No
SHP02	0826	09/11/2007	Magnesium	2500		F	2450			2190			8	0	Yes	No
SHP02	0826	09/11/2007	Manganese	2.5		F	2.86		L	2.51			8	0	Yes	No
SHP02	0826	09/11/2007	Potassium	150		F	143	E	JL	102			8	0	Yes	No
SHP02	0826	09/11/2007	Selenium	0.0028		F	0.0852			0.0095		F	8	0	Yes	No
SHP02	0826	09/11/2007	Sodium	2000		F	2210			2040			8	0	Yes	No
SHP02	0826	09/11/2007	Strontium	11		F	12.8		L	11.1			8	0	Yes	No
SHP02	0826	09/11/2007	Uranium	3.5		F	3.43		L	2.38			9	0	Yes	No
SHP02	0827	09/11/2007	Potassium	75		FQ	56.6		L	21.1		L	7	0	Yes	No
SHP02	0827	09/11/2007	Total Dissolved Solids	16000		FQ	12300		L	9030		L	6	0	No	No
SHP02	0830	09/10/2007	Magnesium	60		F	59		F	32		F	11	0	Yes	No
SHP02	0830	09/10/2007	Manganese	4.4		F	3.7		F	1.5		F	12	0	No	No
SHP02	0830	09/10/2007	Strontium	0.38		F	0.281		L	0.166			11	0	Yes	No

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect		
SHP02	0832	09/13/2007	Manganese	0.18		FQ	0.04	B	F	0.0001	U	F	17	9	No	Yes
SHP02	0832	09/13/2007	Strontium	12		FQ	10		F	3.72			16	0	Yes	No
SHP02	0833	09/13/2007	Calcium	450		FQ	735			533			5	0	Yes	No
SHP02	0833	09/13/2007	Chloride	610		FQ	318			107			5	0	Yes	No
SHP02	0833	09/13/2007	Magnesium	1500		FQ	863			466			5	0	Yes	No
SHP02	0833	09/13/2007	Manganese	0.037	B	FQ	0.0253			0.0006	U		6	2	Yes	No
SHP02	0833	09/13/2007	Potassium	41		FQ	18.3			12.4	E	J	5	0	Yes	Yes
SHP02	0833	09/13/2007	Selenium	0.64		FQ	0.61			0.18			6	0	Yes	No
SHP02	0833	09/13/2007	Sodium	1900		FQ	1100			574			5	0	Yes	No
SHP02	0833	09/13/2007	Sulfate	9200		FQ	6140			2660			7	0	Yes	No
SHP02	0833	09/13/2007	Total Dissolved Solids	18000		FQ	12000			6560			6	0	Yes	No
SHP02	0833	09/13/2007	Uranium	0.26		FQ	0.146			0.061			7	0	Yes	Yes
SHP02	0836	09/11/2007	Nitrate + Nitrite as Nitrogen	14		F	9.7		F	3.6		F	6	0	No	No
SHP02	0836	09/11/2007	Total Dissolved Solids	4400		F	5970			4500		F	15	0	No	No
SHP02	0837	09/13/2007	Calcium	570		F	493	E		356			7	0	Yes	Yes
SHP02	0837	09/13/2007	Chloride	38		F	21.2			16.5			7	0	Yes	Yes
SHP02	0837	09/13/2007	Magnesium	190		F	181			126			7	0	Yes	No
SHP02	0837	09/13/2007	Manganese	3.7		F	3.16			1.09			8	0	Yes	No

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	0837	09/13/2007	Potassium	8.2		F	6.85			5.03			7	0	Yes	Yes
SHP02	0837	09/13/2007	Selenium	0.099		F	0.0254			0.0099			8	0	Yes	Yes
SHP02	0837	09/13/2007	Sodium	230		F	183			143			7	0	Yes	Yes
SHP02	0837	09/13/2007	Sulfate	2000		F	1950			1190			9	0	Yes	No
SHP02	0837	09/13/2007	Uranium	0.045		F	0.0446			0.03			9	0	Yes	No
SHP02	0838	09/13/2007	Nitrate + Nitrite as Nitrogen	110		F	99		F	32		F	8	0	Yes	No
SHP02	0838	09/13/2007	Selenium	0.5		F	0.47		F	0.0272			20	0	Yes	No
SHP02	0838	09/13/2007	Sodium	430		F	420		F	91.9			18	0	Yes	No
SHP02	0838	09/13/2007	Sulfate	2900		F	2800		F	1180			21	0	Yes	No
SHP02	0838	09/13/2007	Total Dissolved Solids	5600		F	5500		F	2000		F	16	0	Yes	No
SHP02	0841	09/11/2007	Chloride	1000		F	988		F	557			21	0	Yes	No
SHP02	0841	09/11/2007	Sulfate	15000		F	14800			8651			25	0	Yes	No
SHP02	0843	09/13/2007	Chloride	57		FQ	29			24.7			6	0	Yes	Yes
SHP02	0843	09/13/2007	Magnesium	160		FQ	215			161			6	0	Yes	No
SHP02	0843	09/13/2007	Potassium	14		FQ	11.1			9.12			6	0	Yes	Yes
SHP02	0843	09/13/2007	Selenium	0.22		FQ	0.0014		B	0.00013		B	7	2	Yes	Yes
SHP02	0843	09/13/2007	Sodium	320		FQ	276			174			6	0	Yes	No
SHP02	0844	09/13/2007	Calcium	510		FQ	492			448			7	0	No	No

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect		
SHP02	0844	09/13/2007	Chloride	780		FQ	117			54.5			7	0	Yes	Yes
SHP02	0844	09/13/2007	Magnesium	1500		FQ	480			355			7	0	Yes	Yes
SHP02	0844	09/13/2007	Manganese	0.0015	U	FQJ	0.0702			0.0307			8	0	Yes	No
SHP02	0844	09/13/2007	Potassium	51		FQ	14.3			9.7			7	0	Yes	Yes
SHP02	0844	09/13/2007	Selenium	1.8		FQ	1.21			0.155			8	0	Yes	No
SHP02	0844	09/13/2007	Sodium	1900		FQ	767			397			7	0	Yes	Yes
SHP02	0844	09/13/2007	Strontium	11		FQ	7.79			6.23			7	0	Yes	Yes
SHP02	0844	09/13/2007	Sulfate	8400		FQ	4650			2670			9	0	Yes	Yes
SHP02	0844	09/13/2007	Total Dissolved Solids	18000		FQ	9960			5040			8	0	Yes	Yes
SHP02	0844	09/13/2007	Uranium	0.15		FQ	0.084			0.0404			9	0	Yes	Yes
SHP02	0846	09/13/2007	Magnesium	140		F	252		F	160		F	20	0	Yes	No
SHP02	0846	09/13/2007	Nitrate + Nitrite as Nitrogen	28		F	27		JF	15		F	10	0	No	No
SHP02	0846	09/13/2007	Strontium	3.9		F	6.48			4		F	20	0	No	No
SHP02	0848	09/11/2007	Calcium	380		F	548			449			5	0	Yes	No
SHP02	0848	09/11/2007	Chloride	1000		F	369			218			5	0	No	Yes
SHP02	0848	09/11/2007	Manganese	3.1		F	0.847			0.33			6	0	Yes	Yes
SHP02	0848	09/11/2007	Potassium	46		F	19.8			16			5	0	Yes	Yes
SHP02	0848	09/11/2007	Selenium	0.035		F	1.99			0.338			6	0	Yes	No

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect				
SHP02	0848	09/11/2007	Sodium	5500	F	2230		1380			5	0	Yes	Yes	
SHP02	0848	09/11/2007	Strontium	17	F	9.88		8.07			5	0	Yes	Yes	
SHP02	0848	09/11/2007	Sulfate	16000	F	6440		2990			7	0	Yes	Yes	
SHP02	0848	09/11/2007	Total Dissolved Solids	27000	F	12500		9070			6	0	Yes	Yes	
SHP02	0889	09/13/2007	Nitrate + Nitrite as Nitrogen	900		810		370			7	0	Yes	No	
SHP02	0889	09/13/2007	Uranium	0.28		0.278		0.11			22	0	Yes	No	
SHP02	0934	09/13/2007	Calcium	59		667		120			16	0	No	No	
SHP02	0934	09/13/2007	Magnesium	9		440		38			16	0	Yes	No	
SHP02	0934	09/13/2007	Manganese	0.22		0.0409		0.00014	B U		16	3	Yes	Yes	
SHP02	0934	09/13/2007	Nitrate + Nitrite as Nitrogen	0.22		110	J	0.78			6	0	Yes	No	
SHP02	0934	09/13/2007	Selenium	0.00062		0.363		0.0038			16	0	Yes	No	
SHP02	0934	09/13/2007	Sodium	25		820		46			16	0	No	No	
SHP02	0934	09/13/2007	Strontium	0.62		7.07		1			16	0	No	No	
SHP02	0934	09/13/2007	Sulfate	100		3800		310			17	0	Yes	No	
SHP02	0934	09/13/2007	Uranium	0.0012		0.14		0.0064			17	0	Yes	No	
SHP02	0942	09/12/2007	Nitrate + Nitrite as Nitrogen	58		40		0.37			6	0	No	No	
SHP02	0942	09/12/2007	Potassium	17		13		3.4			18	0	Yes	No	
SHP02	1007	09/13/2007	Sulfate	13000	FQ	11800	FQ	967	L		5	0	Yes	No	

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect				
SHP02	1007	09/13/2007	Uranium	2.5	FQ	2.09	FQ	0.0438	L	5	0	Yes	No		
SHP02	1057	09/12/2007	Calcium	710	F	520	F	430	F	8	0	Yes	Yes		
SHP02	1057	09/12/2007	Calcium	680	F	520	F	430	F	8	0	Yes	Yes		
SHP02	1057	09/12/2007	Chloride	390	F	595	L	450	F	8	0	Yes	No		
SHP02	1057	09/12/2007	Magnesium	1400	F	2570	L	1900	F	8	0	No	No		
SHP02	1057	09/12/2007	Manganese	14	F	10.7		6.4	F	9	0	Yes	No		
SHP02	1057	09/12/2007	Manganese	13	F	10.7		6.4	F	9	0	Yes	No		
SHP02	1057	09/12/2007	Potassium	240	F	407	E J	280	F	8	0	Yes	No		
SHP02	1057	09/12/2007	Potassium	210	F	407	E J	280	F	8	0	Yes	No		
SHP02	1057	09/12/2007	Selenium	0.23	F	0.593	L	0.33	F	9	0	Yes	No		
SHP02	1057	09/12/2007	Selenium	0.21	F	0.593	L	0.33	F	9	0	Yes	No		
SHP02	1057	09/12/2007	Sodium	1200	F	1900	L	1300	F	8	0	Yes	No		
SHP02	1057	09/12/2007	Sodium	1100	F	1900	L	1300	F	8	0	Yes	No		
SHP02	1057	09/12/2007	Strontium	8.1	F	10	F	8.7	F	8	0	Yes	No		
SHP02	1057	09/12/2007	Strontium	7.3	F	10	F	8.7	F	8	0	Yes	No		
SHP02	1057	09/12/2007	Sulfate	6200	F	16700	L	9400	F	9	0	Yes	No		
SHP02	1057	09/12/2007	Sulfate	6000	F	16700	L	9400	F	9	0	Yes	No		
SHP02	1057	09/12/2007	Total Dissolved Solids	20000	F	25300		21000	F	6	0	Yes	No		

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect		
SHP02	1057	09/12/2007	Uranium	0.051		F	0.11		F	0.0543		L	9	0	Yes	No
SHP02	1057	09/12/2007	Uranium	0.046		F	0.11		F	0.0543		L	9	0	Yes	No
SHP02	1059	09/10/2007	Manganese	0.048	B	FQ	1.43		L	0.215		L	5	0	Yes	No
SHP02	1060	09/11/2007	Chloride	580		FQ	530		FQ	83.5		Q	9	0	Yes	No
SHP02	1060	09/11/2007	Potassium	47		FQ	34		F	7.91		Q	10	0	No	No
SHP02	1060	09/11/2007	Sulfate	11000		FQ	10800		L	1140		L	10	0	Yes	No
SHP02	1071	09/12/2007	Ammonia Total as N	220			190			7.6			8	0	Yes	No
SHP02	1071	09/12/2007	Magnesium	1400			1200			1100			5	0	Yes	Yes
SHP02	1071	09/12/2007	Manganese	1.9			1.1			0.076			5	0	Yes	No
SHP02	1071	09/12/2007	Nitrate + Nitrite as Nitrogen	3400			2800			600			7	0	No	No
SHP02	1071	09/12/2007	Selenium	0.15			3.29			0.16			5	0	No	No
SHP02	1071	09/12/2007	Uranium	0.059			0.2			0.077			14	0	Yes	No
SHP02	1078	09/12/2007	Nitrate + Nitrite as Nitrogen	830			810			630			8	0	Yes	No
SHP02	1079	09/13/2007	Uranium	0.023		F	0.033		F	0.026		F	11	0	Yes	No
SHP02	1087	09/12/2007	Calcium	490			480			350			6	0	Yes	No
SHP02	1087	09/12/2007	Nitrate + Nitrite as Nitrogen	510			490			140			7	0	Yes	No
SHP02	1087	09/12/2007	Uranium	0.87			0.85			0.43			14	0	No	No
SHP02	1091	09/10/2007	Nitrate + Nitrite as Nitrogen	1500			2300			1600		J	7	0	Yes	No

Data Validation Outliers Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 07081119

Comparison: All Historical Data

Report Date: 1/3/2008

Site Code	Location Code	Sample Date	Analyte	Result	Current Qualifiers		Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count		Normally Distributed	Statistical Outlier
					Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	1092	09/10/2007	Nitrate + Nitrite as Nitrogen	890			1900			1400			7	0	Yes	Yes
SHP02	1093	09/10/2007	Chloride	520			791			590			12	0	Yes	Yes
SHP02	1093	09/10/2007	Magnesium	1400			2600			1900			5	0	Yes	No
SHP02	1093	09/10/2007	Manganese	28			7.4			0.46			5	0	Yes	Yes
SHP02	1093	09/10/2007	Selenium	0.38			1.9			0.47			5	0	Yes	No
SHP02	1093	09/10/2007	Sodium	1400			2900			1600			5	0	No	No
SHP02	1093	09/10/2007	Strontium	10			17			14			5	0	Yes	No
SHP02	1093	09/10/2007	Uranium	0.063			0.1			0.066			15	0	Yes	No

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

STATISTICAL TESTS:

The distribution of the data is tested for normality using the Studentized Range Test

Outliers are identified using Dixon's Test when there are 25 or fewer data points.

Outliers are identified using Rosner's Test when there are 26 or more data points.

See Data Quality Assessment: Statistical Methods for Practitioners, EPA QC/G-9S, February 2006.

Anomalous Data Review Checksheet

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Anomalous Data Review Checksheet

Site: Shiprock, NM, Disposal Site

Sampling Data: Groundwater and Surface Water

Reviewer: Gretchen Baer
Name (print)

Gretchen R Baer 1/18/08
Signature Date

Site Hydrologist: David Miller
Name (print)

David Miller 1/3/08
Signature Date

Date of Review: December 27, 2007

Loc. No.	Analyte	Type of Anomaly	Disposition
0817 SHP02	Ammonia Total as N	Low	Compare to future results
0818 SHP02	Ammonia Total as N	Low	Compare to future results
0856 SHP01	Calcium	Low	First data point in >5yrs Compare to future results
0603 SHP02	Calcium	High	First data point in >5yrs Compare to future results
0726 SHP02	Calcium	Low	First data point in >5yrs Compare to future results
0816 SHP02	Calcium	Low	First data point in >5yrs Compare to future results
0837 SHP02	Calcium	High	First data point in >5yrs Compare to future results
1057 SHP02	Calcium	High	May be trending upward Compare to future results
1089 SHP01	Chloride	Low	May be trending down Compare to future results
0726 SHP02	Chloride	High	Compare to future results
0837 SHP02	Chloride	High	First data point in >5yrs Compare to future results
0843 SHP02	Chloride	High	First data point in >5yrs Compare to future results
0844 SHP02	Chloride	High	First data point in >5yrs Compare to future results
0848 SHP02	Chloride	High	First data point in >5yrs Compare to future results
1093 SHP02	Chloride	Low	May be trending down Compare to future results
0856 SHP01	Magnesium	Low	First data point in >5yrs Compare to future results
0726 SHP02	Magnesium	Low	First data point in >5yrs Compare to future results
0844 SHP02	Magnesium	High	First data point in >5yrs Compare to future results
1071 SHP02	Magnesium	High	Compare to future results
0610 SHP01	Manganese	Low	Compare to future results
0855 SHP01	Manganese	Low	First data point in >5yrs Compare to future results

Loc. No.		Analyte	Type of Anomaly	Disposition
0725	SHP02	Manganese	High	First data point in >5yrs Compare to future results
0786	SHP02	Manganese	High	Compare to future results
0832	SHP02	Manganese	High	Compare to future results
0848	SHP02	Manganese	High	First data point in >5yrs Compare to future results
0934	SHP02	Manganese	High	Compare to future results
1093	SHP02	Manganese	High	May be trending upward Compare to future results
0618	SHP01	Nitrate + Nitrite as Nitrogen	High	May be trending upward Compare to future results
1092	SHP02	Nitrate + Nitrite as Nitrogen	Low	Compare to future results
0855	SHP01	Potassium	High	First data point in >5yrs Compare to future results
0856	SHP01	Potassium	High	First data point in >5yrs Compare to future results
0725	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0812	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0813	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0816	SHP02	Potassium	Low	First data point in >5yrs Compare to future results
0833	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0837	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0843	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0844	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0848	SHP02	Potassium	High	First data point in >5yrs Compare to future results
0855	SHP01	Selenium	Low	First data point in >5yrs Compare to future results
0837	SHP02	Selenium	High	First data point in >5yrs Compare to future results
0843	SHP02	Selenium	High	First data point in >5yrs Compare to future results
0856	SHP01	Sodium	Low	First data point in >5yrs Compare to future results
0812	SHP02	Sodium	Low	First data point in >5yrs Compare to future results
0816	SHP02	Sodium	Low	First data point in >5yrs Compare to future results
0837	SHP02	Sodium	High	First data point in >5yrs Compare to future results
0844	SHP02	Sodium	High	First data point in >5yrs Compare to future results
0848	SHP02	Sodium	High	First data point in >5yrs Compare to future results
0812	SHP02	Strontium	Low	First data point in >5yrs Compare to future results
0816	SHP02	Strontium	Low	First data point in >5yrs Compare to future results

Loc. No.		Analyte	Type of Anomaly	Disposition
0819	SHP02	Strontium	Low	First data point in >5yrs Compare to future results
0844	SHP02	Strontium	High	First data point in >5yrs Compare to future results
0848	SHP02	Strontium	High	First data point in >5yrs Compare to future results
0853	SHP01	Sulfate	Low	First data point in >5yrs Compare to future results
0816	SHP02	Sulfate	Low	First data point in >5yrs Compare to future results
0844	SHP02	Sulfate	High	First data point in >5yrs Compare to future results
0848	SHP02	Sulfate	High	First data point in >5yrs Compare to future results
0734	SHP01	Total Dissolved Solids	Low	Compare to future results
0853	SHP01	Total Dissolved Solids	Low	First data point in >5yrs Compare to future results
0816	SHP02	Total Dissolved Solids	Low	First data point in >5yrs Compare to future results
0844	SHP02	Total Dissolved Solids	High	First data point in >5yrs Compare to future results
0848	SHP02	Total Dissolved Solids	High	First data point in >5yrs Compare to future results
0856	SHP01	Uranium	Low	First data point in >5yrs Compare to future results
0833	SHP02	Uranium	High	First data point in >5yrs Compare to future results
0844	SHP02	Uranium	High	First data point in >5yrs Compare to future results

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Attachment 2
Data Presentation

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**Groundwater Quality Data
Floodplain Locations**

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Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0608 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
						Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	10 - 15	554		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	10 - 15	200		F	#	20	
Calcium	mg/L	09/11/2007	0001	10 - 15	430		F	#	.016	
Chloride	mg/L	09/11/2007	0001	10 - 15	400		F	#	40	
Dissolved Oxygen	mg/L	09/11/2007	N001	10 - 15	0.38		F	#		
Magnesium	mg/L	09/11/2007	0001	10 - 15	1400		F	#	.045	
Manganese	mg/L	09/11/2007	0001	10 - 15	3.9		F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	10 - 15	450		F	#	5	
Oxidation Reduction Potential	mV	09/11/2007	N001	10 - 15	208		F	#		
pH	s.u.	09/11/2007	N001	10 - 15	6.95		F	#		
Potassium	mg/L	09/11/2007	0001	10 - 15	140		F	#	.22	
Selenium	mg/L	09/11/2007	0001	10 - 15	0.0059		F	#	.000097	
Sodium	mg/L	09/11/2007	0001	10 - 15	2200		F	#	.023	
Specific Conductance	umhos/cm	09/11/2007	N001	10 - 15	16452		F	#		
Strontium	mg/L	09/11/2007	0001	10 - 15	12		F	#	.00032	
Sulfate	mg/L	09/11/2007	0001	10 - 15	11000		F	#	100	
Temperature	C	09/11/2007	N001	10 - 15	21.67		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	10 - 15	19000		F	#	200	
Turbidity	NTU	09/11/2007	N001	10 - 15	9.43		F	#		
Uranium	mg/L	09/11/2007	0001	10 - 15	1.8		F	#	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0610 WELL SE part of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	4 - 9	476		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	4 - 9	15		FQ	#	2	
Calcium	mg/L	09/11/2007	0001	4 - 9	480		FQ	#	.016	
Chloride	mg/L	09/11/2007	0001	4 - 9	410		FQ	#	40	
Dissolved Oxygen	mg/L	09/11/2007	N001	4 - 9	1.24		FQ	#		
Magnesium	mg/L	09/11/2007	0001	4 - 9	2100		FQ	#	.045	
Manganese	mg/L	09/11/2007	0001	4 - 9	1.2		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	4 - 9	780		FQ	#	5	
Oxidation Reduction Potential	mV	09/11/2007	N001	4 - 9	116		FQ	#		
pH	s.u.	09/11/2007	N001	4 - 9	7.04		FQ	#		
Potassium	mg/L	09/11/2007	0001	4 - 9	180		FQ	#	.22	
Selenium	mg/L	09/11/2007	0001	4 - 9	0.026		FQ	#	.00049	
Sodium	mg/L	09/11/2007	0001	4 - 9	2100		FQ	#	.023	
Specific Conductance	umhos/cm	09/11/2007	N001	4 - 9	17900		FQ	#		
Strontium	mg/L	09/11/2007	0001	4 - 9	10		FQ	#	.00032	
Sulfate	mg/L	09/11/2007	0001	4 - 9	11000		FQ	#	100	
Temperature	C	09/11/2007	N001	4 - 9	28.12		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	4 - 9	21000		FQ	#	1000	
Turbidity	NTU	09/11/2007	N001	4 - 9	16.6		FQ	#		
Uranium	mg/L	09/11/2007	0001	4 - 9	2.1		FQ	#	.00059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0612 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	5	-	10		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	5	-	10		F	#	.1	
Calcium	mg/L	09/11/2007	0001	5	-	10		F	#	.0016	
Chloride	mg/L	09/11/2007	0001	5	-	10		F	#	2	
Dissolved Oxygen	mg/L	09/11/2007	N001	5	-	10		F	#		
Magnesium	mg/L	09/11/2007	0001	5	-	10		F	#	.0045	
Manganese	mg/L	09/11/2007	0001	5	-	10		F	#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	5	-	10		U	F	#	.01
Oxidation Reduction Potential	mV	09/11/2007	N001	5	-	10		F	#		
pH	s.u.	09/11/2007	N001	5	-	10		F	#		
Potassium	mg/L	09/11/2007	0001	5	-	10		EN	F	#	.022
Selenium	mg/L	09/11/2007	0001	5	-	10		F	#	.000049	
Sodium	mg/L	09/11/2007	0001	5	-	10		F	#	.0023	
Specific Conductance	umhos/cm	09/11/2007	N001	5	-	10		F	#		
Strontium	mg/L	09/11/2007	0001	5	-	10		F	#	.000032	
Sulfate	mg/L	09/11/2007	0001	5	-	10		F	#	5	
Temperature	C	09/11/2007	N001	5	-	10		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	5	-	10		F	#	20	
Turbidity	NTU	09/11/2007	N001	5	-	10		F	#		
Uranium	mg/L	09/11/2007	0001	5	-	10		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0614 WELL SE part of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	10 - 15	732		F #		
Ammonia Total as N	mg/L	09/11/2007	0001	10 - 15	37		F #	5	
Calcium	mg/L	09/11/2007	0001	10 - 15	450		F #	.016	
Chloride	mg/L	09/11/2007	0001	10 - 15	570		F #	40	
Dissolved Oxygen	mg/L	09/11/2007	N001	10 - 15	0.92		F #		
Magnesium	mg/L	09/11/2007	0001	10 - 15	2600		F #	.045	
Manganese	mg/L	09/11/2007	0001	10 - 15	3.9		F #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	10 - 15	820		F #	5	
Oxidation Reduction Potential	mV	09/11/2007	N001	10 - 15	74		F #		
pH	s.u.	09/11/2007	N001	10 - 15	6.8		F #		
Potassium	mg/L	09/11/2007	0001	10 - 15	190		F #	.22	
Selenium	mg/L	09/11/2007	0001	10 - 15	0.059		F #	.00049	
Sodium	mg/L	09/11/2007	0001	10 - 15	2700		F #	.11	
Specific Conductance	umhos/cm	09/11/2007	N001	10 - 15	21714		F #		
Strontium	mg/L	09/11/2007	0001	10 - 15	13		F #	.00032	
Sulfate	mg/L	09/11/2007	0001	10 - 15	15000		F #	100	
Temperature	C	09/11/2007	N001	10 - 15	20.47		F #		
Total Dissolved Solids	mg/L	09/11/2007	0001	10 - 15	28000		F #	400	
Turbidity	NTU	09/11/2007	N001	10 - 15	3		F #		
Uranium	mg/L	09/11/2007	0001	10 - 15	2.8		F #	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0618 WELL Center of floodplain, well nest, just N of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	11	-	16	957		F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	11	-	16	52		F	#	10	
Calcium	mg/L	09/12/2007	0001	11	-	16	430		F	#	.016	
Chloride	mg/L	09/12/2007	0001	11	-	16	650		F	#	40	
Dissolved Oxygen	mg/L	09/12/2007	N001	11	-	16	1.29		F	#		
Magnesium	mg/L	09/12/2007	0001	11	-	16	1800		F	#	.045	
Manganese	mg/L	09/12/2007	0001	11	-	16	8.5		F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	11	-	16	360		F	#	2	
Oxidation Reduction Potential	mV	09/12/2007	N001	11	-	16	154		F	#		
pH	s.u.	09/12/2007	N001	11	-	16	6.78		F	#		
Potassium	mg/L	09/12/2007	0001	11	-	16	120		F	#	.22	
Selenium	mg/L	09/12/2007	0001	11	-	16	0.24		F	#	.0049	
Sodium	mg/L	09/12/2007	0001	11	-	16	2900		F	#	.11	
Specific Conductance	umhos/cm	09/12/2007	N001	11	-	16	19129		F	#		
Strontium	mg/L	09/12/2007	0001	11	-	16	9.5		F	#	.00032	
Sulfate	mg/L	09/12/2007	0001	11	-	16	13000		F	#	100	
Temperature	C	09/12/2007	N001	11	-	16	20.95		F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	11	-	16	23000		F	#	400	
Turbidity	NTU	09/12/2007	N001	11	-	16	2.04		F	#		
Uranium	mg/L	09/12/2007	0001	11	-	16	2.5		F	#	.00059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0619 WELL Center of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers		Detection Limit	Uncertainty
								Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	8	-	13	652		F #		
Ammonia Total as N	mg/L	09/12/2007	0001	8	-	13	0.85		F #	.1	
Calcium	mg/L	09/12/2007	0001	8	-	13	340		F #	.0078	
Chloride	mg/L	09/12/2007	0001	8	-	13	140		F #	20	
Dissolved Oxygen	mg/L	09/12/2007	N001	8	-	13	0.83		F #		
Magnesium	mg/L	09/12/2007	0001	8	-	13	230		F #	.023	
Manganese	mg/L	09/12/2007	0001	8	-	13	1.7		F #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	8	-	13	0.05	U	F #	.05	
Oxidation Reduction Potential	mV	09/12/2007	N001	8	-	13	-111		F #		
pH	s.u.	09/12/2007	N001	8	-	13	6.99		F #		
Potassium	mg/L	09/12/2007	0001	8	-	13	44		F #	.11	
Selenium	mg/L	09/12/2007	0001	8	-	13	0.00043		F #	.000049	
Sodium	mg/L	09/12/2007	0001	8	-	13	1100		F #	.11	
Specific Conductance	umhos/cm	09/12/2007	N001	8	-	13	7197		F #		
Strontium	mg/L	09/12/2007	0001	8	-	13	6.1		F #	.00016	
Sulfate	mg/L	09/12/2007	0001	8	-	13	4800		F #	50	
Temperature	C	09/12/2007	N001	8	-	13	20.19		F #		
Total Dissolved Solids	mg/L	09/12/2007	0001	8	-	13	7900		F #	200	
Turbidity	NTU	09/12/2007	N001	8	-	13	0.71		F #		
Uranium	mg/L	09/12/2007	0001	8	-	13	0.27		F #	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0622 WELL Center of floodplain, well nest, N of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	5	-	10		F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	5	-	10	U	F	#	.1	
Calcium	mg/L	09/12/2007	0001	5	-	10		F	#	.0078	
Chloride	mg/L	09/12/2007	0001	5	-	10		F	#	20	
Dissolved Oxygen	mg/L	09/12/2007	N001	5	-	10		F	#		
Magnesium	mg/L	09/12/2007	0001	5	-	10		F	#	.023	
Manganese	mg/L	09/12/2007	0001	5	-	10		F	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	5	-	10		F	#	.05	
Oxidation Reduction Potential	mV	09/12/2007	N001	5	-	10		F	#		
pH	s.u.	09/12/2007	N001	5	-	10		F	#		
Potassium	mg/L	09/12/2007	0001	5	-	10		F	#	.11	
Selenium	mg/L	09/12/2007	0001	5	-	10		F	#	.0049	
Sodium	mg/L	09/12/2007	0001	5	-	10		F	#	.11	
Specific Conductance	umhos/cm	09/12/2007	N001	5	-	10		F	#		
Strontium	mg/L	09/12/2007	0001	5	-	10		F	#	.00016	
Sulfate	mg/L	09/12/2007	0001	5	-	10		F	#	50	
Temperature	C	09/12/2007	N001	5	-	10		F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	5	-	10		F	#	200	
Turbidity	NTU	09/12/2007	N001	5	-	10		F	#		
Uranium	mg/L	09/12/2007	0001	5	-	10		F	#	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0626 WELL Center of floodplain, just NE of wetland

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	9.5 - 14.5	439		F #		
Ammonia Total as N	mg/L	09/13/2007	0001	9.5 - 14.5	0.18		F #	.1	
Calcium	mg/L	09/13/2007	0001	9.5 - 14.5	230		F #	.0078	
Chloride	mg/L	09/13/2007	0001	9.5 - 14.5	93		F #	10	
Dissolved Oxygen	mg/L	09/13/2007	N001	9.5 - 14.5	1.2		F #		
Magnesium	mg/L	09/13/2007	0001	9.5 - 14.5	54		F #	.023	
Manganese	mg/L	09/13/2007	0001	9.5 - 14.5	3.3		F #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	9.5 - 14.5	0.05	U	F #	.05	
Oxidation Reduction Potential	mV	09/13/2007	N001	9.5 - 14.5	82		F #		
pH	s.u.	09/13/2007	N001	9.5 - 14.5	7.09		F #		
Potassium	mg/L	09/13/2007	0001	9.5 - 14.5	18		F #	.11	
Selenium	mg/L	09/13/2007	0001	9.5 - 14.5	0.00046		F #	.000049	
Sodium	mg/L	09/13/2007	0001	9.5 - 14.5	1100		F #	.011	
Specific Conductance	umhos/cm	09/13/2007	N001	9.5 - 14.5	6096		F #		
Strontium	mg/L	09/13/2007	0001	9.5 - 14.5	10		F #	.00016	
Sulfate	mg/L	09/13/2007	0001	9.5 - 14.5	3200		F #	25	
Temperature	C	09/13/2007	N001	9.5 - 14.5	18.12		F #		
Total Dissolved Solids	mg/L	09/13/2007	0001	9.5 - 14.5	5200		F #	80	
Turbidity	NTU	09/13/2007	N001	9.5 - 14.5	1.22		F #		
Uranium	mg/L	09/13/2007	0001	9.5 - 14.5	0.052		F #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0628 WELL Center of floodplain, well nest, just N of wetland

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty	
							Lab	Data	QA			
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	6	-	10	354		F	#		
Ammonia Total as N	mg/L	09/13/2007	0001	6	-	10	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2007	0001	6	-	10	280		F	#	.0078	
Chloride	mg/L	09/13/2007	0001	6	-	10	99		F	#	10	
Dissolved Oxygen	mg/L	09/13/2007	N001	6	-	10	1.09		F	#		
Magnesium	mg/L	09/13/2007	0001	6	-	10	46		F	#	.023	
Manganese	mg/L	09/13/2007	0001	6	-	10	5.1		F	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	6	-	10	0.05	U	F	#	.05	
Oxidation Reduction Potential	mV	09/13/2007	N001	6	-	10	-29		F	#		
pH	s.u.	09/13/2007	N001	6	-	10	7.25		F	#		
Potassium	mg/L	09/13/2007	0001	6	-	10	18		F	#	.11	
Selenium	mg/L	09/13/2007	0001	6	-	10	0.00029		F	#	.000049	
Sodium	mg/L	09/13/2007	0001	6	-	10	1200		F	#	.011	
Specific Conductance	umhos/cm	09/13/2007	N001	6	-	10	6111		F	#		
Strontium	mg/L	09/13/2007	0001	6	-	10	15		F	#	.00016	
Sulfate	mg/L	09/13/2007	0001	6	-	10	3500		F	#	25	
Temperature	C	09/13/2007	N001	6	-	10	18.08		F	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	6	-	10	5600		F	#	80	
Turbidity	NTU	09/13/2007	N001	6	-	10	4.18		F	#		
Uranium	mg/L	09/13/2007	0001	6	-	10	0.045		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0630 WELL Just N of mouth of Bob Lee Wash, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	5 - 10	246		F	#		
Ammonia Total as N	mg/L	09/13/2007	0001	5 - 10	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2007	0001	5 - 10	210		F	#	.0031	
Chloride	mg/L	09/13/2007	0001	5 - 10	69		F	#	10	
Dissolved Oxygen	mg/L	09/13/2007	N001	5 - 10	0.95		F	#		
Magnesium	mg/L	09/13/2007	0001	5 - 10	37		F	#	.009	
Manganese	mg/L	09/13/2007	0001	5 - 10	0.35		F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	5 - 10	5.6		F	#	.05	
Oxidation Reduction Potential	mV	09/13/2007	N001	5 - 10	63		F	#		
pH	s.u.	09/13/2007	N001	5 - 10	7.43		F	#		
Potassium	mg/L	09/13/2007	0001	5 - 10	16		F	#	.045	
Selenium	mg/L	09/13/2007	0001	5 - 10	0.047		F	#	.00049	
Sodium	mg/L	09/13/2007	0001	5 - 10	720		F	#	.11	
Specific Conductance	umhos/cm	09/13/2007	N001	5 - 10	4553		F	#		
Strontium	mg/L	09/13/2007	0001	5 - 10	11		F	#	.000065	
Sulfate	mg/L	09/13/2007	0001	5 - 10	2500		F	#	25	
Temperature	C	09/13/2007	N001	5 - 10	18.73		F	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	5 - 10	3900		F	#	80	
Turbidity	NTU	09/13/2007	N001	5 - 10	5.91		F	#		
Uranium	mg/L	09/13/2007	0001	5 - 10	0.042		F	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0734 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Ammonia Total as N	mg/L	09/13/2007	0001	2	-	4	0.1	U	FQ	#	.1	
Calcium	mg/L	09/13/2007	0001	2	-	4	180		FQ	#	.0031	
Chloride	mg/L	09/13/2007	0001	2	-	4	31		FQ	#	10	
Magnesium	mg/L	09/13/2007	0001	2	-	4	150		FQ	#	.009	
Manganese	mg/L	09/13/2007	0001	2	-	4	0.51		FQ	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	2	-	4	0.05	U	FQ	#	.05	
Potassium	mg/L	09/13/2007	0001	2	-	4	8.1		FQ	#	.045	
Selenium	mg/L	09/13/2007	0001	2	-	4	0.0075		FQ	#	.000049	
Sodium	mg/L	09/13/2007	0001	2	-	4	500		FQ	#	.11	
Strontium	mg/L	09/13/2007	0001	2	-	4	3.4		FQ	#	.000065	
Sulfate	mg/L	09/13/2007	0001	2	-	4	2200		FQ	#	25	
Total Dissolved Solids	mg/L	09/13/2007	0001	2	-	4	3600		FQ	#	40	
Uranium	mg/L	09/13/2007	0001	2	-	4	0.073		FQ	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0735 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers		Detection Limit	Uncertainty
								Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	3	-	8	609	F	#		
Ammonia Total as N	mg/L	09/10/2007	0001	3	-	8	15	F	#	.5	
Calcium	mg/L	09/10/2007	0001	3	-	8	380	F	#	.0078	
Chloride	mg/L	09/10/2007	0001	3	-	8	310	F	#	20	
Dissolved Oxygen	mg/L	09/10/2007	N001	3	-	8	0.94	F	#		
Magnesium	mg/L	09/10/2007	0001	3	-	8	700	F	#	.023	
Manganese	mg/L	09/10/2007	0001	3	-	8	2.1	F	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	3	-	8	330	F	#	5	
Oxidation Reduction Potential	mV	09/10/2007	N001	3	-	8	213	F	#		
pH	s.u.	09/10/2007	N001	3	-	8	6.9	F	#		
Potassium	mg/L	09/10/2007	0001	3	-	8	52	F	#	.11	
Selenium	mg/L	09/10/2007	0001	3	-	8	0.024	F	#	.00024	
Sodium	mg/L	09/10/2007	0001	3	-	8	1700	F	#	.11	
Specific Conductance	umhos/cm	09/10/2007	N001	3	-	8	11796	F	#		
Strontium	mg/L	09/10/2007	0001	3	-	8	7.5	F	#	.00016	
Sulfate	mg/L	09/10/2007	0001	3	-	8	6300	F	#	50	
Temperature	C	09/10/2007	N001	3	-	8	19.07	F	#		
Total Dissolved Solids	mg/L	09/10/2007	0001	3	-	8	13000	FJ	#	200	
Turbidity	NTU	09/10/2007	N001	3	-	8	5.14	F	#		
Uranium	mg/L	09/10/2007	0001	3	-	8	0.19	F	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0784 WELL Island area NW of US Hwy 666 bridge. Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	4.5	-	7	190		F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	4.5	-	7	0.1	U	F	#	.1	
Calcium	mg/L	09/12/2007	0001	4.5	-	7	95		F	#	.0016	
Chloride	mg/L	09/12/2007	0001	4.5	-	7	17		F	#	2	
Magnesium	mg/L	09/12/2007	0001	4.5	-	7	25		F	#	.0045	
Manganese	mg/L	09/12/2007	0001	4.5	-	7	1.2		F	#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	4.5	-	7	0.05	U	F	#	.05	
Oxidation Reduction Potential	mV	09/12/2007	N001	4.5	-	7	-158		F	#		
pH	s.u.	09/12/2007	N001	4.5	-	7	7.47		F	#		
Potassium	mg/L	09/12/2007	0001	4.5	-	7	4		F	#	.022	
Selenium	mg/L	09/12/2007	0001	4.5	-	7	0.000049	U	F	#	.000049	
Sodium	mg/L	09/12/2007	0001	4.5	-	7	78		F	#	.0023	
Specific Conductance	umhos /cm	09/12/2007	N001	4.5	-	7	961		F	#		
Strontium	mg/L	09/12/2007	0001	4.5	-	7	0.94		F	#	.000032	
Sulfate	mg/L	09/12/2007	0001	4.5	-	7	280		F	#	5	
Temperature	C	09/12/2007	N001	4.5	-	7	23.39		F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	4.5	-	7	640		F	#	20	
Turbidity	NTU	09/12/2007	N001	4.5	-	7	1.52		F	#		
Uranium	mg/L	09/12/2007	0001	4.5	-	7	0.0025		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0792 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	6 - 8	1530		F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	6 - 8	0.1	U	F	#	.1	
Calcium	mg/L	09/12/2007	0001	6 - 8	440		F	#	.016	
Chloride	mg/L	09/12/2007	0001	6 - 8	1100		F	#	40	
Dissolved Oxygen	mg/L	09/12/2007	N001	6 - 8	0.95		F	#		
Magnesium	mg/L	09/12/2007	0001	6 - 8	2500		F	#	.045	
Manganese	mg/L	09/12/2007	0001	6 - 8	1.1		F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	6 - 8	0.11		F	#	.01	
Oxidation Reduction Potential	mV	09/12/2007	N001	6 - 8	197		F	#		
pH	s.u.	09/12/2007	N001	6 - 8	7.37		F	#		
Potassium	mg/L	09/12/2007	0001	6 - 8	250		F	#	.22	
Selenium	mg/L	09/12/2007	0001	6 - 8	1.3		F	#	.049	
Sodium	mg/L	09/12/2007	0001	6 - 8	5800		F	#	.23	
Specific Conductance	umhos/cm	09/12/2007	N001	6 - 8	31078		F	#		
Strontium	mg/L	09/12/2007	0001	6 - 8	21		F	#	.00032	
Sulfate	mg/L	09/12/2007	0001	6 - 8	26000		F	#	250	
Temperature	C	09/12/2007	N001	6 - 8	23.49		F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	6 - 8	40000		F	#	1000	
Turbidity	NTU	09/12/2007	N001	6 - 8	5.89		F	#		
Uranium	mg/L	09/12/2007	0001	6 - 8	2.7		F	#	.00059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0793 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	5.2	- 7.2	663		F #		
Ammonia Total as N	mg/L	09/12/2007	0001	5.2	- 7.2	17		F #	1	
Calcium	mg/L	09/12/2007	0001	5.2	- 7.2	450		F #	.0078	
Chloride	mg/L	09/12/2007	0001	5.2	- 7.2	280		F #	20	
Dissolved Oxygen	mg/L	09/12/2007	N001	5.2	- 7.2	0.95		F #		
Magnesium	mg/L	09/12/2007	0001	5.2	- 7.2	1000		F #	.023	
Manganese	mg/L	09/12/2007	0001	5.2	- 7.2	1.6		F #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	5.2	- 7.2	140		F #	2	
Oxidation Reduction Potential	mV	09/12/2007	N001	5.2	- 7.2	133		F #		
pH	s.u.	09/12/2007	N001	5.2	- 7.2	7.02		F #		
Potassium	mg/L	09/12/2007	0001	5.2	- 7.2	96		F #	.11	
Selenium	mg/L	09/12/2007	0001	5.2	- 7.2	0.37		F #	.0049	
Sodium	mg/L	09/12/2007	0001	5.2	- 7.2	1200		F #	.11	
Specific Conductance	umhos/cm	09/12/2007	N001	5.2	- 7.2	11594		F #		
Strontium	mg/L	09/12/2007	0001	5.2	- 7.2	6.7		F #	.00016	
Sulfate	mg/L	09/12/2007	0001	5.2	- 7.2	7300		F #	50	
Temperature	C	09/12/2007	N001	5.2	- 7.2	21.79		F #		
Total Dissolved Solids	mg/L	09/12/2007	0001	5.2	- 7.2	13000		F #	400	
Turbidity	NTU	09/12/2007	N001	5.2	- 7.2	1.33		F #		
Uranium	mg/L	09/12/2007	0001	5.2	- 7.2	1.7		F #	.00059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0797 WELL

Parameter	Units	Sample		Depth Range			Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	7.3	-	9.3	600		FQ	#	
Ammonia Total as N	mg/L	09/12/2007	0001	7.3	-	9.3	0.1	U	FQ	#	.1
Calcium	mg/L	09/12/2007	0001	7.3	-	9.3	460		FQ	#	.0078
Chloride	mg/L	09/12/2007	0001	7.3	-	9.3	210		FQ	#	20
Magnesium	mg/L	09/12/2007	0001	7.3	-	9.3	110		FQ	#	.023
Manganese	mg/L	09/12/2007	0001	7.3	-	9.3	2		FQ	#	.00075
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	7.3	-	9.3	0.036		FQ	#	.01
Oxidation Reduction Potential	mV	09/12/2007	N001	7.3	-	9.3	122		FQ	#	
pH	s.u.	09/12/2007	N001	7.3	-	9.3	7.17		FQ	#	
Potassium	mg/L	09/12/2007	0001	7.3	-	9.3	11		FQ	#	.11
Selenium	mg/L	09/12/2007	0001	7.3	-	9.3	0.0002		FQ	#	.000049
Sodium	mg/L	09/12/2007	0001	7.3	-	9.3	1300		FQ	#	.11
Specific Conductance	umhos/cm	09/12/2007	N001	7.3	-	9.3	8320		FQ	#	
Strontium	mg/L	09/12/2007	0001	7.3	-	9.3	6.9		FQ	#	.00016
Sulfate	mg/L	09/12/2007	0001	7.3	-	9.3	4300		FQ	#	50
Temperature	C	09/12/2007	N001	7.3	-	9.3	22.78		FQ	#	
Total Dissolved Solids	mg/L	09/12/2007	0001	7.3	-	9.3	7300		FQ	#	400
Turbidity	NTU	09/12/2007	N001	7.3	-	9.3	3.94		FQ	#	
Uranium	mg/L	09/12/2007	0001	7.3	-	9.3	0.024		FQ	#	.00003

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0798 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	7.1	-	9.1	1428		F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	7.1	-	9.1	1.1		F	#	1	
Calcium	mg/L	09/12/2007	0001	7.1	-	9.1	430		F	#	.016	
Chloride	mg/L	09/12/2007	0001	7.1	-	9.1	770		F	#	40	
Dissolved Oxygen	mg/L	09/12/2007	N001	7.1	-	9.1	0.96		F	#		
Magnesium	mg/L	09/12/2007	0001	7.1	-	9.1	1600		F	#	.045	
Manganese	mg/L	09/12/2007	0001	7.1	-	9.1	3.6		F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	7.1	-	9.1	5.4		F	#	.1	
Oxidation Reduction Potential	mV	09/12/2007	N001	7.1	-	9.1	60		F	#		
pH	s.u.	09/12/2007	N001	7.1	-	9.1	7.2		F	#		
Potassium	mg/L	09/12/2007	0001	7.1	-	9.1	180		F	#	.22	
Selenium	mg/L	09/12/2007	0001	7.1	-	9.1	0.52		F	#	.0049	
Sodium	mg/L	09/12/2007	0001	7.1	-	9.1	4600		F	#	.23	
Specific Conductance	umhos/cm	09/12/2007	N001	7.1	-	9.1	24290		F	#		
Strontium	mg/L	09/12/2007	0001	7.1	-	9.1	13		F	#	.00032	
Sulfate	mg/L	09/12/2007	0001	7.1	-	9.1	18000		F	#	100	
Temperature	C	09/12/2007	N001	7.1	-	9.1	20.83		F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	7.1	-	9.1	30000		F	#	1000	
Turbidity	NTU	09/12/2007	N001	7.1	-	9.1	2.85		F	#		
Uranium	mg/L	09/12/2007	0001	7.1	-	9.1	2		F	#	.00059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0850 WELL Background area 1 mi E of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	5.6 - 15.4	348		F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	5.6 - 15.4	0.1	U	F	#	.1	
Calcium	mg/L	09/12/2007	0001	5.6 - 15.4	170		F	#	.0031	
Chloride	mg/L	09/12/2007	0001	5.6 - 15.4	120		F	#	10	
Magnesium	mg/L	09/12/2007	0001	5.6 - 15.4	38		F	#	.009	
Manganese	mg/L	09/12/2007	0001	5.6 - 15.4	0.6		F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	5.6 - 15.4	0.1	U	F	#	.1	
Oxidation Reduction Potential	mV	09/12/2007	N001	5.6 - 15.4	-112		F	#		
pH	s.u.	09/12/2007	N001	5.6 - 15.4	7.5		F	#		
Potassium	mg/L	09/12/2007	0001	5.6 - 15.4	7.6		F	#	.045	
Selenium	mg/L	09/12/2007	0001	5.6 - 15.4	0.00019		F	#	.000049	
Sodium	mg/L	09/12/2007	0001	5.6 - 15.4	660		F	#	.11	
Specific Conductance	umhos/cm	09/12/2007	N001	5.6 - 15.4	4336		F	#		
Strontium	mg/L	09/12/2007	0001	5.6 - 15.4	2.4		F	#	.000065	
Sulfate	mg/L	09/12/2007	0001	5.6 - 15.4	1900		F	#	25	
Temperature	C	09/12/2007	N001	5.6 - 15.4	19.86		F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	5.6 - 15.4	3300		F	#	200	
Turbidity	NTU	09/12/2007	N001	5.6 - 15.4	9.37		F	#		
Uranium	mg/L	09/12/2007	0001	5.6 - 15.4	0.071		F	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0853 WELL S of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
						Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	10 - 15	219		F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	10 - 15	20		F	#	1	
Calcium	mg/L	09/12/2007	0001	10 - 15	120		F	#	.0016	
Chloride	mg/L	09/12/2007	0001	10 - 15	19		F	#	4	
Dissolved Oxygen	mg/L	09/12/2007	N001	10 - 15	0.83		F	#		
Magnesium	mg/L	09/12/2007	0001	10 - 15	38		F	#	.0045	
Manganese	mg/L	09/12/2007	0001	10 - 15	0.55		F	#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	10 - 15	0.01	U	F	#	.01	
Oxidation Reduction Potential	mV	09/12/2007	N001	10 - 15	-41		F	#		
pH	s.u.	09/12/2007	N001	10 - 15	7.26		F	#		
Potassium	mg/L	09/12/2007	0001	10 - 15	19	EN	F	#	.022	
Selenium	mg/L	09/12/2007	0001	10 - 15	0.00011		F	#	.000049	
Sodium	mg/L	09/12/2007	0001	10 - 15	110	E	FJ	#	.0023	
Specific Conductance	umhos/cm	09/12/2007	N001	10 - 15	1409		F	#		
Strontium	mg/L	09/12/2007	0001	10 - 15	1.3	N	F	#	.000032	
Sulfate	mg/L	09/12/2007	0001	10 - 15	520		F	#	10	
Temperature	C	09/12/2007	N001	10 - 15	22.9		F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	10 - 15	980		F	#	20	
Turbidity	NTU	09/12/2007	N001	10 - 15	6.53		F	#		
Uranium	mg/L	09/12/2007	0001	10 - 15	0.052		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0855 WELL NW part of floodplain

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	4.9 - 14.9	307		F	#		
Ammonia Total as N	mg/L	09/13/2007	0001	4.9 - 14.9	0.1	U	F	#	.1	
Ammonia Total as N	mg/L	09/13/2007	0002	4.9 - 14.9	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2007	0001	4.9 - 14.9	290		F	#	.0031	
Calcium	mg/L	09/13/2007	0002	4.9 - 14.9	290		F	#	.0031	
Chloride	mg/L	09/13/2007	0001	4.9 - 14.9	82		F	#	10	
Chloride	mg/L	09/13/2007	0002	4.9 - 14.9	84		F	#	10	
Dissolved Oxygen	mg/L	09/13/2007	N001	4.9 - 14.9	0.88		F	#		
Magnesium	mg/L	09/13/2007	0001	4.9 - 14.9	64		F	#	.009	
Magnesium	mg/L	09/13/2007	0002	4.9 - 14.9	64		F	#	.009	
Manganese	mg/L	09/13/2007	0001	4.9 - 14.9	1.2		F	#	.0003	
Manganese	mg/L	09/13/2007	0002	4.9 - 14.9	1.2		F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	4.9 - 14.9	0.048		F	#	.01	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0002	4.9 - 14.9	0.049		F	#	.01	
Oxidation Reduction Potential	mV	09/13/2007	N001	4.9 - 14.9	207		F	#		
pH	s.u.	09/13/2007	N001	4.9 - 14.9	7.26		F	#		
Potassium	mg/L	09/13/2007	0001	4.9 - 14.9	21		F	#	.045	
Potassium	mg/L	09/13/2007	0002	4.9 - 14.9	21		F	#	.045	
Selenium	mg/L	09/13/2007	0001	4.9 - 14.9	0.02		F	#	.00024	
Selenium	mg/L	09/13/2007	0002	4.9 - 14.9	0.023		F	#	.000097	
Sodium	mg/L	09/13/2007	0001	4.9 - 14.9	950		F	#	.23	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0855 WELL NW part of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Sodium	mg/L	09/13/2007	0002	4.9	-	14.9		F #	.23	
Specific Conductance	umhos/cm	09/13/2007	N001	4.9	-	14.9		F #		
Strontium	mg/L	09/13/2007	0001	4.9	-	14.9		F #	.000065	
Strontium	mg/L	09/13/2007	0002	4.9	-	14.9		F #	.000065	
Sulfate	mg/L	09/13/2007	0001	4.9	-	14.9		F #	25	
Sulfate	mg/L	09/13/2007	0002	4.9	-	14.9		F #	25	
Temperature	C	09/13/2007	N001	4.9	-	14.9		F #		
Total Dissolved Solids	mg/L	09/13/2007	0001	4.9	-	14.9		F #	80	
Total Dissolved Solids	mg/L	09/13/2007	0002	4.9	-	14.9		F #	200	
Turbidity	NTU	09/13/2007	N001	4.9	-	14.9		F #		
Uranium	mg/L	09/13/2007	0001	4.9	-	14.9		F #	.0000059	
Uranium	mg/L	09/13/2007	0002	4.9	-	14.9		F #	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0856 WELL NW part of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	18.8	- 23.8	282		F #		
Ammonia Total as N	mg/L	09/13/2007	0001	18.8	- 23.8	0.1	U	F #	.1	
Calcium	mg/L	09/13/2007	0001	18.8	- 23.8	220		F #	.0031	
Chloride	mg/L	09/13/2007	0001	18.8	- 23.8	78		F #	10	
Dissolved Oxygen	mg/L	09/13/2007	N001	18.8	- 23.8	0.84		F #		
Magnesium	mg/L	09/13/2007	0001	18.8	- 23.8	67		F #	.009	
Manganese	mg/L	09/13/2007	0001	18.8	- 23.8	1.3		F #	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	18.8	- 23.8	0.028		F #	.01	
Oxidation Reduction Potential	mV	09/13/2007	N001	18.8	- 23.8	58		F #		
pH	s.u.	09/13/2007	N001	18.8	- 23.8	7.36		F #		
Potassium	mg/L	09/13/2007	0001	18.8	- 23.8	24		F #	.045	
Selenium	mg/L	09/13/2007	0001	18.8	- 23.8	0.0002		F #	.000049	
Sodium	mg/L	09/13/2007	0001	18.8	- 23.8	920		F #	.23	
Specific Conductance	umhos/cm	09/13/2007	N001	18.8	- 23.8	5482		F #		
Strontium	mg/L	09/13/2007	0001	18.8	- 23.8	4.9		F #	.000065	
Sulfate	mg/L	09/13/2007	0001	18.8	- 23.8	3100		F #	25	
Temperature	C	09/13/2007	N001	18.8	- 23.8	15.57		F #		
Total Dissolved Solids	mg/L	09/13/2007	0001	18.8	- 23.8	4900		F #	80	
Turbidity	NTU	09/13/2007	N001	18.8	- 23.8	2.16		F #		
Uranium	mg/L	09/13/2007	0001	18.8	- 23.8	0.076		F #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0857 WELL Near E end of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers		Detection Limit	Uncertainty
								Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	13.2	-	18.2	346	F	#		
Ammonia Total as N	mg/L	09/12/2007	0001	13.2	-	18.2	9.4	F	#	.2	
Calcium	mg/L	09/12/2007	0001	13.2	-	18.2	290	F	#	.0031	
Chloride	mg/L	09/12/2007	0001	13.2	-	18.2	110	F	#	10	
Dissolved Oxygen	mg/L	09/12/2007	N001	13.2	-	18.2	0.79	F	#		
Magnesium	mg/L	09/12/2007	0001	13.2	-	18.2	210	F	#	.009	
Manganese	mg/L	09/12/2007	0001	13.2	-	18.2	2.4	F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	13.2	-	18.2	1.9	F	#	.02	
Oxidation Reduction Potential	mV	09/12/2007	N001	13.2	-	18.2	123	F	#		
pH	s.u.	09/12/2007	N001	13.2	-	18.2	7.03	F	#		
Potassium	mg/L	09/12/2007	0001	13.2	-	18.2	32	F	#	.045	
Selenium	mg/L	09/12/2007	0001	13.2	-	18.2	0.0014	F	#	.000049	
Sodium	mg/L	09/12/2007	0001	13.2	-	18.2	370	F	#	.11	
Specific Conductance	umhos/cm	09/12/2007	N001	13.2	-	18.2	4395	F	#		
Strontium	mg/L	09/12/2007	0001	13.2	-	18.2	3.1	F	#	.000065	
Sulfate	mg/L	09/12/2007	0001	13.2	-	18.2	2400	F	#	25	
Temperature	C	09/12/2007	N001	13.2	-	18.2	18.88	F	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	13.2	-	18.2	4300	F	#	80	
Turbidity	NTU	09/12/2007	N001	13.2	-	18.2	4.45	F	#		
Uranium	mg/L	09/12/2007	0001	13.2	-	18.2	0.3	F	#	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1009 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
						Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	7.4 - 17.4	358		F #		
Ammonia Total as N	mg/L	09/12/2007	0001	7.4 - 17.4	27		F #	1	
Calcium	mg/L	09/12/2007	0001	7.4 - 17.4	480		F #	.0078	
Chloride	mg/L	09/12/2007	0001	7.4 - 17.4	120		F #	20	
Dissolved Oxygen	mg/L	09/12/2007	N001	7.4 - 17.4	1.09		F #		
Magnesium	mg/L	09/12/2007	0001	7.4 - 17.4	600		F #	.023	
Manganese	mg/L	09/12/2007	0001	7.4 - 17.4	3		F #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	7.4 - 17.4	130		F #	1	
Oxidation Reduction Potential	mV	09/12/2007	N001	7.4 - 17.4	194		F #		
pH	s.u.	09/12/2007	N001	7.4 - 17.4	6.87		F #		
Potassium	mg/L	09/12/2007	0001	7.4 - 17.4	51		F #	.11	
Selenium	mg/L	09/12/2007	0001	7.4 - 17.4	0.17		F #	.0024	
Sodium	mg/L	09/12/2007	0001	7.4 - 17.4	670		F #	.011	
Specific Conductance	umhos/cm	09/12/2007	N001	7.4 - 17.4	7189		F #		
Strontium	mg/L	09/12/2007	0001	7.4 - 17.4	5.3		F #	.00016	
Sulfate	mg/L	09/12/2007	0001	7.4 - 17.4	4400		F #	50	
Temperature	C	09/12/2007	N001	7.4 - 17.4	21.42		F #		
Total Dissolved Solids	mg/L	09/12/2007	0001	7.4 - 17.4	7700		F #	200	
Turbidity	NTU	09/12/2007	N001	7.4 - 17.4	2.21		F #		
Uranium	mg/L	09/12/2007	0001	7.4 - 17.4	0.58		F #	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1089 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	4.8	-	14.8			#		
Ammonia Total as N	mg/L	09/12/2007	0001	4.8	-	14.8			#	.1	
Ammonia Total as N	mg/L	09/12/2007	0002	4.8	-	14.8			#	.1	
Calcium	mg/L	09/12/2007	0001	4.8	-	14.8			#	.0078	
Calcium	mg/L	09/12/2007	0002	4.8	-	14.8			#	.0078	
Chloride	mg/L	09/12/2007	0001	4.8	-	14.8			#	20	
Chloride	mg/L	09/12/2007	0002	4.8	-	14.8			#	20	
Dissolved Oxygen	mg/L	09/12/2007	N001	4.8	-	14.8			#		
Magnesium	mg/L	09/12/2007	0001	4.8	-	14.8			#	.023	
Magnesium	mg/L	09/12/2007	0002	4.8	-	14.8			#	.023	
Manganese	mg/L	09/12/2007	0001	4.8	-	14.8			#	.00075	
Manganese	mg/L	09/12/2007	0002	4.8	-	14.8			#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	4.8	-	14.8			#	.2	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0002	4.8	-	14.8			#	.2	
Oxidation Reduction Potential	mV	09/12/2007	N001	4.8	-	14.8			#		
pH	s.u.	09/12/2007	N001	4.8	-	14.8			#		
Potassium	mg/L	09/12/2007	0001	4.8	-	14.8			#	.11	
Potassium	mg/L	09/12/2007	0002	4.8	-	14.8			#	.11	
Selenium	mg/L	09/12/2007	0001	4.8	-	14.8			#	.00024	
Selenium	mg/L	09/12/2007	0002	4.8	-	14.8			#	.000097	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1089 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Sodium	mg/L	09/12/2007	0001	4.8 - 14.8	2000		#	.23	
Sodium	mg/L	09/12/2007	0002	4.8 - 14.8	1900		#	.23	
Specific Conductance	umhos/cm	09/12/2007	N001	4.8 - 14.8	12230		#		
Strontium	mg/L	09/12/2007	0001	4.8 - 14.8	6.5		#	.00016	
Strontium	mg/L	09/12/2007	0002	4.8 - 14.8	6.4		#	.00016	
Sulfate	mg/L	09/12/2007	0001	4.8 - 14.8	8200		#	50	
Sulfate	mg/L	09/12/2007	0002	4.8 - 14.8	8200		#	50	
Temperature	C	09/12/2007	N001	4.8 - 14.8	23.5		#		
Total Dissolved Solids	mg/L	09/12/2007	0001	4.8 - 14.8	14000		#	200	
Total Dissolved Solids	mg/L	09/12/2007	0002	4.8 - 14.8	14000		#	200	
Turbidity	NTU	09/12/2007	N001	4.8 - 14.8	3.83		#		
Uranium	mg/L	09/12/2007	0001	4.8 - 14.8	0.9		#	.0003	
Uranium	mg/L	09/12/2007	0002	4.8 - 14.8	0.89		#	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1104 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
						Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	-	770			#		
Ammonia Total as N	mg/L	09/12/2007	0001	-	1.9			#	.1	
Calcium	mg/L	09/12/2007	0001	-	390			#	.0078	
Chloride	mg/L	09/12/2007	0001	-	430			#	20	
Dissolved Oxygen	mg/L	09/12/2007	N001	-	1.23			#		
Magnesium	mg/L	09/12/2007	0001	-	1300			#	.023	
Manganese	mg/L	09/12/2007	0001	-	1.9			#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	-	110			#	1	
Oxidation Reduction Potential	mV	09/12/2007	N001	-	116			#		
pH	s.u.	09/12/2007	N001	-	7.12			#		
Potassium	mg/L	09/12/2007	0001	-	120			#	.11	
Selenium	mg/L	09/12/2007	0001	-	0.014			#	.000097	
Sodium	mg/L	09/12/2007	0001	-	2200			#	.23	
Specific Conductance	umhos/cm	09/12/2007	N001	-	14864			#		
Strontium	mg/L	09/12/2007	0001	-	7.5			#	.00016	
Sulfate	mg/L	09/12/2007	0001	-	9900			#	50	
Temperature	C	09/12/2007	N001	-	22.96			#		
Total Dissolved Solids	mg/L	09/12/2007	0001	-	17000			#	200	
Turbidity	NTU	09/12/2007	N001	-	1.04			#		
Uranium	mg/L	09/12/2007	0001	-	1.5			#	.00059	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1109 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	0	-	0	226			#		
Ammonia Total as N	mg/L	09/11/2007	0001	0	-	0	35			#	5	
Calcium	mg/L	09/11/2007	0001	0	-	0	84	E		#	.0016	
Chloride	mg/L	09/11/2007	0001	0	-	0	37			#	4	
Dissolved Oxygen	mg/L	09/11/2007	N001	0	-	0	5.71			#		
Magnesium	mg/L	09/11/2007	0001	0	-	0	150	E		#	.0045	
Manganese	mg/L	09/11/2007	0001	0	-	0	0.51	E		#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	0	-	0	37			#	.5	
Oxidation Reduction Potential	mV	09/11/2007	N001	0	-	0	176			#		
pH	s.u.	09/11/2007	N001	0	-	0	7.49			#		
Potassium	mg/L	09/11/2007	0001	0	-	0	24	EN		#	.022	
Selenium	mg/L	09/11/2007	0001	0	-	0	0.0069			#	.000049	
Sodium	mg/L	09/11/2007	0001	0	-	0	190	E		#	.0023	
Specific Conductance	umhos/cm	09/11/2007	N001	0	-	0	2247			#		
Strontium	mg/L	09/11/2007	0001	0	-	0	1.2	EN		#	.000032	
Sulfate	mg/L	09/11/2007	0001	0	-	0	860			#	10	
Temperature	C	09/11/2007	N001	0	-	0	18.94			#		
Total Dissolved Solids	mg/L	09/11/2007	0001	0	-	0	1700			#	40	
Turbidity	NTU	09/11/2007	N001	0	-	0	8.04			#		
Uranium	mg/L	09/11/2007	0001	0	-	0	0.14			#	.00003	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 1/3/2008
Location: 1110 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	0	-	0	943			#		
Ammonia Total as N	mg/L	09/11/2007	0001	0	-	0	11			#	.5	
Calcium	mg/L	09/11/2007	0001	0	-	0	450			#	.016	
Chloride	mg/L	09/11/2007	0001	0	-	0	460			#	40	
Dissolved Oxygen	mg/L	09/11/2007	N001	0	-	0	4.78			#		
Magnesium	mg/L	09/11/2007	0001	0	-	0	1500			#	.045	
Manganese	mg/L	09/11/2007	0001	0	-	0	2.2			#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	0	-	0	250			#	2	
Oxidation Reduction Potential	mV	09/11/2007	N001	0	-	0	86			#		
pH	s.u.	09/11/2007	N001	0	-	0	7.46			#		
Potassium	mg/L	09/11/2007	0001	0	-	0	120			#	.22	
Selenium	mg/L	09/11/2007	0001	0	-	0	0.4			#	.0049	
Sodium	mg/L	09/11/2007	0001	0	-	0	2400			#	.023	
Specific Conductance	umhos/cm	09/11/2007	N001	0	-	0	16062			#		
Strontium	mg/L	09/11/2007	0001	0	-	0	10			#	.00032	
Sulfate	mg/L	09/11/2007	0001	0	-	0	11000			#	100	
Temperature	C	09/11/2007	N001	0	-	0	24.7			#		
Total Dissolved Solids	mg/L	09/11/2007	0001	0	-	0	18000			#	1000	
Turbidity	NTU	09/11/2007	N001	0	-	0	6.09			#		
Uranium	mg/L	09/11/2007	0001	0	-	0	1.5			#	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1111 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	7 - 12	1079		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	7 - 12	0.1	U	F	#	.1	
Calcium	mg/L	09/11/2007	0001	7 - 12	430		F	#	.0078	
Chloride	mg/L	09/11/2007	0001	7 - 12	410		F	#	40	
Dissolved Oxygen	mg/L	09/11/2007	N001	7 - 12	0.88		F	#		
Magnesium	mg/L	09/11/2007	0001	7 - 12	1100		F	#	.023	
Manganese	mg/L	09/11/2007	0001	7 - 12	0.81		F	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	7 - 12	43		F	#	.5	
Oxidation Reduction Potential	mV	09/11/2007	N001	7 - 12	103		F	#		
pH	s.u.	09/11/2007	N001	7 - 12	6.77		F	#		
Potassium	mg/L	09/11/2007	0001	7 - 12	97		F	#	.11	
Selenium	mg/L	09/11/2007	0001	7 - 12	0.73		F	#	.0097	
Sodium	mg/L	09/11/2007	0001	7 - 12	2000		F	#	.11	
Specific Conductance	umhos/cm	09/11/2007	N001	7 - 12	13695		F	#		
Strontium	mg/L	09/11/2007	0001	7 - 12	9.4		F	#	.00016	
Sulfate	mg/L	09/11/2007	0001	7 - 12	9000		F	#	100	
Temperature	C	09/11/2007	N001	7 - 12	23.75		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	7 - 12	16000		F	#	200	
Turbidity	NTU	09/11/2007	N001	7 - 12	8.16		F	#		
Uranium	mg/L	09/11/2007	0001	7 - 12	1		F	#	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1114 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	7	-	12	420		F	#		
Ammonia Total as N	mg/L	09/10/2007	0001	7	-	12	120		F	#	20	
Calcium	mg/L	09/10/2007	0001	7	-	12	85		F	#	.0031	
Chloride	mg/L	09/10/2007	0001	7	-	12	70		F	#	10	
Dissolved Oxygen	mg/L	09/10/2007	N001	7	-	12	0.71		F	#		
Magnesium	mg/L	09/10/2007	0001	7	-	12	190		F	#	.009	
Manganese	mg/L	09/10/2007	0001	7	-	12	1		F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	7	-	12	61		F	#	.5	
Oxidation Reduction Potential	mV	09/10/2007	N001	7	-	12	123		F	#		
pH	s.u.	09/10/2007	N001	7	-	12	7.14		F	#		
Potassium	mg/L	09/10/2007	0001	7	-	12	57		F	#	.045	
Selenium	mg/L	09/10/2007	0001	7	-	12	0.0064		F	#	.000049	
Sodium	mg/L	09/10/2007	0001	7	-	12	350		F	#	.0046	
Specific Conductance	umhos/cm	09/10/2007	N001	7	-	12	3784		F	#		
Strontium	mg/L	09/10/2007	0001	7	-	12	1.7		F	#	.000065	
Sulfate	mg/L	09/10/2007	0001	7	-	12	1500		F	#	25	
Temperature	C	09/10/2007	N001	7	-	12	22.68		F	#		
Total Dissolved Solids	mg/L	09/10/2007	0001	7	-	12	2800		FJ	#	40	
Turbidity	NTU	09/10/2007	N001	7	-	12	9.31		F	#		
Uranium	mg/L	09/10/2007	0001	7	-	12	0.33		F	#	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1115 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	7 - 12	508		F #		
Ammonia Total as N	mg/L	09/10/2007	0001	7 - 12	150		F #	20	
Calcium	mg/L	09/10/2007	0001	7 - 12	240		F #	.0078	
Chloride	mg/L	09/10/2007	0001	7 - 12	140		F #	20	
Dissolved Oxygen	mg/L	09/10/2007	N001	7 - 12	0.8		F #		
Magnesium	mg/L	09/10/2007	0001	7 - 12	410		F #	.023	
Manganese	mg/L	09/10/2007	0001	7 - 12	1.6		F #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	7 - 12	150		F #	2	
Oxidation Reduction Potential	mV	09/10/2007	N001	7 - 12	119		F #		
pH	s.u.	09/10/2007	N001	7 - 12	6.9		F #		
Potassium	mg/L	09/10/2007	0001	7 - 12	79		F #	.11	
Selenium	mg/L	09/10/2007	0001	7 - 12	0.035		F #	.00024	
Sodium	mg/L	09/10/2007	0001	7 - 12	690		F #	.011	
Specific Conductance	umhos/cm	09/10/2007	N001	7 - 12	6776		F #		
Strontium	mg/L	09/10/2007	0001	7 - 12	3.6		F #	.00016	
Sulfate	mg/L	09/10/2007	0001	7 - 12	3600		F #	50	
Temperature	C	09/10/2007	N001	7 - 12	21.03		F #		
Total Dissolved Solids	mg/L	09/10/2007	0001	7 - 12	6300		FJ #	80	
Turbidity	NTU	09/10/2007	N001	7 - 12	8.72		F #		
Uranium	mg/L	09/10/2007	0001	7 - 12	0.55		F #	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1117 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	7	-	12	118		F	#		
Ammonia Total as N	mg/L	09/10/2007	0001	7	-	12	0.52		F	#	.1	
Calcium	mg/L	09/10/2007	0001	7	-	12	42		F	#	.0016	
Chloride	mg/L	09/10/2007	0001	7	-	12	8.9		F	#	1	
Dissolved Oxygen	mg/L	09/10/2007	N001	7	-	12	0.46		F	#		
Magnesium	mg/L	09/10/2007	0001	7	-	12	13		F	#	.0045	
Manganese	mg/L	09/10/2007	0001	7	-	12	0.39		F	#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	7	-	12	0.038		F	#	.01	
pH	s.u.	09/10/2007	N001	7	-	12	7.53		F	#		
Potassium	mg/L	09/10/2007	0001	7	-	12	3.2	N	F	#	.022	
Selenium	mg/L	09/10/2007	0001	7	-	12	0.00031		F	#	.000049	
Sodium	mg/L	09/10/2007	0001	7	-	12	41		F	#	.0023	
Specific Conductance	umhos /cm	09/10/2007	N001	7	-	12	475		F	#		
Strontium	mg/L	09/10/2007	0001	7	-	12	0.46		F	#	.000032	
Sulfate	mg/L	09/10/2007	0001	7	-	12	100		F	#	2.5	
Temperature	C	09/10/2007	N001	7	-	12	20.14		F	#		
Total Dissolved Solids	mg/L	09/10/2007	0001	7	-	12	310		FJ	#	20	
Turbidity	NTU	09/10/2007	N001	7	-	12	3.32		F	#		
Uranium	mg/L	09/10/2007	0001	7	-	12	0.0075		F	#	.0000059	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

Validated according to quality assurance guidelines.

**Groundwater Quality Data
Terrace Locations**

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Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0600 WELL Just N of Disposal Cell

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	29 - 48.8	1232		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	29 - 48.8	130		FQ	#	20	
Calcium	mg/L	09/11/2007	0001	29 - 48.8	340		FQ	#	.016	
Chloride	mg/L	09/11/2007	0001	29 - 48.8	620		FQ	#	40	
Magnesium	mg/L	09/11/2007	0001	29 - 48.8	510		FQ	#	.045	
Manganese	mg/L	09/11/2007	0001	29 - 48.8	0.69		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	29 - 48.8	160		FQ	#	1	
Oxidation Reduction Potential	mV	09/11/2007	N001	29 - 48.8	137		FQ	#		
pH	s.u.	09/11/2007	N001	29 - 48.8	6.82		FQ	#		
Potassium	mg/L	09/11/2007	0001	29 - 48.8	79		FQ	#	.22	
Selenium	mg/L	09/11/2007	0001	29 - 48.8	0.0015		FQ	#	.000097	
Sodium	mg/L	09/11/2007	0001	29 - 48.8	3300		FQ	#	.11	
Specific Conductance	umhos/cm	09/11/2007	N001	29 - 48.8	33060		FQ	#		
Strontium	mg/L	09/11/2007	0001	29 - 48.8	7.5		FQ	#	.00032	
Sulfate	mg/L	09/11/2007	0001	29 - 48.8	8900		FQ	#	100	
Temperature	C	09/11/2007	N001	29 - 48.8	34.12		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	29 - 48.8	16000		FQ	#	200	
Turbidity	NTU	09/11/2007	N001	29 - 48.8	2.52		FQ	#		
Uranium	mg/L	09/11/2007	0001	29 - 48.8	1.1		FQ	#	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0602 WELL Just W of Disposal Cell; NECA yard

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	27 - 47	2054		F #		
Ammonia Total as N	mg/L	09/11/2007	0001	27 - 47	290		F #	20	
Calcium	mg/L	09/11/2007	0001	27 - 47	420		F #	.016	
Chloride	mg/L	09/11/2007	0001	27 - 47	1000		F #	40	
Magnesium	mg/L	09/11/2007	0001	27 - 47	2400		F #	.045	
Manganese	mg/L	09/11/2007	0001	27 - 47	1.7		F #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	27 - 47	19		F #	.5	
Oxidation Reduction Potential	mV	09/11/2007	N001	27 - 47	171		F #		
pH	s.u.	09/11/2007	N001	27 - 47	6.56		F #		
Potassium	mg/L	09/11/2007	0001	27 - 47	220		F #	.22	
Selenium	mg/L	09/11/2007	0001	27 - 47	0.0056		F #	.000097	
Sodium	mg/L	09/11/2007	0001	27 - 47	3200		F #	.11	
Specific Conductance	umhos/cm	09/11/2007	N001	27 - 47	24543		F #		
Strontium	mg/L	09/11/2007	0001	27 - 47	11		F #	.00032	
Sulfate	mg/L	09/11/2007	0001	27 - 47	17000		F #	100	
Temperature	C	09/11/2007	N001	27 - 47	23.01		F #		
Total Dissolved Solids	mg/L	09/11/2007	0001	27 - 47	29000		F #	400	
Turbidity	NTU	09/11/2007	N001	27 - 47	6.25		F #		
Uranium	mg/L	09/11/2007	0001	27 - 47	0.7		F #	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0603 WELL Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	25.9	- 35.9	210		F #		
Ammonia Total as N	mg/L	09/11/2007	0001	25.9	- 35.9	750		F #	20	
Calcium	mg/L	09/11/2007	0001	25.9	- 35.9	710		F #	.0078	
Chloride	mg/L	09/11/2007	0001	25.9	- 35.9	96		F #	20	
Magnesium	mg/L	09/11/2007	0001	25.9	- 35.9	420		F #	.023	
Manganese	mg/L	09/11/2007	0001	25.9	- 35.9	25		F #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	25.9	- 35.9	780		F #	10	
Oxidation Reduction Potential	mV	09/11/2007	N001	25.9	- 35.9	183		F #		
pH	s.u.	09/11/2007	N001	25.9	- 35.9	6.36		F #		
Potassium	mg/L	09/11/2007	0001	25.9	- 35.9	110		F #	.11	
Selenium	mg/L	09/11/2007	0001	25.9	- 35.9	0.087		F #	.00049	
Sodium	mg/L	09/11/2007	0001	25.9	- 35.9	410		F #	.011	
Specific Conductance	umhos /cm	09/11/2007	N001	25.9	- 35.9	27520		F #		
Strontium	mg/L	09/11/2007	0001	25.9	- 35.9	2.4		F #	.00016	
Sulfate	mg/L	09/11/2007	0001	25.9	- 35.9	3100		F #	50	
Temperature	C	09/11/2007	N001	25.9	- 35.9	18.5		F #		
Total Dissolved Solids	mg/L	09/11/2007	0001	25.9	- 35.9	9200		F #	200	
Turbidity	NTU	09/11/2007	N001	25.9	- 35.9	1.71		F #		
Uranium	mg/L	09/11/2007	0001	25.9	- 35.9	0.0077		F #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0725 WELL West side, lower Bob Lee Wash

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	7.5 - 17.5	430		F	#		
Ammonia Total as N	mg/L	09/13/2007	0001	7.5 - 17.5	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2007	0001	7.5 - 17.5	340		F	#	.0078	
Chloride	mg/L	09/13/2007	0001	7.5 - 17.5	91		F	#	20	
Magnesium	mg/L	09/13/2007	0001	7.5 - 17.5	140		F	#	.023	
Manganese	mg/L	09/13/2007	0001	7.5 - 17.5	0.51		F	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	7.5 - 17.5	7.6		F	#	.1	
Oxidation Reduction Potential	mV	09/13/2007	N001	7.5 - 17.5	182		F	#		
pH	s.u.	09/13/2007	N001	7.5 - 17.5	6.95		F	#		
Potassium	mg/L	09/13/2007	0001	7.5 - 17.5	18		F	#	.11	
Selenium	mg/L	09/13/2007	0001	7.5 - 17.5	0.0061		F	#	.000049	
Sodium	mg/L	09/13/2007	0001	7.5 - 17.5	1100		F	#	.011	
Specific Conductance	umhos/cm	09/13/2007	N001	7.5 - 17.5	4470		F	#		
Strontium	mg/L	09/13/2007	0001	7.5 - 17.5	9.7		F	#	.00016	
Sulfate	mg/L	09/13/2007	0001	7.5 - 17.5	3500		F	#	50	
Temperature	C	09/13/2007	N001	7.5 - 17.5	19.7		F	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	7.5 - 17.5	5800		F	#	80	
Turbidity	NTU	09/13/2007	N001	7.5 - 17.5	1.82		F	#		
Uranium	mg/L	09/13/2007	0001	7.5 - 17.5	0.099		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0726 WELL West side, upper Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	27.2	- 37.2	598		FQ #		
Ammonia Total as N	mg/L	09/13/2007	0001	27.2	- 37.2	2		FQ #	.1	
Calcium	mg/L	09/13/2007	0001	27.2	- 37.2	140		FQ #	.0078	
Chloride	mg/L	09/13/2007	0001	27.2	- 37.2	820		FQ #	20	
Magnesium	mg/L	09/13/2007	0001	27.2	- 37.2	120		FQ #	.023	
Manganese	mg/L	09/13/2007	0001	27.2	- 37.2	0.1		FQ #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	27.2	- 37.2	27		FQ #	.2	
Oxidation Reduction Potential	mV	09/13/2007	N001	27.2	- 37.2	202		FQ #		
pH	s.u.	09/13/2007	N001	27.2	- 37.2	6.47		FQ #		
Potassium	mg/L	09/13/2007	0001	27.2	- 37.2	31		FQ #	.11	
Selenium	mg/L	09/13/2007	0001	27.2	- 37.2	0.004		FQ #	.000049	
Sodium	mg/L	09/13/2007	0001	27.2	- 37.2	2500		FQ #	.23	
Specific Conductance	umhos /cm	09/13/2007	N001	27.2	- 37.2	5358		FQ #		
Strontium	mg/L	09/13/2007	0001	27.2	- 37.2	6.5		FQ #	.00016	
Sulfate	mg/L	09/13/2007	0001	27.2	- 37.2	6200		FQ #	50	
Temperature	C	09/13/2007	N001	27.2	- 37.2	16.1		FQ #		
Total Dissolved Solids	mg/L	09/13/2007	0001	27.2	- 37.2	11000		FQ #	200	
Turbidity	NTU	09/13/2007	N001	27.2	- 37.2	22		FQ #		
Uranium	mg/L	09/13/2007	0001	27.2	- 37.2	0.032		FQ #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0728 WELL W of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	17 - 27	530		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	17 - 27	130		FQ	#	20	
Calcium	mg/L	09/11/2007	0001	17 - 27	490		FQ	#	.0078	
Chloride	mg/L	09/11/2007	0001	17 - 27	44		FQ	#	4	
Magnesium	mg/L	09/11/2007	0001	17 - 27	730		FQ	#	.023	
Manganese	mg/L	09/11/2007	0001	17 - 27	0.88		FQ	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	17 - 27	48		FQ	#	.5	
Oxidation Reduction Potential	mV	09/11/2007	N001	17 - 27	65		FQ	#		
pH	s.u.	09/11/2007	N001	17 - 27	7.09		FQ	#		
Potassium	mg/L	09/11/2007	0001	17 - 27	91		FQ	#	.11	
Selenium	mg/L	09/11/2007	0001	17 - 27	0.0017		FQ	#	.000049	
Sodium	mg/L	09/11/2007	0001	17 - 27	580		FQ	#	.011	
Specific Conductance	umhos/cm	09/11/2007	N001	17 - 27	4784		FQ	#		
Strontium	mg/L	09/11/2007	0001	17 - 27	6.8		FQ	#	.00016	
Sulfate	mg/L	09/11/2007	0001	17 - 27	5200		FQ	#	50	
Temperature	C	09/11/2007	N001	17 - 27	17.6		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	17 - 27	8000		FQ	#	80	
Turbidity	NTU	09/11/2007	N001	17 - 27	7.08		FQ	#		
Uranium	mg/L	09/11/2007	0001	17 - 27	0.32		FQ	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0730 WELL Just SW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
						Lab	Data QA		
Ammonia Total as N	mg/L	09/11/2007	0001	26.93 - 36.93	80		FQ #	20	
Calcium	mg/L	09/11/2007	0001	26.93 - 36.93	650		FQ #	.0031	
Chloride	mg/L	09/11/2007	0001	26.93 - 36.93	13		FQ #	2	
Magnesium	mg/L	09/11/2007	0001	26.93 - 36.93	140		FQ #	.009	
Manganese	mg/L	09/11/2007	0001	26.93 - 36.93	20		FQ #	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	26.93 - 36.93	160		FQ #	1	
Oxidation Reduction Potential	mV	09/11/2007	N001	26.93 - 36.93	424		FQ #		
pH	s.u.	09/11/2007	N001	26.93 - 36.93	4.16		FQ #		
Potassium	mg/L	09/11/2007	0001	26.93 - 36.93	22		FQ #	.045	
Selenium	mg/L	09/11/2007	0001	26.93 - 36.93	0.0087		FQ #	.000049	
Sodium	mg/L	09/11/2007	0001	26.93 - 36.93	82		FQ #	.0046	
Specific Conductance	umhos/cm	09/11/2007	N001	26.93 - 36.93	10460		FQ #		
Strontium	mg/L	09/11/2007	0001	26.93 - 36.93	2.8		FQ #	.000065	
Sulfate	mg/L	09/11/2007	0001	26.93 - 36.93	2000		FQ #	25	
Temperature	C	09/11/2007	N001	26.93 - 36.93	21.8		FQ #		
Total Dissolved Solids	mg/L	09/11/2007	0001	26.93 - 36.93	3800		FQ #	40	
Turbidity	NTU	09/11/2007	N001	26.93 - 36.93	2.93		FQ #		
Uranium	mg/L	09/11/2007	0001	26.93 - 36.93	0.0063		FQ #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0731 WELL SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	17 - 27	372		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	17 - 27	32		FQ	#	2	
Calcium	mg/L	09/11/2007	0001	17 - 27	450		FQ	#	.0078	
Chloride	mg/L	09/11/2007	0001	17 - 27	200		FQ	#	20	
Magnesium	mg/L	09/11/2007	0001	17 - 27	600		FQ	#	.023	
Manganese	mg/L	09/11/2007	0001	17 - 27	0.23		FQ	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	17 - 27	140		FQ	#	1	
Oxidation Reduction Potential	mV	09/11/2007	N001	17 - 27	94		FQ	#		
pH	s.u.	09/11/2007	N001	17 - 27	7.52		FQ	#		
Potassium	mg/L	09/11/2007	0001	17 - 27	54		FQ	#	.11	
Selenium	mg/L	09/11/2007	0001	17 - 27	0.013		FQ	#	.000049	
Sodium	mg/L	09/11/2007	0001	17 - 27	1100		FQ	#	.011	
Specific Conductance	umhos/cm	09/11/2007	N001	17 - 27	20730		FQ	#		
Strontium	mg/L	09/11/2007	0001	17 - 27	8.7		FQ	#	.00016	
Sulfate	mg/L	09/11/2007	0001	17 - 27	5100		FQ	#	50	
Temperature	C	09/11/2007	N001	17 - 27	17.7		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	17 - 27	9500		FQ	#	200	
Turbidity	NTU	09/11/2007	N001	17 - 27	25.8		FQ	#		
Uranium	mg/L	09/11/2007	0001	17 - 27	0.049		FQ	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0812 WELL W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	51.3	- 61.3	702		FQ #		
Ammonia Total as N	mg/L	09/11/2007	0001	51.3	- 61.3	0.1	U	FQ #	.1	
Calcium	mg/L	09/11/2007	0001	51.3	- 61.3	460		FQ #	.016	
Chloride	mg/L	09/11/2007	0001	51.3	- 61.3	2400		FQ #	40	
Magnesium	mg/L	09/11/2007	0001	51.3	- 61.3	2200		FQ #	.045	
Manganese	mg/L	09/11/2007	0001	51.3	- 61.3	0.26		FQ #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	51.3	- 61.3	1400		FQ #	10	
Oxidation Reduction Potential	mV	09/11/2007	N001	51.3	- 61.3	165		FQ #		
pH	s.u.	09/11/2007	N001	51.3	- 61.3	7.37		FQ #		
Potassium	mg/L	09/11/2007	0001	51.3	- 61.3	100		FQ #	.22	
Selenium	mg/L	09/11/2007	0001	51.3	- 61.3	4.9		FQ #	.049	
Sodium	mg/L	09/11/2007	0001	51.3	- 61.3	5400		FQ #	.23	
Specific Conductance	umhos /cm	09/11/2007	N001	51.3	- 61.3	19340		FQ #		
Strontium	mg/L	09/11/2007	0001	51.3	- 61.3	13		FQ #	.00032	
Sulfate	mg/L	09/11/2007	0001	51.3	- 61.3	16000		FQ #	100	
Temperature	C	09/11/2007	N001	51.3	- 61.3	17.5		FQ #		
Total Dissolved Solids	mg/L	09/11/2007	0001	51.3	- 61.3	37000		FQ #	400	
Turbidity	NTU	09/11/2007	N001	51.3	- 61.3	115		FQ #		
Uranium	mg/L	09/11/2007	0001	51.3	- 61.3	0.13		FQ #	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0813 WELL W of radon cover borrow pit

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	40.8 - 50.8	950		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	40.8 - 50.8	71		F	#	20	
Calcium	mg/L	09/11/2007	0001	40.8 - 50.8	630		F	#	.016	
Chloride	mg/L	09/11/2007	0001	40.8 - 50.8	710		F	#	40	
Magnesium	mg/L	09/11/2007	0001	40.8 - 50.8	3100		F	#	.045	
Manganese	mg/L	09/11/2007	0001	40.8 - 50.8	0.35		F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	40.8 - 50.8	2300		F	#	20	
Oxidation Reduction Potential	mV	09/11/2007	N001	40.8 - 50.8	198		F	#		
pH	s.u.	09/11/2007	N001	40.8 - 50.8	6.54		F	#		
Potassium	mg/L	09/11/2007	0001	40.8 - 50.8	170		F	#	.22	
Selenium	mg/L	09/11/2007	0001	40.8 - 50.8	0.039		F	#	.00049	
Sodium	mg/L	09/11/2007	0001	40.8 - 50.8	2400		F	#	.023	
Specific Conductance	umhos/cm	09/11/2007	N001	40.8 - 50.8	16670		F	#		
Strontium	mg/L	09/11/2007	0001	40.8 - 50.8	17		F	#	.00032	
Sulfate	mg/L	09/11/2007	0001	40.8 - 50.8	10000		F	#	100	
Temperature	C	09/11/2007	N001	40.8 - 50.8	18.5		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	40.8 - 50.8	33000		F	#	400	
Turbidity	NTU	09/11/2007	N001	40.8 - 50.8	3.04		F	#		
Uranium	mg/L	09/11/2007	0001	40.8 - 50.8	0.13		F	#	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0814 WELL South edge of fairgrounds, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers		Detection Limit	Uncertainty
								Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	23.8	-	33.8	846	FQ	#		
Ammonia Total as N	mg/L	09/12/2007	0001	23.8	-	33.8	40	FQ	#	10	
Calcium	mg/L	09/12/2007	0001	23.8	-	33.8	430	FQ	#	.016	
Chloride	mg/L	09/12/2007	0001	23.8	-	33.8	990	FQ	#	40	
Magnesium	mg/L	09/12/2007	0001	23.8	-	33.8	2200	FQ	#	.045	
Manganese	mg/L	09/12/2007	0001	23.8	-	33.8	1.3	FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	23.8	-	33.8	970	FQ	#	10	
Oxidation Reduction Potential	mV	09/12/2007	N001	23.8	-	33.8	230	FQ	#		
pH	s.u.	09/12/2007	N001	23.8	-	33.8	6.18	FQ	#		
Potassium	mg/L	09/12/2007	0001	23.8	-	33.8	130	FQ	#	.22	
Selenium	mg/L	09/12/2007	0001	23.8	-	33.8	2.1	FQ	#	.049	
Sodium	mg/L	09/12/2007	0001	23.8	-	33.8	2900	FQ	#	.23	
Specific Conductance	umhos /cm	09/12/2007	N001	23.8	-	33.8	14810	FQ	#		
Strontium	mg/L	09/12/2007	0001	23.8	-	33.8	12	FQ	#	.00032	
Sulfate	mg/L	09/12/2007	0001	23.8	-	33.8	14000	FQ	#	100	
Temperature	C	09/12/2007	N001	23.8	-	33.8	16.4	FQ	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	23.8	-	33.8	28000	FQ	#	1000	
Turbidity	NTU	09/12/2007	N001	23.8	-	33.8	861	FQ	#		
Uranium	mg/L	09/12/2007	0001	23.8	-	33.8	0.12	FQ	#	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0815 WELL Fairgrounds, just N of Uranium Blvd., flush mount.

Parameter	Units	Sample		Depth Range (Ft BLS)		Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID					Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	22.3	- 32.3	1644		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	22.3	- 32.3	0.1	U	FQ	#	.1	
Calcium	mg/L	09/11/2007	0001	22.3	- 32.3	410		FQ	#	.016	
Chloride	mg/L	09/11/2007	0001	22.3	- 32.3	650		FQ	#	40	
Magnesium	mg/L	09/11/2007	0001	22.3	- 32.3	2300		FQ	#	.045	
Manganese	mg/L	09/11/2007	0001	22.3	- 32.3	1.2		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	22.3	- 32.3	560		FQ	#	5	
Oxidation Reduction Potential	mV	09/11/2007	N001	22.3	- 32.3	211		FQ	#		
pH	s.u.	09/11/2007	N001	22.3	- 32.3	6.7		FQ	#		
Potassium	mg/L	09/11/2007	0001	22.3	- 32.3	99		FQ	#	.22	
Selenium	mg/L	09/11/2007	0001	22.3	- 32.3	0.054		FQ	#	.00049	
Sodium	mg/L	09/11/2007	0001	22.3	- 32.3	3000		FQ	#	.11	
Specific Conductance	umhos/cm	09/11/2007	N001	22.3	- 32.3	14690		FQ	#		
Strontium	mg/L	09/11/2007	0001	22.3	- 32.3	11		FQ	#	.00032	
Sulfate	mg/L	09/11/2007	0001	22.3	- 32.3	15000		FQ	#	100	
Temperature	C	09/11/2007	N001	22.3	- 32.3	18.1		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	22.3	- 32.3	28000		FQ	#	400	
Turbidity	NTU	09/11/2007	N001	22.3	- 32.3	9.6		FQ	#		
Uranium	mg/L	09/11/2007	0001	22.3	- 32.3	0.33		FQ	#	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0816 WELL N of artesian well 648

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	20.1	- 25.1	296		FQ #		
Ammonia Total as N	mg/L	09/12/2007	0001	20.1	- 25.1	0.1	U	FQ #	.1	
Calcium	mg/L	09/12/2007	0001	20.1	- 25.1	40		FQ #	.0016	
Chloride	mg/L	09/12/2007	0001	20.1	- 25.1	41		FQ #	4	
Magnesium	mg/L	09/12/2007	0001	20.1	- 25.1	58		FQ #	.0045	
Manganese	mg/L	09/12/2007	0001	20.1	- 25.1	0.00015	U	FQJ #	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	20.1	- 25.1	24		FQ #	.2	
Oxidation Reduction Potential	mV	09/12/2007	N001	20.1	- 25.1	174		FQ #		
pH	s.u.	09/12/2007	N001	20.1	- 25.1	7.86		FQ #		
Potassium	mg/L	09/12/2007	0001	20.1	- 25.1	11		FQ #	.022	
Selenium	mg/L	09/12/2007	0001	20.1	- 25.1	0.015		FQ #	.00024	
Sodium	mg/L	09/12/2007	0001	20.1	- 25.1	290		FQ #	.11	
Specific Conductance	umhos /cm	09/12/2007	N001	20.1	- 25.1	1840		FQ #		
Strontium	mg/L	09/12/2007	0001	20.1	- 25.1	0.75		FQ #	.000032	
Sulfate	mg/L	09/12/2007	0001	20.1	- 25.1	700		FQ #	10	
Temperature	C	09/12/2007	N001	20.1	- 25.1	18.6		FQ #		
Total Dissolved Solids	mg/L	09/12/2007	0001	20.1	- 25.1	1500		FQ #	1000	
Turbidity	NTU	09/12/2007	N001	20.1	- 25.1	3.59		FQ #		
Uranium	mg/L	09/12/2007	0001	20.1	- 25.1	0.014		FQ #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0817 WELL Just W of Disposal Cell, NECA yard

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	21.6	- 31.62	1444		FQ	#		
Ammonia Total as N	mg/L	09/12/2007	0001	21.6	- 31.62	480		FQ	#	20	
Calcium	mg/L	09/12/2007	0001	21.6	- 31.62	460		FQ	#	.016	
Chloride	mg/L	09/12/2007	0001	21.6	- 31.62	440		FQ	#	40	
Magnesium	mg/L	09/12/2007	0001	21.6	- 31.62	1600		FQ	#	.045	
Manganese	mg/L	09/12/2007	0001	21.6	- 31.62	1.8		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	21.6	- 31.62	610		FQ	#	5	
Oxidation Reduction Potential	mV	09/12/2007	N001	21.6	- 31.62	267		FQ	#		
pH	s.u.	09/12/2007	N001	21.6	- 31.62	6.71		FQ	#		
Potassium	mg/L	09/12/2007	0001	21.6	- 31.62	210		FQ	#	.22	
Selenium	mg/L	09/12/2007	0001	21.6	- 31.62	0.0024		FQ	#	.000097	
Sodium	mg/L	09/12/2007	0001	21.6	- 31.62	1400		FQ	#	.023	
Specific Conductance	umhos/cm	09/12/2007	N001	21.6	- 31.62	11650		FQ	#		
Strontium	mg/L	09/12/2007	0001	21.6	- 31.62	10		FQ	#	.00032	
Sulfate	mg/L	09/12/2007	0001	21.6	- 31.62	10000		FQ	#	100	
Temperature	C	09/12/2007	N001	21.6	- 31.62	18		FQ	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	21.6	- 31.62	17000		FQ	#	1000	
Turbidity	NTU	09/12/2007	N001	21.6	- 31.62	9.98		FQ	#		
Uranium	mg/L	09/12/2007	0001	21.6	- 31.62	9.3		FQ	#	.0012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0818 WELL Just W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	52	-	61.5			#		
Ammonia Total as N	mg/L	09/12/2007	0001	52	-	61.5			#	5	
Calcium	mg/L	09/12/2007	0001	52	-	61.5			#	.016	
Chloride	mg/L	09/12/2007	0001	52	-	61.5			#	40	
Magnesium	mg/L	09/12/2007	0001	52	-	61.5			#	.045	
Manganese	mg/L	09/12/2007	0001	52	-	61.5			#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	52	-	61.5			#	10	
Oxidation Reduction Potential	mV	09/12/2007	N001	52	-	61.5			#		
pH	s.u.	09/12/2007	N001	52	-	61.5			#		
Potassium	mg/L	09/12/2007	0001	52	-	61.5			#	.22	
Selenium	mg/L	09/12/2007	0001	52	-	61.5			#	.049	
Sodium	mg/L	09/12/2007	0001	52	-	61.5			#	.11	
Specific Conductance	umhos /cm	09/12/2007	N001	52	-	61.5			#		
Strontium	mg/L	09/12/2007	0001	52	-	61.5			#	.00032	
Sulfate	mg/L	09/12/2007	0001	52	-	61.5			#	100	
Temperature	C	09/12/2007	N001	52	-	61.5			#		
Total Dissolved Solids	mg/L	09/12/2007	0001	52	-	61.5			#	1000	
Turbidity	NTU	09/12/2007	N001	52	-	61.5			#		
Uranium	mg/L	09/12/2007	0001	52	-	61.5			#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0819 WELL Just W of Disposal Cell, NECA yard, flush mount.

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	15.67 - 25.67	1706		F #		
Ammonia Total as N	mg/L	09/11/2007	0001	15.67 - 25.67	540		F #	20	
Calcium	mg/L	09/11/2007	0001	15.67 - 25.67	410		F #	.016	
Chloride	mg/L	09/11/2007	0001	15.67 - 25.67	720		F #	40	
Magnesium	mg/L	09/11/2007	0001	15.67 - 25.67	1500		F #	.045	
Manganese	mg/L	09/11/2007	0001	15.67 - 25.67	1.5		F #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	15.67 - 25.67	67		F #	.5	
Oxidation Reduction Potential	mV	09/11/2007	N001	15.67 - 25.67	184		F #		
pH	s.u.	09/11/2007	N001	15.67 - 25.67	6.58		F #		
Potassium	mg/L	09/11/2007	0001	15.67 - 25.67	240		F #	.22	
Selenium	mg/L	09/11/2007	0001	15.67 - 25.67	0.0039		F #	.000097	
Sodium	mg/L	09/11/2007	0001	15.67 - 25.67	2100		F #	.023	
Specific Conductance	umhos/cm	09/11/2007	N001	15.67 - 25.67	19935		F #		
Strontium	mg/L	09/11/2007	0001	15.67 - 25.67	8.7		F #	.00032	
Sulfate	mg/L	09/11/2007	0001	15.67 - 25.67	12000		F #	100	
Temperature	C	09/11/2007	N001	15.67 - 25.67	24.81		F #		
Total Dissolved Solids	mg/L	09/11/2007	0001	15.67 - 25.67	21000		F #	400	
Turbidity	NTU	09/11/2007	N001	15.67 - 25.67	4.29		F #		
Uranium	mg/L	09/11/2007	0001	15.67 - 25.67	1.3		F #	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0826 WELL Just West of Disposal Cell, NECA yard, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	10	-	20	1720		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	10	-	20	100		F	#	20	
Calcium	mg/L	09/11/2007	0001	10	-	20	400		F	#	.016	
Chloride	mg/L	09/11/2007	0001	10	-	20	620		F	#	40	
Magnesium	mg/L	09/11/2007	0001	10	-	20	2500		F	#	.045	
Manganese	mg/L	09/11/2007	0001	10	-	20	2.5		F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	10	-	20	40		F	#	.5	
Oxidation Reduction Potential	mV	09/11/2007	N001	10	-	20	176		F	#		
pH	s.u.	09/11/2007	N001	10	-	20	6.63		F	#		
Potassium	mg/L	09/11/2007	0001	10	-	20	150		F	#	.22	
Selenium	mg/L	09/11/2007	0001	10	-	20	0.0028		F	#	.000097	
Sodium	mg/L	09/11/2007	0001	10	-	20	2000		F	#	.023	
Specific Conductance	umhos /cm	09/11/2007	N001	10	-	20	19346		F	#		
Strontium	mg/L	09/11/2007	0001	10	-	20	11		F	#	.00032	
Sulfate	mg/L	09/11/2007	0001	10	-	20	15000		F	#	100	
Temperature	C	09/11/2007	N001	10	-	20	21.78		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	10	-	20	22000		F	#	1000	
Turbidity	NTU	09/11/2007	N001	10	-	20	5.15		F	#		
Uranium	mg/L	09/11/2007	0001	10	-	20	3.5		F	#	.00059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0827 WELL Just NW of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	19.9	- 29.9	1442	FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	19.9	- 29.9	9.7	FQ	#	.5	
Calcium	mg/L	09/11/2007	0001	19.9	- 29.9	440	FQ	#	.0078	
Chloride	mg/L	09/11/2007	0001	19.9	- 29.9	440	FQ	#	20	
Magnesium	mg/L	09/11/2007	0001	19.9	- 29.9	1200	FQ	#	.023	
Manganese	mg/L	09/11/2007	0001	19.9	- 29.9	0.53	FQ	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	19.9	- 29.9	13	FQ	#	.1	
Oxidation Reduction Potential	mV	09/11/2007	N001	19.9	- 29.9	56	FQ	#		
pH	s.u.	09/11/2007	N001	19.9	- 29.9	6.68	FQ	#		
Potassium	mg/L	09/11/2007	0001	19.9	- 29.9	75	FQ	#	.11	
Selenium	mg/L	09/11/2007	0001	19.9	- 29.9	0.012	FQ	#	.000049	
Sodium	mg/L	09/11/2007	0001	19.9	- 29.9	1700	FQ	#	.23	
Specific Conductance	umhos/cm	09/11/2007	N001	19.9	- 29.9	26860	FQ	#		
Strontium	mg/L	09/11/2007	0001	19.9	- 29.9	8.6	FQ	#	.00016	
Sulfate	mg/L	09/11/2007	0001	19.9	- 29.9	8600	FQ	#	50	
Temperature	C	09/11/2007	N001	19.9	- 29.9	16.6	FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	19.9	- 29.9	16000	FQ	#	200	
Turbidity	NTU	09/11/2007	N001	19.9	- 29.9	10.4	FQ	#		
Uranium	mg/L	09/11/2007	0001	19.9	- 29.9	0.65	FQ	#	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0830 WELL Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
						Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	7.7 - 17.7	0		F	#		
Ammonia Total as N	mg/L	09/10/2007	0001	7.7 - 17.7	15		F	#	1	
Calcium	mg/L	09/10/2007	0001	7.7 - 17.7	660		F	#	.0031	
Chloride	mg/L	09/10/2007	0001	7.7 - 17.7	71		F	#	10	
Magnesium	mg/L	09/10/2007	0001	7.7 - 17.7	60		F	#	.009	
Manganese	mg/L	09/10/2007	0001	7.7 - 17.7	4.4		F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	7.7 - 17.7	63		F	#	.5	
Oxidation Reduction Potential	mV	09/10/2007	N001	7.7 - 17.7	423		F	#		
pH	s.u.	09/10/2007	N001	7.7 - 17.7	3.87		F	#		
Potassium	mg/L	09/10/2007	0001	7.7 - 17.7	8.9		F	#	.045	
Selenium	mg/L	09/10/2007	0001	7.7 - 17.7	0.028		F	#	.00024	
Sodium	mg/L	09/10/2007	0001	7.7 - 17.7	160		F	#	.0046	
Specific Conductance	umhos /cm	09/10/2007	N001	7.7 - 17.7	794		F	#		
Strontium	mg/L	09/10/2007	0001	7.7 - 17.7	0.38		F	#	.000065	
Sulfate	mg/L	09/10/2007	0001	7.7 - 17.7	1800		F	#	25	
Temperature	C	09/10/2007	N001	7.7 - 17.7	27.4		F	#		
Total Dissolved Solids	mg/L	09/10/2007	0001	7.7 - 17.7	3200		FJ	#	40	
Turbidity	NTU	09/10/2007	N001	7.7 - 17.7	3.65		F	#		
Uranium	mg/L	09/10/2007	0001	7.7 - 17.7	0.011		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0832 WELL SW corner of Multipurpose Center tract, W of US Hwy 666, flush mount.

Parameter	Units	Sample		Depth Range (Ft BLS)			Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID					Lab	Data		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	21.1	-	31.1	560		FQ	#	
Ammonia Total as N	mg/L	09/13/2007	0001	21.1	-	31.1	0.1	U	FQ	#	.1
Calcium	mg/L	09/13/2007	0001	21.1	-	31.1	460		FQ	#	.016
Chloride	mg/L	09/13/2007	0001	21.1	-	31.1	990		FQ	#	40
Magnesium	mg/L	09/13/2007	0001	21.1	-	31.1	1500		FQ	#	.045
Manganese	mg/L	09/13/2007	0001	21.1	-	31.1	0.18		FQ	#	.0015
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	21.1	-	31.1	680		FQ	#	5
Oxidation Reduction Potential	mV	09/13/2007	N001	21.1	-	31.1	195		FQ	#	
pH	s.u.	09/13/2007	N001	21.1	-	31.1	7.32		FQ	#	
Potassium	mg/L	09/13/2007	0001	21.1	-	31.1	52		FQ	#	.22
Selenium	mg/L	09/13/2007	0001	21.1	-	31.1	4.1		FQ	#	.049
Sodium	mg/L	09/13/2007	0001	21.1	-	31.1	3200		FQ	#	.11
Specific Conductance	umhos/cm	09/13/2007	N001	21.1	-	31.1	13080		FQ	#	
Strontium	mg/L	09/13/2007	0001	21.1	-	31.1	12		FQ	#	.00032
Sulfate	mg/L	09/13/2007	0001	21.1	-	31.1	11000		FQ	#	100
Temperature	C	09/13/2007	N001	21.1	-	31.1	21.43		FQ	#	
Total Dissolved Solids	mg/L	09/13/2007	0001	21.1	-	31.1	23000		FQ	#	1000
Turbidity	NTU	09/13/2007	N001	21.1	-	31.1	9.38		FQ	#	
Uranium	mg/L	09/13/2007	0001	21.1	-	31.1	0.15		FQ	#	.00003

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0833 WELL Just NE of Dine College tract

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	24.9	- 34.9	552		FQ #		
Ammonia Total as N	mg/L	09/13/2007	0001	24.9	- 34.9	0.1	U	FQ #	.1	
Calcium	mg/L	09/13/2007	0001	24.9	- 34.9	450		FQ #	.016	
Chloride	mg/L	09/13/2007	0001	24.9	- 34.9	610		FQ #	40	
Magnesium	mg/L	09/13/2007	0001	24.9	- 34.9	1500		FQ #	.045	
Manganese	mg/L	09/13/2007	0001	24.9	- 34.9	0.037	B	FQ #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	24.9	- 34.9	510		FQ #	5	
Oxidation Reduction Potential	mV	09/13/2007	N001	24.9	- 34.9	187		FQ #		
pH	s.u.	09/13/2007	N001	24.9	- 34.9	7.24		FQ #		
Potassium	mg/L	09/13/2007	0001	24.9	- 34.9	41		FQ #	.22	
Selenium	mg/L	09/13/2007	0001	24.9	- 34.9	0.64		FQ #	.0097	
Sodium	mg/L	09/13/2007	0001	24.9	- 34.9	1900		FQ #	.023	
Specific Conductance	umhos/cm	09/13/2007	N001	24.9	- 34.9	10330		FQ #		
Strontium	mg/L	09/13/2007	0001	24.9	- 34.9	10		FQ #	.00032	
Sulfate	mg/L	09/13/2007	0001	24.9	- 34.9	9200		FQ #	100	
Temperature	C	09/13/2007	N001	24.9	- 34.9	17.6		FQ #		
Total Dissolved Solids	mg/L	09/13/2007	0001	24.9	- 34.9	18000		FQ #	400	
Turbidity	NTU	09/13/2007	N001	24.9	- 34.9	43.2		FQ #		
Uranium	mg/L	09/13/2007	0001	24.9	- 34.9	0.26		FQ #	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0835 WELL Housing area between 2nd Wash and 3rd Wash

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	21.9	- 31.9	334		F #		
Ammonia Total as N	mg/L	09/13/2007	0001	21.9	- 31.9	0.1	U	F #	.1	
Calcium	mg/L	09/13/2007	0001	21.9	- 31.9	580		F #	.0078	
Chloride	mg/L	09/13/2007	0001	21.9	- 31.9	170		F #	20	
Magnesium	mg/L	09/13/2007	0001	21.9	- 31.9	370		F #	.023	
Manganese	mg/L	09/13/2007	0001	21.9	- 31.9	0.0058	B	F #	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	21.9	- 31.9	88		F #	.5	
Oxidation Reduction Potential	mV	09/13/2007	N001	21.9	- 31.9	182		F #		
pH	s.u.	09/13/2007	N001	21.9	- 31.9	7.14		F #		
Potassium	mg/L	09/13/2007	0001	21.9	- 31.9	14		F #	.11	
Selenium	mg/L	09/13/2007	0001	21.9	- 31.9	0.26		F #	.0049	
Sodium	mg/L	09/13/2007	0001	21.9	- 31.9	650		F #	.011	
Specific Conductance	umhos/cm	09/13/2007	N001	21.9	- 31.9	4450		F #		
Strontium	mg/L	09/13/2007	0001	21.9	- 31.9	5.9		F #	.00016	
Sulfate	mg/L	09/13/2007	0001	21.9	- 31.9	3600		F #	50	
Temperature	C	09/13/2007	N001	21.9	- 31.9	19.9		F #		
Total Dissolved Solids	mg/L	09/13/2007	0001	21.9	- 31.9	6900		F #	200	
Turbidity	NTU	09/13/2007	N001	21.9	- 31.9	1.52		F #		
Uranium	mg/L	09/13/2007	0001	21.9	- 31.9	0.076		F #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0836 WELL SW part of Blueeyes Ranch, N of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	26.8	-	36.8		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	26.8	-	36.8	U	F	#	.1	
Calcium	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.0031	
Chloride	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	2	
Magnesium	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.009	
Manganese	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.1	
Oxidation Reduction Potential	mV	09/11/2007	N001	26.8	-	36.8		F	#		
pH	s.u.	09/11/2007	N001	26.8	-	36.8		F	#		
Potassium	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.045	
Selenium	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.00097	
Sodium	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.0046	
Specific Conductance	umhos/cm	09/11/2007	N001	26.8	-	36.8		F	#		
Strontium	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.000065	
Sulfate	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	25	
Temperature	C	09/11/2007	N001	26.8	-	36.8		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	200	
Turbidity	NTU	09/11/2007	N001	26.8	-	36.8		F	#		
Uranium	mg/L	09/11/2007	0001	26.8	-	36.8		F	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0837 WELL Center of Blueeyes Ranch, N of US Hwy 64

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
						Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	17 - 27.1	584		F #		
Ammonia Total as N	mg/L	09/13/2007	0001	17 - 27.1	0.1	U	F #	.1	
Calcium	mg/L	09/13/2007	0001	17 - 27.1	570		F #	.0031	
Chloride	mg/L	09/13/2007	0001	17 - 27.1	38		F #	10	
Dissolved Oxygen	mg/L	09/13/2007	N001	17 - 27.1	1.25		F #		
Magnesium	mg/L	09/13/2007	0001	17 - 27.1	190		F #	.009	
Manganese	mg/L	09/13/2007	0001	17 - 27.1	3.7		F #	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	17 - 27.1	3.7		F #	.05	
Oxidation Reduction Potential	mV	09/13/2007	N001	17 - 27.1	150		F #		
pH	s.u.	09/13/2007	N001	17 - 27.1	6.76		F #		
Potassium	mg/L	09/13/2007	0001	17 - 27.1	8.2		F #	.045	
Selenium	mg/L	09/13/2007	0001	17 - 27.1	0.099		F #	.0024	
Sodium	mg/L	09/13/2007	0001	17 - 27.1	230		F #	.0046	
Specific Conductance	umhos/cm	09/13/2007	N001	17 - 27.1	3534		F #		
Strontium	mg/L	09/13/2007	0001	17 - 27.1	4.9		F #	.000065	
Sulfate	mg/L	09/13/2007	0001	17 - 27.1	2000		F #	25	
Temperature	C	09/13/2007	N001	17 - 27.1	16.58		F #		
Total Dissolved Solids	mg/L	09/13/2007	0001	17 - 27.1	3800		F #	80	
Turbidity	NTU	09/13/2007	N001	17 - 27.1	4.47		F #		
Uranium	mg/L	09/13/2007	0001	17 - 27.1	0.045		F #	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0838 WELL W part of Dine College tract

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	21.9	- 31.9	264		F	#		
Ammonia Total as N	mg/L	09/13/2007	0001	21.9	- 31.9	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2007	0001	21.9	- 31.9	760		F	#	.0078	
Chloride	mg/L	09/13/2007	0001	21.9	- 31.9	150		F	#	20	
Magnesium	mg/L	09/13/2007	0001	21.9	- 31.9	210		F	#	.023	
Manganese	mg/L	09/13/2007	0001	21.9	- 31.9	0.00075	U	FJ	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	21.9	- 31.9	110		F	#	1	
Oxidation Reduction Potential	mV	09/13/2007	N001	21.9	- 31.9	189		F	#		
pH	s.u.	09/13/2007	N001	21.9	- 31.9	7.11		F	#		
Potassium	mg/L	09/13/2007	0001	21.9	- 31.9	12		F	#	.11	
Selenium	mg/L	09/13/2007	0001	21.9	- 31.9	0.5		F	#	.0049	
Sodium	mg/L	09/13/2007	0001	21.9	- 31.9	430		F	#	.011	
Specific Conductance	umhos /cm	09/13/2007	N001	21.9	- 31.9	3820		F	#		
Strontium	mg/L	09/13/2007	0001	21.9	- 31.9	7.1		F	#	.00016	
Sulfate	mg/L	09/13/2007	0001	21.9	- 31.9	2900		F	#	50	
Temperature	C	09/13/2007	N001	21.9	- 31.9	17.1		F	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	21.9	- 31.9	5600		F	#	200	
Turbidity	NTU	09/13/2007	N001	21.9	- 31.9	1.5		F	#		
Uranium	mg/L	09/13/2007	0001	21.9	- 31.9	0.047		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0839 WELL West part of fairgrounds, flush mount.

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	18.1	- 28.1	830		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	18.1	- 28.1	44		FQ	#	2	
Calcium	mg/L	09/11/2007	0001	18.1	- 28.1	440		FQ	#	.016	
Chloride	mg/L	09/11/2007	0001	18.1	- 28.1	480		FQ	#	40	
Magnesium	mg/L	09/11/2007	0001	18.1	- 28.1	1900		FQ	#	.045	
Manganese	mg/L	09/11/2007	0001	18.1	- 28.1	1		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	18.1	- 28.1	550		FQ	#	5	
Oxidation Reduction Potential	mV	09/11/2007	N001	18.1	- 28.1	236		FQ	#		
pH	s.u.	09/11/2007	N001	18.1	- 28.1	6.67		FQ	#		
Potassium	mg/L	09/11/2007	0001	18.1	- 28.1	120		FQ	#	.22	
Selenium	mg/L	09/11/2007	0001	18.1	- 28.1	0.0013		FQ	#	.000097	
Sodium	mg/L	09/11/2007	0001	18.1	- 28.1	1900		FQ	#	.023	
Specific Conductance	umhos/cm	09/11/2007	N001	18.1	- 28.1	11390		FQ	#		
Strontium	mg/L	09/11/2007	0001	18.1	- 28.1	10		FQ	#	.00032	
Sulfate	mg/L	09/11/2007	0001	18.1	- 28.1	11000		FQ	#	100	
Temperature	C	09/11/2007	N001	18.1	- 28.1	23.8		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	18.1	- 28.1	20000		FQ	#	1000	
Turbidity	NTU	09/11/2007	N001	18.1	- 28.1	8.36		FQ	#		
Uranium	mg/L	09/11/2007	0001	18.1	- 28.1	0.41		FQ	#	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0841 WELL S of Multipurpose Center tract, W of US Hwy 666

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	42	-	52	706		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	42	-	52	0.1	U	F	#	.1	
Calcium	mg/L	09/11/2007	0001	42	-	52	390		F	#	.016	
Chloride	mg/L	09/11/2007	0001	42	-	52	1000		F	#	40	
Magnesium	mg/L	09/11/2007	0001	42	-	52	790		F	#	.045	
Manganese	mg/L	09/11/2007	0001	42	-	52	0.017	B	F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	42	-	52	640		F	#	5	
Oxidation Reduction Potential	mV	09/11/2007	N001	42	-	52	93		F	#		
pH	s.u.	09/11/2007	N001	42	-	52	7.35		F	#		
Potassium	mg/L	09/11/2007	0001	42	-	52	79		F	#	.22	
Selenium	mg/L	09/11/2007	0001	42	-	52	3.4		F	#	.049	
Sodium	mg/L	09/11/2007	0001	42	-	52	5300		F	#	.23	
Specific Conductance	umhos /cm	09/11/2007	N001	42	-	52	26715		F	#		
Strontium	mg/L	09/11/2007	0001	42	-	52	7.8		F	#	.00032	
Sulfate	mg/L	09/11/2007	0001	42	-	52	15000		F	#	100	
Temperature	C	09/11/2007	N001	42	-	52	16.54		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	42	-	52	28000		F	#	400	
Turbidity	NTU	09/11/2007	N001	42	-	52	2.44		F	#		
Uranium	mg/L	09/11/2007	0001	42	-	52	0.14		F	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0843 WELL E part of Blueeyes Ranch, N of US Hwy 64

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	11.9 - 21.9	350		FQ	#		
Ammonia Total as N	mg/L	09/13/2007	0001	11.9 - 21.9	0.1	U	FQ	#	.1	
Calcium	mg/L	09/13/2007	0001	11.9 - 21.9	520		FQ	#	.0031	
Chloride	mg/L	09/13/2007	0001	11.9 - 21.9	57		FQ	#	10	
Dissolved Oxygen	mg/L	09/13/2007	N001	11.9 - 21.9	0.95		FQ	#		
Magnesium	mg/L	09/13/2007	0001	11.9 - 21.9	160		FQ	#	.009	
Manganese	mg/L	09/13/2007	0001	11.9 - 21.9	2.3		FQ	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	11.9 - 21.9	26		FQ	#	.2	
Oxidation Reduction Potential	mV	09/13/2007	N001	11.9 - 21.9	184		FQ	#		
pH	s.u.	09/13/2007	N001	11.9 - 21.9	6.84		FQ	#		
Potassium	mg/L	09/13/2007	0001	11.9 - 21.9	14		FQ	#	.045	
Selenium	mg/L	09/13/2007	0001	11.9 - 21.9	0.22		FQ	#	.0024	
Sodium	mg/L	09/13/2007	0001	11.9 - 21.9	320		FQ	#	.0046	
Specific Conductance	umhos/cm	09/13/2007	N001	11.9 - 21.9	3652		FQ	#		
Strontium	mg/L	09/13/2007	0001	11.9 - 21.9	5.2		FQ	#	.000065	
Sulfate	mg/L	09/13/2007	0001	11.9 - 21.9	2100		FQ	#	25	
Temperature	C	09/13/2007	N001	11.9 - 21.9	17.38		FQ	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	11.9 - 21.9	3900		FQ	#	80	
Turbidity	NTU	09/13/2007	N001	11.9 - 21.9	17.1		FQ	#		
Uranium	mg/L	09/13/2007	0001	11.9 - 21.9	0.03		FQ	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0844 WELL W part of Multipurpose Center tract, W of US Hwy 666, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
						Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	28.91 - 38.91	670		FQ	#		
Ammonia Total as N	mg/L	09/13/2007	0001	28.91 - 38.91	0.1	U	FQ	#	.1	
Calcium	mg/L	09/13/2007	0001	28.91 - 38.91	510		FQ	#	.016	
Chloride	mg/L	09/13/2007	0001	28.91 - 38.91	780		FQ	#	40	
Magnesium	mg/L	09/13/2007	0001	28.91 - 38.91	1500		FQ	#	.045	
Manganese	mg/L	09/13/2007	0001	28.91 - 38.91	0.0015	U	FQJ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	28.91 - 38.91	650		FQ	#	5	
Oxidation Reduction Potential	mV	09/13/2007	N001	28.91 - 38.91	165		FQ	#		
pH	s.u.	09/13/2007	N001	28.91 - 38.91	7.38		FQ	#		
Potassium	mg/L	09/13/2007	0001	28.91 - 38.91	51		FQ	#	.22	
Selenium	mg/L	09/13/2007	0001	28.91 - 38.91	1.8		FQ	#	.049	
Sodium	mg/L	09/13/2007	0001	28.91 - 38.91	1900		FQ	#	.023	
Specific Conductance	umhos/cm	09/13/2007	N001	28.91 - 38.91	6175		FQ	#		
Strontium	mg/L	09/13/2007	0001	28.91 - 38.91	11		FQ	#	.00032	
Sulfate	mg/L	09/13/2007	0001	28.91 - 38.91	8400		FQ	#	100	
Temperature	C	09/13/2007	N001	28.91 - 38.91	18		FQ	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	28.91 - 38.91	18000		FQ	#	400	
Turbidity	NTU	09/13/2007	N001	28.91 - 38.91	357		FQ	#		
Uranium	mg/L	09/13/2007	0001	28.91 - 38.91	0.15		FQ	#	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0846 WELL Just W of elementary school, S of US Hwy 64

Parameter	Units	Sample		Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID				Lab	Data	QA		
Ammonia Total as N	mg/L	09/13/2007	0001	17.9	- 27.9	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2007	0001	17.9	- 27.9	560		F	#	.0031	
Chloride	mg/L	09/13/2007	0001	17.9	- 27.9	33		F	#	10	
Magnesium	mg/L	09/13/2007	0001	17.9	- 27.9	140		F	#	.009	
Manganese	mg/L	09/13/2007	0001	17.9	- 27.9	0.0025	B	F	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	17.9	- 27.9	28		F	#	.2	
Oxidation Reduction Potential	mV	09/13/2007	N001	17.9	- 27.9	144		F	#		
pH	s.u.	09/13/2007	N001	17.9	- 27.9	7.19		F	#		
Potassium	mg/L	09/13/2007	0001	17.9	- 27.9	7.1		F	#	.045	
Selenium	mg/L	09/13/2007	0001	17.9	- 27.9	0.21		F	#	.0024	
Sodium	mg/L	09/13/2007	0001	17.9	- 27.9	200		F	#	.0046	
Specific Conductance	umhos/cm	09/13/2007	N001	17.9	- 27.9	3467		F	#		
Strontium	mg/L	09/13/2007	0001	17.9	- 27.9	3.9		F	#	.000065	
Sulfate	mg/L	09/13/2007	0001	17.9	- 27.9	2000		F	#	25	
Temperature	C	09/13/2007	N001	17.9	- 27.9	17.93		F	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	17.9	- 27.9	3400		F	#	80	
Turbidity	NTU	09/13/2007	N001	17.9	- 27.9	6.76		F	#		
Uranium	mg/L	09/13/2007	0001	17.9	- 27.9	0.032		F	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0848 WELL Just W of Shiprock High School track, S of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
						Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	45 - 142.58	1448		F	#		
Ammonia Total as N	mg/L	09/11/2007	0001	45 - 142.58	8		F	#	.5	
Calcium	mg/L	09/11/2007	0001	45 - 142.58	380		F	#	.016	
Chloride	mg/L	09/11/2007	0001	45 - 142.58	1000		F	#	40	
Magnesium	mg/L	09/11/2007	0001	45 - 142.58	530		F	#	.045	
Manganese	mg/L	09/11/2007	0001	45 - 142.58	3.1		F	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	45 - 142.58	0.05	U	F	#	.05	
Oxidation Reduction Potential	mV	09/11/2007	N001	45 - 142.58	-27.7		F	#		
pH	s.u.	09/11/2007	N001	45 - 142.58	6.85		F	#		
Potassium	mg/L	09/11/2007	0001	45 - 142.58	46		F	#	.22	
Selenium	mg/L	09/11/2007	0001	45 - 142.58	0.035		F	#	.00049	
Sodium	mg/L	09/11/2007	0001	45 - 142.58	5500		F	#	.23	
Specific Conductance	umhos /cm	09/11/2007	N001	45 - 142.58	26186		F	#		
Strontium	mg/L	09/11/2007	0001	45 - 142.58	17		F	#	.00032	
Sulfate	mg/L	09/11/2007	0001	45 - 142.58	16000		F	#	100	
Temperature	C	09/11/2007	N001	45 - 142.58	17.22		F	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	45 - 142.58	27000		F	#	400	
Turbidity	NTU	09/11/2007	N001	45 - 142.58	8.7		F	#		
Uranium	mg/L	09/11/2007	0001	45 - 142.58	0.028		F	#	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1007 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	36.8	- 46.3	1460		FQ	#		
Ammonia Total as N	mg/L	09/13/2007	0001	36.8	- 46.3	24		FQ	#	1	
Calcium	mg/L	09/13/2007	0001	36.8	- 46.3	450		FQ	#	.016	
Chloride	mg/L	09/13/2007	0001	36.8	- 46.3	540		FQ	#	40	
Magnesium	mg/L	09/13/2007	0001	36.8	- 46.3	2200		FQ	#	.045	
Manganese	mg/L	09/13/2007	0001	36.8	- 46.3	1.5		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	36.8	- 46.3	490		FQ	#	5	
Oxidation Reduction Potential	mV	09/13/2007	N001	36.8	- 46.3	207		FQ	#		
pH	s.u.	09/13/2007	N001	36.8	- 46.3	6.67		FQ	#		
Potassium	mg/L	09/13/2007	0001	36.8	- 46.3	130		FQ	#	.22	
Selenium	mg/L	09/13/2007	0001	36.8	- 46.3	0.11		FQ	#	.00097	
Sodium	mg/L	09/13/2007	0001	36.8	- 46.3	2500		FQ	#	.023	
Specific Conductance	umhos/cm	09/13/2007	N001	36.8	- 46.3	13040		FQ	#		
Strontium	mg/L	09/13/2007	0001	36.8	- 46.3	11		FQ	#	.00032	
Sulfate	mg/L	09/13/2007	0001	36.8	- 46.3	13000		FQ	#	100	
Temperature	C	09/13/2007	N001	36.8	- 46.3	18.5		FQ	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	36.8	- 46.3	23000		FQ	#	400	
Turbidity	NTU	09/13/2007	N001	36.8	- 46.3	8.55		FQ	#		
Uranium	mg/L	09/13/2007	0001	36.8	- 46.3	2.5		FQ	#	.00059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1057 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	36.66	- 41.66	1186		F #		
Ammonia Total as N	mg/L	09/12/2007	0001	36.66	- 41.66	410		F #	10	
Ammonia Total as N	mg/L	09/12/2007	0002	36.66	- 41.66	560		F #	20	
Calcium	mg/L	09/12/2007	0001	36.66	- 41.66	680		F #	.016	
Calcium	mg/L	09/12/2007	0002	36.66	- 41.66	710		F #	.078	
Chloride	mg/L	09/12/2007	0001	36.66	- 41.66	390		F #	40	
Chloride	mg/L	09/12/2007	0002	36.66	- 41.66	390		F #	40	
Magnesium	mg/L	09/12/2007	0001	36.66	- 41.66	1400		F #	.045	
Magnesium	mg/L	09/12/2007	0002	36.66	- 41.66	1400		F #	.23	
Manganese	mg/L	09/12/2007	0001	36.66	- 41.66	13		F #	.0015	
Manganese	mg/L	09/12/2007	0002	36.66	- 41.66	14		F #	.0075	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	36.66	- 41.66	2400		F #	20	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0002	36.66	- 41.66	1700		F #	20	
Oxidation Reduction Potential	mV	09/12/2007	N001	36.66	- 41.66	215		F #		
pH	s.u.	09/12/2007	N001	36.66	- 41.66	6.65		F #		
Potassium	mg/L	09/12/2007	0001	36.66	- 41.66	210		F #	.22	
Potassium	mg/L	09/12/2007	0002	36.66	- 41.66	240		F #	.022	
Selenium	mg/L	09/12/2007	0001	36.66	- 41.66	0.23		F #	.0024	
Selenium	mg/L	09/12/2007	0002	36.66	- 41.66	0.21		F #	.0024	
Sodium	mg/L	09/12/2007	0001	36.66	- 41.66	1200		F #	.023	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1057 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Sodium	mg/L	09/12/2007	0002	36.66 - 41.66	1100		F #	.11	
Specific Conductance	umhos/cm	09/12/2007	N001	36.66 - 41.66	12870		F #		
Strontium	mg/L	09/12/2007	0001	36.66 - 41.66	8.1		F #	.00032	
Strontium	mg/L	09/12/2007	0002	36.66 - 41.66	7.3		F #	.000032	
Sulfate	mg/L	09/12/2007	0001	36.66 - 41.66	6000		F #	100	
Sulfate	mg/L	09/12/2007	0002	36.66 - 41.66	6200		F #	100	
Temperature	C	09/12/2007	N001	36.66 - 41.66	19.2		F #		
Total Dissolved Solids	mg/L	09/12/2007	0001	36.66 - 41.66	21000		F #	400	
Total Dissolved Solids	mg/L	09/12/2007	0002	36.66 - 41.66	20000		F #	400	
Turbidity	NTU	09/12/2007	N001	36.66 - 41.66	1.82		F #		
Uranium	mg/L	09/12/2007	0001	36.66 - 41.66	0.051		F #	.00003	
Uranium	mg/L	09/12/2007	0002	36.66 - 41.66	0.046		F #	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1058 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Ammonia Total as N	mg/L	09/10/2007	0001	41.7	- 51.2	2.9	FQ	#	.2	
Calcium	mg/L	09/10/2007	0001	41.7	- 51.2	110	FQ	#	.0078	
Chloride	mg/L	09/10/2007	0001	41.7	- 51.2	2200	FQ	#	40	
Magnesium	mg/L	09/10/2007	0001	41.7	- 51.2	54	FQ	#	.023	
Manganese	mg/L	09/10/2007	0001	41.7	- 51.2	0.12	FQ	#	.00075	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	41.7	- 51.2	0.39	FQ	#	.01	
Oxidation Reduction Potential	mV	09/10/2007	N001	41.7	- 51.2	178	FQ	#		
pH	s.u.	09/10/2007	N001	41.7	- 51.2	6.72	FQ	#		
Potassium	mg/L	09/10/2007	0001	41.7	- 51.2	18	FQ	#	.11	
Selenium	mg/L	09/10/2007	0001	41.7	- 51.2	0.00059	FQ	#	.000049	
Sodium	mg/L	09/10/2007	0001	41.7	- 51.2	1900	FQ	#	.23	
Specific Conductance	umhos /cm	09/10/2007	N001	41.7	- 51.2	27030	FQ	#		
Strontium	mg/L	09/10/2007	0001	41.7	- 51.2	5.2	FQ	#	.00016	
Sulfate	mg/L	09/10/2007	0001	41.7	- 51.2	3000	FQ	#	50	
Temperature	C	09/10/2007	N001	41.7	- 51.2	19.4	FQ	#		
Total Dissolved Solids	mg/L	09/10/2007	0001	41.7	- 51.2	8000	FQJ	#	200	
Turbidity	NTU	09/10/2007	N001	41.7	- 51.2	48.9	FQ	#		
Uranium	mg/L	09/10/2007	0001	41.7	- 51.2	0.0043	FQ	#	.0000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1059 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	39.5 - 49	670		FQ	#		
Ammonia Total as N	mg/L	09/10/2007	0001	39.5 - 49	0.59		FQ	#	.1	
Calcium	mg/L	09/10/2007	0001	39.5 - 49	310		FQ	#	.016	
Chloride	mg/L	09/10/2007	0001	39.5 - 49	820		FQ	#	40	
Magnesium	mg/L	09/10/2007	0001	39.5 - 49	310		FQ	#	.045	
Manganese	mg/L	09/10/2007	0001	39.5 - 49	0.048	B	FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	39.5 - 49	290		FQ	#	2	
Oxidation Reduction Potential	mV	09/10/2007	N001	39.5 - 49	157		FQ	#		
pH	s.u.	09/10/2007	N001	39.5 - 49	7.12		FQ	#		
Potassium	mg/L	09/10/2007	0001	39.5 - 49	31		FQ	#	.22	
Selenium	mg/L	09/10/2007	0001	39.5 - 49	0.021		FQ	#	.000097	
Sodium	mg/L	09/10/2007	0001	39.5 - 49	3300		FQ	#	.23	
Specific Conductance	umhos/cm	09/10/2007	N001	39.5 - 49	37540		FQ	#		
Strontium	mg/L	09/10/2007	0001	39.5 - 49	16		FQ	#	.00032	
Sulfate	mg/L	09/10/2007	0001	39.5 - 49	8800		FQ	#	100	
Temperature	C	09/10/2007	N001	39.5 - 49	18.7		FQ	#		
Total Dissolved Solids	mg/L	09/10/2007	0001	39.5 - 49	17000		FQJ	#	200	
Turbidity	NTU	09/10/2007	N001	39.5 - 49	25.5		FQ	#		
Uranium	mg/L	09/10/2007	0001	39.5 - 49	0.061		FQ	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1060 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	27.2	- 36.7	562		FQ #		
Ammonia Total as N	mg/L	09/11/2007	0001	27.2	- 36.7	0.1	U	FQ #	.1	
Calcium	mg/L	09/11/2007	0001	27.2	- 36.7	420		FQ #	.016	
Chloride	mg/L	09/11/2007	0001	27.2	- 36.7	580		FQ #	40	
Magnesium	mg/L	09/11/2007	0001	27.2	- 36.7	1000		FQ #	.045	
Manganese	mg/L	09/11/2007	0001	27.2	- 36.7	0.0016	B	FQJ #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	27.2	- 36.7	450		FQ #	5	
Oxidation Reduction Potential	mV	09/11/2007	N001	27.2	- 36.7	102		FQ #		
pH	s.u.	09/11/2007	N001	27.2	- 36.7	7.61		FQ #		
Potassium	mg/L	09/11/2007	0001	27.2	- 36.7	47		FQ #	.22	
Selenium	mg/L	09/11/2007	0001	27.2	- 36.7	3.2		FQ #	.049	
Sodium	mg/L	09/11/2007	0001	27.2	- 36.7	3100		FQ #	.23	
Specific Conductance	umhos/cm	09/11/2007	N001	27.2	- 36.7	20052		FQ #		
Strontium	mg/L	09/11/2007	0001	27.2	- 36.7	8.9		FQ #	.00032	
Sulfate	mg/L	09/11/2007	0001	27.2	- 36.7	11000		FQ #	100	
Temperature	C	09/11/2007	N001	27.2	- 36.7	19.54		FQ #		
Total Dissolved Solids	mg/L	09/11/2007	0001	27.2	- 36.7	20000		FQ #	1000	
Uranium	mg/L	09/11/2007	0001	27.2	- 36.7	0.22		FQ #	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1068 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	6.95	- 8.95	622		FQ	#		
Ammonia Total as N	mg/L	09/12/2007	0001	6.95	- 8.95	62		FQ	#	2	
Calcium	mg/L	09/12/2007	0001	6.95	- 8.95	470		FQ	#	.016	
Chloride	mg/L	09/12/2007	0001	6.95	- 8.95	280		FQ	#	40	
Magnesium	mg/L	09/12/2007	0001	6.95	- 8.95	1000		FQ	#	.045	
Manganese	mg/L	09/12/2007	0001	6.95	- 8.95	1.4		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	6.95	- 8.95	220		FQ	#	5	
Oxidation Reduction Potential	mV	09/12/2007	N001	6.95	- 8.95	156		FQ	#		
pH	s.u.	09/12/2007	N001	6.95	- 8.95	6.86		FQ	#		
Potassium	mg/L	09/12/2007	0001	6.95	- 8.95	84		FQ	#	.22	
Selenium	mg/L	09/12/2007	0001	6.95	- 8.95	0.03		FQ	#	.00049	
Sodium	mg/L	09/12/2007	0001	6.95	- 8.95	1100		FQ	#	.023	
Specific Conductance	umhos/cm	09/12/2007	N001	6.95	- 8.95	7308		FQ	#		
Strontium	mg/L	09/12/2007	0001	6.95	- 8.95	9.2		FQ	#	.00032	
Sulfate	mg/L	09/12/2007	0001	6.95	- 8.95	6400		FQ	#	100	
Temperature	C	09/12/2007	N001	6.95	- 8.95	24.99		FQ	#		
Total Dissolved Solids	mg/L	09/12/2007	0001	6.95	- 8.95	12000		FQ	#	400	
Turbidity	NTU	09/12/2007	N001	6.95	- 8.95	41.8		FQ	#		
Uranium	mg/L	09/12/2007	0001	6.95	- 8.95	0.63		FQ	#	.00012	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1070 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	52.5	-	62	648			#		
Ammonia Total as N	mg/L	09/12/2007	0001	52.5	-	62	6.4			#	.2	
Calcium	mg/L	09/12/2007	0001	52.5	-	62	410			#	.016	
Chloride	mg/L	09/12/2007	0001	52.5	-	62	1500			#	40	
Magnesium	mg/L	09/12/2007	0001	52.5	-	62	1200			#	.045	
Manganese	mg/L	09/12/2007	0001	52.5	-	62	0.46			#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	52.5	-	62	850			#	5	
Oxidation Reduction Potential	mV	09/12/2007	N001	52.5	-	62	175			#		
pH	s.u.	09/12/2007	N001	52.5	-	62	7.37			#		
Potassium	mg/L	09/12/2007	0001	52.5	-	62	96			#	.22	
Selenium	mg/L	09/12/2007	0001	52.5	-	62	2.5			#	.049	
Sodium	mg/L	09/12/2007	0001	52.5	-	62	5200			#	.23	
Specific Conductance	umhos /cm	09/12/2007	N001	52.5	-	62	18270			#		
Strontium	mg/L	09/12/2007	0001	52.5	-	62	9.4			#	.00032	
Sulfate	mg/L	09/12/2007	0001	52.5	-	62	16000			#	100	
Temperature	C	09/12/2007	N001	52.5	-	62	24.1			#		
Total Dissolved Solids	mg/L	09/12/2007	0001	52.5	-	62	31000			#	1000	
Turbidity	NTU	09/12/2007	N001	52.5	-	62	6.86			#		
Uranium	mg/L	09/12/2007	0001	52.5	-	62	0.11			#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1071 WELL

Parameter	Units	Sample		Depth Range			Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	36.5	-	46	510		#		
Ammonia Total as N	mg/L	09/12/2007	0001	36.5	-	46	220		#	10	
Calcium	mg/L	09/12/2007	0001	36.5	-	46	1400		#	.016	
Chloride	mg/L	09/12/2007	0001	36.5	-	46	330		#	40	
Magnesium	mg/L	09/12/2007	0001	36.5	-	46	1400		#	.045	
Manganese	mg/L	09/12/2007	0001	36.5	-	46	1.9		#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	36.5	-	46	3400		#	20	
Oxidation Reduction Potential	mV	09/12/2007	N001	36.5	-	46	169		#		
pH	s.u.	09/12/2007	N001	36.5	-	46	6.27		#		
Potassium	mg/L	09/12/2007	0001	36.5	-	46	190		#	.22	
Selenium	mg/L	09/12/2007	0001	36.5	-	46	0.15		#	.0024	
Sodium	mg/L	09/12/2007	0001	36.5	-	46	1200		#	.023	
Specific Conductance	umhos/cm	09/12/2007	N001	36.5	-	46	13200		#		
Strontium	mg/L	09/12/2007	0001	36.5	-	46	9.7		#	.00032	
Sulfate	mg/L	09/12/2007	0001	36.5	-	46	3900		#	100	
Temperature	C	09/12/2007	N001	36.5	-	46	25.6		#		
Total Dissolved Solids	mg/L	09/12/2007	0001	36.5	-	46	24000		#	400	
Turbidity	NTU	09/12/2007	N001	36.5	-	46	4.39		#		
Uranium	mg/L	09/12/2007	0001	36.5	-	46	0.059		#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1072 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	39	- 48.5	1442		FQ #		
Ammonia Total as N	mg/L	09/11/2007	0001	39	- 48.5	0.27		FQ #	.1	
Calcium	mg/L	09/11/2007	0001	39	- 48.5	490		FQ #	.016	
Chloride	mg/L	09/11/2007	0001	39	- 48.5	910		FQ #	40	
Magnesium	mg/L	09/11/2007	0001	39	- 48.5	2700		FQ #	.045	
Manganese	mg/L	09/11/2007	0001	39	- 48.5	1.2		FQ #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	39	- 48.5	1400		FQ #	10	
Oxidation Reduction Potential	mV	09/11/2007	N001	39	- 48.5	178		FQ #		
pH	s.u.	09/11/2007	N001	39	- 48.5	6.58		FQ #		
Potassium	mg/L	09/11/2007	0001	39	- 48.5	81		FQ #	.22	
Selenium	mg/L	09/11/2007	0001	39	- 48.5	0.0013		FQ #	.000097	
Sodium	mg/L	09/11/2007	0001	39	- 48.5	2900		FQ #	.11	
Specific Conductance	umhos /cm	09/11/2007	N001	39	- 48.5	15920		FQ #		
Strontium	mg/L	09/11/2007	0001	39	- 48.5	14		FQ #	.00032	
Sulfate	mg/L	09/11/2007	0001	39	- 48.5	12000		FQ #	100	
Temperature	C	09/11/2007	N001	39	- 48.5	17.9		FQ #		
Total Dissolved Solids	mg/L	09/11/2007	0001	39	- 48.5	30000		FQ #	400	
Turbidity	NTU	09/11/2007	N001	39	- 48.5	6.16		FQ #		
Uranium	mg/L	09/11/2007	0001	39	- 48.5	0.16		FQ #	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1073 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	40.5	- 50	1150		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	40.5	- 50	68		FQ	#	20	
Calcium	mg/L	09/11/2007	0001	40.5	- 50	520		FQ	#	.016	
Chloride	mg/L	09/11/2007	0001	40.5	- 50	1000		FQ	#	40	
Magnesium	mg/L	09/11/2007	0001	40.5	- 50	1600		FQ	#	.045	
Manganese	mg/L	09/11/2007	0001	40.5	- 50	1.1		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	40.5	- 50	1300		FQ	#	10	
Oxidation Reduction Potential	mV	09/11/2007	N001	40.5	- 50	160		FQ	#		
pH	s.u.	09/11/2007	N001	40.5	- 50	7.76		FQ	#		
Potassium	mg/L	09/11/2007	0001	40.5	- 50	130		FQ	#	.22	
Selenium	mg/L	09/11/2007	0001	40.5	- 50	1.9		FQ	#	.049	
Sodium	mg/L	09/11/2007	0001	40.5	- 50	2400		FQ	#	.023	
Specific Conductance	umhos/cm	09/11/2007	N001	40.5	- 50	11650		FQ	#		
Strontium	mg/L	09/11/2007	0001	40.5	- 50	9.2		FQ	#	.00032	
Sulfate	mg/L	09/11/2007	0001	40.5	- 50	8800		FQ	#	100	
Temperature	C	09/11/2007	N001	40.5	- 50	18.3		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	40.5	- 50	23000		FQ	#	400	
Turbidity	NTU	09/11/2007	N001	40.5	- 50	723		FQ	#		
Uranium	mg/L	09/11/2007	0001	40.5	- 50	0.06		FQ	#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1074 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	27	- 36.5	1200		FQ #		
Ammonia Total as N	mg/L	09/10/2007	0001	27	- 36.5	2.7		FQ #	.2	
Calcium	mg/L	09/10/2007	0001	27	- 36.5	550		FQ #	.016	
Chloride	mg/L	09/10/2007	0001	27	- 36.5	980		FQ #	40	
Magnesium	mg/L	09/10/2007	0001	27	- 36.5	1900		FQ #	.045	
Manganese	mg/L	09/10/2007	0001	27	- 36.5	1.8		FQ #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	27	- 36.5	1100		FQ #	10	
Oxidation Reduction Potential	mV	09/10/2007	N001	27	- 36.5	284		FQ #		
pH	s.u.	09/10/2007	N001	27	- 36.5	6.88		FQ #		
Potassium	mg/L	09/10/2007	0001	27	- 36.5	56		FQ #	.22	
Selenium	mg/L	09/10/2007	0001	27	- 36.5	0.29		FQ #	.0049	
Sodium	mg/L	09/10/2007	0001	27	- 36.5	2000		FQ #	.023	
Specific Conductance	umhos /cm	09/10/2007	N001	27	- 36.5	875		FQ #		
Strontium	mg/L	09/10/2007	0001	27	- 36.5	10		FQ #	.00032	
Sulfate	mg/L	09/10/2007	0001	27	- 36.5	7700		FQ #	100	
Temperature	C	09/10/2007	N001	27	- 36.5	23.2		FQ #		
Total Dissolved Solids	mg/L	09/10/2007	0001	27	- 36.5	21000		FQJ #	1000	
Turbidity	NTU	09/10/2007	N001	27	- 36.5	213		FQ #		
Uranium	mg/L	09/10/2007	0001	27	- 36.5	1.7		FQ #	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1078 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
						Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	35.5 - 45	564		#		
Ammonia Total as N	mg/L	09/12/2007	0001	35.5 - 45	2.8		#	.1	
Calcium	mg/L	09/12/2007	0001	35.5 - 45	430		#	.016	
Chloride	mg/L	09/12/2007	0001	35.5 - 45	1100		#	40	
Magnesium	mg/L	09/12/2007	0001	35.5 - 45	1100		#	.045	
Manganese	mg/L	09/12/2007	0001	35.5 - 45	0.11		#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	35.5 - 45	830		#	5	
Oxidation Reduction Potential	mV	09/12/2007	N001	35.5 - 45	185		#		
pH	s.u.	09/12/2007	N001	35.5 - 45	7.66		#		
Potassium	mg/L	09/12/2007	0001	35.5 - 45	81		#	.22	
Selenium	mg/L	09/12/2007	0001	35.5 - 45	3.3		#	.049	
Sodium	mg/L	09/12/2007	0001	35.5 - 45	4600		#	.23	
Specific Conductance	umhos/cm	09/12/2007	N001	35.5 - 45	16650		#		
Strontium	mg/L	09/12/2007	0001	35.5 - 45	9.5		#	.00032	
Sulfate	mg/L	09/12/2007	0001	35.5 - 45	14000		#	100	
Temperature	C	09/12/2007	N001	35.5 - 45	21.3		#		
Total Dissolved Solids	mg/L	09/12/2007	0001	35.5 - 45	27000		#	1000	
Turbidity	NTU	09/12/2007	N001	35.5 - 45	5.35		#		
Uranium	mg/L	09/12/2007	0001	35.5 - 45	0.15		#	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1079 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	10.5	-	20	300		F	#		
Ammonia Total as N	mg/L	09/13/2007	0001	10.5	-	20	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2007	0001	10.5	-	20	540		F	#	.0031	
Chloride	mg/L	09/13/2007	0001	10.5	-	20	67		F	#	10	
Magnesium	mg/L	09/13/2007	0001	10.5	-	20	110		F	#	.009	
Manganese	mg/L	09/13/2007	0001	10.5	-	20	0.0003	U	FJ	#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	10.5	-	20	44		F	#	.5	
Oxidation Reduction Potential	mV	09/13/2007	N001	10.5	-	20	172		F	#		
pH	s.u.	09/13/2007	N001	10.5	-	20	7.16		F	#		
Potassium	mg/L	09/13/2007	0001	10.5	-	20	9.3		F	#	.045	
Selenium	mg/L	09/13/2007	0001	10.5	-	20	0.25		F	#	.0024	
Sodium	mg/L	09/13/2007	0001	10.5	-	20	270		F	#	.0046	
Specific Conductance	umhos/cm	09/13/2007	N001	10.5	-	20	2560		F	#		
Strontium	mg/L	09/13/2007	0001	10.5	-	20	4.4		F	#	.000065	
Sulfate	mg/L	09/13/2007	0001	10.5	-	20	1700		F	#	25	
Temperature	C	09/13/2007	N001	10.5	-	20	19.7		F	#		
Total Dissolved Solids	mg/L	09/13/2007	0001	10.5	-	20	3300		F	#	80	
Turbidity	NTU	09/13/2007	N001	10.5	-	20	4.28		F	#		
Uranium	mg/L	09/13/2007	0001	10.5	-	20	0.023		F	#	.00003	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1087 TREATMENT SYSTEM Sump from interceptor trenches in Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	0	-	0	826			#		
Ammonia Total as N	mg/L	09/12/2007	0001	0	-	0	150			#	10	
Calcium	mg/L	09/12/2007	0001	0	-	0	490			#	.016	
Chloride	mg/L	09/12/2007	0001	0	-	0	380			#	40	
Magnesium	mg/L	09/12/2007	0001	0	-	0	1700			#	.045	
Manganese	mg/L	09/12/2007	0001	0	-	0	1.6			#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	0	-	0	510			#	5	
Oxidation Reduction Potential	mV	09/12/2007	N001	0	-	0	183			#		
pH	s.u.	09/12/2007	N001	0	-	0	7.01			#		
Potassium	mg/L	09/12/2007	0001	0	-	0	180			#	.22	
Selenium	mg/L	09/12/2007	0001	0	-	0	0.034	E		#	.00049	
Sodium	mg/L	09/12/2007	0001	0	-	0	1600			#	.023	
Specific Conductance	umhos/cm	09/12/2007	N001	0	-	0	10940			#		
Strontium	mg/L	09/12/2007	0001	0	-	0	10			#	.00032	
Sulfate	mg/L	09/12/2007	0001	0	-	0	10000			#	100	
Temperature	C	09/12/2007	N001	0	-	0	27.2			#		
Total Dissolved Solids	mg/L	09/12/2007	0001	0	-	0	19000			#	400	
Turbidity	NTU	09/12/2007	N001	0	-	0	3.42			#		
Uranium	mg/L	09/12/2007	0001	0	-	0	0.87			#	.00012	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1088 TREATMENT SYSTEM Sump from interceptor trenches in Many Devils Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	0	-	0	630			#		
Ammonia Total as N	mg/L	09/12/2007	0001	0	-	0	0.1	U		#	.1	
Calcium	mg/L	09/12/2007	0001	0	-	0	410			#	.016	
Chloride	mg/L	09/12/2007	0001	0	-	0	1600			#	40	
Magnesium	mg/L	09/12/2007	0001	0	-	0	1100			#	.045	
Manganese	mg/L	09/12/2007	0001	0	-	0	0.03	B		#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	0	-	0	600			#	5	
Oxidation Reduction Potential	mV	09/12/2007	N001	0	-	0	183			#		
pH	s.u.	09/12/2007	N001	0	-	0	7.35			#		
Potassium	mg/L	09/12/2007	0001	0	-	0	83			#	.22	
Selenium	mg/L	09/12/2007	0001	0	-	0	1.5			#	.049	
Sodium	mg/L	09/12/2007	0001	0	-	0	6300			#	.23	
Specific Conductance	umhos /cm	09/12/2007	N001	0	-	0	19620			#		
Strontium	mg/L	09/12/2007	0001	0	-	0	9.1			#	.00032	
Sulfate	mg/L	09/12/2007	0001	0	-	0	18000			#	100	
Temperature	C	09/12/2007	N001	0	-	0	23.2			#		
Total Dissolved Solids	mg/L	09/12/2007	0001	0	-	0	34000			#	1000	
Turbidity	NTU	09/12/2007	N001	0	-	0	74.6			#		
Uranium	mg/L	09/12/2007	0001	0	-	0	0.15			#	.0003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1091 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
						Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	33 - 43	818		#		
Ammonia Total as N	mg/L	09/10/2007	0001	33 - 43	1		#	.1	
Calcium	mg/L	09/10/2007	0001	33 - 43	490		#	.016	
Chloride	mg/L	09/10/2007	0001	33 - 43	1300		#	40	
Magnesium	mg/L	09/10/2007	0001	33 - 43	2300		#	.045	
Manganese	mg/L	09/10/2007	0001	33 - 43	1.1		#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	33 - 43	1500		#	20	
Oxidation Reduction Potential	mV	09/10/2007	N001	33 - 43	257		#		
pH	s.u.	09/10/2007	N001	33 - 43	6.57		#		
Potassium	mg/L	09/10/2007	0001	33 - 43	90		#	.22	
Selenium	mg/L	09/10/2007	0001	33 - 43	0.66		#	.0049	
Sodium	mg/L	09/10/2007	0001	33 - 43	3500		#	.23	
Specific Conductance	umhos/cm	09/10/2007	N001	33 - 43	25632		#		
Strontium	mg/L	09/10/2007	0001	33 - 43	13		#	.00032	
Sulfate	mg/L	09/10/2007	0001	33 - 43	12000		#	100	
Temperature	C	09/10/2007	N001	33 - 43	26.31		#		
Total Dissolved Solids	mg/L	09/10/2007	0001	33 - 43	31000		J #	400	
Turbidity	NTU	09/10/2007	N001	33 - 43	4.58		#		
Uranium	mg/L	09/10/2007	0001	33 - 43	0.13		#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1092 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	33	-	43	781		#		
Ammonia Total as N	mg/L	09/10/2007	0001	33	-	43	0.11		#	.1	
Calcium	mg/L	09/10/2007	0001	33	-	43	440		#	.016	
Chloride	mg/L	09/10/2007	0001	33	-	43	1400		#	40	
Magnesium	mg/L	09/10/2007	0001	33	-	43	2200		#	.045	
Manganese	mg/L	09/10/2007	0001	33	-	43	0.94		#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	33	-	43	890		#	10	
Oxidation Reduction Potential	mV	09/10/2007	N001	33	-	43	138		#		
pH	s.u.	09/10/2007	N001	33	-	43	6.84		#		
Potassium	mg/L	09/10/2007	0001	33	-	43	88		#	.22	
Selenium	mg/L	09/10/2007	0001	33	-	43	1.4		#	.0097	
Sodium	mg/L	09/10/2007	0001	33	-	43	3800		#	.23	
Specific Conductance	umhos /cm	09/10/2007	N001	33	-	43	26740		#		
Strontium	mg/L	09/10/2007	0001	33	-	43	12		#	.00032	
Sulfate	mg/L	09/10/2007	0001	33	-	43	14000		#	100	
Temperature	C	09/10/2007	N001	33	-	43	22.35		#		
Total Dissolved Solids	mg/L	09/10/2007	0001	33	-	43	31000		J	#	400
Turbidity	NTU	09/10/2007	N001	33	-	43	9.2		#		
Uranium	mg/L	09/10/2007	0001	33	-	43	0.13		#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1093 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	31.17	- 34.5	388		#		
Ammonia Total as N	mg/L	09/10/2007	0001	31.17	- 34.5	710		#	20	
Calcium	mg/L	09/10/2007	0001	31.17	- 34.5	1300		#	.016	
Chloride	mg/L	09/10/2007	0001	31.17	- 34.5	520		#	40	
Magnesium	mg/L	09/10/2007	0001	31.17	- 34.5	1400		#	.045	
Manganese	mg/L	09/10/2007	0001	31.17	- 34.5	28		#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	31.17	- 34.5	2600		#	20	
Oxidation Reduction Potential	mV	09/10/2007	N001	31.17	- 34.5	182		#		
pH	s.u.	09/10/2007	N001	31.17	- 34.5	6.62		#		
Potassium	mg/L	09/10/2007	0001	31.17	- 34.5	230		#	.22	
Selenium	mg/L	09/10/2007	0001	31.17	- 34.5	0.38		#	.0049	
Sodium	mg/L	09/10/2007	0001	31.17	- 34.5	1400		#	.023	
Specific Conductance	umhos/cm	09/10/2007	N001	31.17	- 34.5	24370		#		
Strontium	mg/L	09/10/2007	0001	31.17	- 34.5	10		#	.00032	
Sulfate	mg/L	09/10/2007	0001	31.17	- 34.5	3800		#	100	
Temperature	C	09/10/2007	N001	31.17	- 34.5	27.39		#		
Total Dissolved Solids	mg/L	09/10/2007	0001	31.17	- 34.5	25000		J #	400	
Turbidity	NTU	09/10/2007	N001	31.17	- 34.5	7.38		#		
Uranium	mg/L	09/10/2007	0001	31.17	- 34.5	0.063		#	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1095 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	39	-	49	510			#	
Ammonia Total as N	mg/L	09/12/2007	0001	39	-	49	670			#	20
Calcium	mg/L	09/12/2007	0001	39	-	49	640			#	.016
Chloride	mg/L	09/12/2007	0001	39	-	49	330			#	40
Magnesium	mg/L	09/12/2007	0001	39	-	49	1400			#	.045
Manganese	mg/L	09/12/2007	0001	39	-	49	23			#	.0015
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	39	-	49	930			#	10
Oxidation Reduction Potential	mV	09/12/2007	N001	39	-	49	123			#	
pH	s.u.	09/12/2007	N001	39	-	49	6.79			#	
Potassium	mg/L	09/12/2007	0001	39	-	49	190			#	.22
Selenium	mg/L	09/12/2007	0001	39	-	49	0.2			#	.0024
Sodium	mg/L	09/12/2007	0001	39	-	49	1200			#	.023
Specific Conductance	umhos /cm	09/12/2007	N001	39	-	49	13110			#	
Strontium	mg/L	09/12/2007	0001	39	-	49	7.3			#	.00032
Sulfate	mg/L	09/12/2007	0001	39	-	49	6600			#	100
Temperature	C	09/12/2007	N001	39	-	49	20.4			#	
Total Dissolved Solids	mg/L	09/12/2007	0001	39	-	49	20000			#	400
Turbidity	NTU	09/12/2007	N001	39	-	49	4.68			#	
Uranium	mg/L	09/12/2007	0001	39	-	49	0.06			#	.00003

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1096 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	57.5 - 66.5	604		#		
Ammonia Total as N	mg/L	09/12/2007	0001	57.5 - 66.5	18		#	1	
Calcium	mg/L	09/12/2007	0001	57.5 - 66.5	420		#	.016	
Chloride	mg/L	09/12/2007	0001	57.5 - 66.5	1000		#	40	
Magnesium	mg/L	09/12/2007	0001	57.5 - 66.5	1200		#	.045	
Manganese	mg/L	09/12/2007	0001	57.5 - 66.5	0.48		#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	57.5 - 66.5	690		#	5	
Oxidation Reduction Potential	mV	09/12/2007	N001	57.5 - 66.5	169		#		
pH	s.u.	09/12/2007	N001	57.5 - 66.5	7.03		#		
Potassium	mg/L	09/12/2007	0001	57.5 - 66.5	85		#	.22	
Selenium	mg/L	09/12/2007	0001	57.5 - 66.5	2.3		#	.049	
Sodium	mg/L	09/12/2007	0001	57.5 - 66.5	3900		#	.23	
Specific Conductance	umhos/cm	09/12/2007	N001	57.5 - 66.5	15070		#		
Strontium	mg/L	09/12/2007	0001	57.5 - 66.5	9.1		#	.00032	
Sulfate	mg/L	09/12/2007	0001	57.5 - 66.5	14000		#	100	
Temperature	C	09/12/2007	N001	57.5 - 66.5	23.3		#		
Total Dissolved Solids	mg/L	09/12/2007	0001	57.5 - 66.5	26000		#	400	
Turbidity	NTU	09/12/2007	N001	57.5 - 66.5	8.74		#		
Uranium	mg/L	09/12/2007	0001	57.5 - 66.5	0.12		#	.000059	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1120 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	17.5	- 22.5	492		FQ #		
Ammonia Total as N	mg/L	09/13/2007	0001	17.5	- 22.5	0.1	U	FQ #	.1	
Calcium	mg/L	09/13/2007	0001	17.5	- 22.5	560		FQ #	.0031	
Chloride	mg/L	09/13/2007	0001	17.5	- 22.5	30		FQ #	2	
Magnesium	mg/L	09/13/2007	0001	17.5	- 22.5	220		FQ #	.009	
Manganese	mg/L	09/13/2007	0001	17.5	- 22.5	0.072		FQ #	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	17.5	- 22.5	0.97		FQ #	.02	
Oxidation Reduction Potential	mV	09/13/2007	N001	17.5	- 22.5	177		FQ #		
pH	s.u.	09/13/2007	N001	17.5	- 22.5	7.34		FQ #		
Potassium	mg/L	09/13/2007	0001	17.5	- 22.5	8.5		FQ #	.045	
Selenium	mg/L	09/13/2007	0001	17.5	- 22.5	0.022		FQ #	.000097	
Sodium	mg/L	09/13/2007	0001	17.5	- 22.5	280		FQ #	.0046	
Specific Conductance	umhos/cm	09/13/2007	N001	17.5	- 22.5	2880		FQ #		
Strontium	mg/L	09/13/2007	0001	17.5	- 22.5	5.1		FQ #	.000065	
Sulfate	mg/L	09/13/2007	0001	17.5	- 22.5	2200		FQ #	25	
Temperature	C	09/13/2007	N001	17.5	- 22.5	17.6		FQ #		
Total Dissolved Solids	mg/L	09/13/2007	0001	17.5	- 22.5	4000		FQ #	80	
Turbidity	NTU	09/13/2007	N001	17.5	- 22.5	24.2		FQ #		
Uranium	mg/L	09/13/2007	0001	17.5	- 22.5	0.056		FQ #	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 1122 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID				Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	17.5	-	22.5	430		F	#	
Ammonia Total as N	mg/L	09/13/2007	0001	17.5	-	22.5	0.1	U	F	#	.1
Calcium	mg/L	09/13/2007	0001	17.5	-	22.5	350		F	#	.0031
Chloride	mg/L	09/13/2007	0001	17.5	-	22.5	34		F	#	10
Magnesium	mg/L	09/13/2007	0001	17.5	-	22.5	160		F	#	.009
Manganese	mg/L	09/13/2007	0001	17.5	-	22.5	0.96		F	#	.0003
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	17.5	-	22.5	1.7		F	#	.02
Oxidation Reduction Potential	mV	09/13/2007	N001	17.5	-	22.5	162		F	#	
pH	s.u.	09/13/2007	N001	17.5	-	22.5	7.37		F	#	
Potassium	mg/L	09/13/2007	0001	17.5	-	22.5	5.7		F	#	.045
Selenium	mg/L	09/13/2007	0001	17.5	-	22.5	0.039		F	#	.00049
Sodium	mg/L	09/13/2007	0001	17.5	-	22.5	210		F	#	.0046
Specific Conductance	umhos/cm	09/13/2007	N001	17.5	-	22.5	2240		F	#	
Strontium	mg/L	09/13/2007	0001	17.5	-	22.5	3.5		F	#	.000065
Sulfate	mg/L	09/13/2007	0001	17.5	-	22.5	1500		F	#	25
Temperature	C	09/13/2007	N001	17.5	-	22.5	19.6		F	#	
Total Dissolved Solids	mg/L	09/13/2007	0001	17.5	-	22.5	2800		F	#	80
Turbidity	NTU	09/13/2007	N001	17.5	-	22.5	9.91		F	#	
Uranium	mg/L	09/13/2007	0001	17.5	-	22.5	0.042		F	#	.00003

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: DM7 WELL Just SW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	38	-	53		FQ #		
Ammonia Total as N	mg/L	09/11/2007	0001	38	-	53	0.1	U FQ #	.1	
Calcium	mg/L	09/11/2007	0001	38	-	53	400	FQ #	.016	
Chloride	mg/L	09/11/2007	0001	38	-	53	1500	FQ #	40	
Magnesium	mg/L	09/11/2007	0001	38	-	53	390	FQ #	.045	
Manganese	mg/L	09/11/2007	0001	38	-	53	0.25	FQ #	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	38	-	53	220	FQ #	2	
Oxidation Reduction Potential	mV	09/11/2007	N001	38	-	53	117	FQ #		
pH	s.u.	09/11/2007	N001	38	-	53	7.35	FQ #		
Potassium	mg/L	09/11/2007	0001	38	-	53	38	FQ #	.22	
Selenium	mg/L	09/11/2007	0001	38	-	53	0.011	FQ #	.000097	
Sodium	mg/L	09/11/2007	0001	38	-	53	3400	FQ #	.23	
Specific Conductance	umhos/cm	09/11/2007	N001	38	-	53	43470	FQ #		
Strontium	mg/L	09/11/2007	0001	38	-	53	15	FQ #	.00032	
Sulfate	mg/L	09/11/2007	0001	38	-	53	10000	FQ #	100	
Temperature	C	09/11/2007	N001	38	-	53	17	FQ #		
Total Dissolved Solids	mg/L	09/11/2007	0001	38	-	53	18000	FQ #	400	
Turbidity	NTU	09/11/2007	N001	38	-	53	41.2	FQ #		
Uranium	mg/L	09/11/2007	0001	38	-	53	0.056	FQ #	.00003	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: MW1 WELL Just N of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	-	1920		FQ	#		
Ammonia Total as N	mg/L	09/11/2007	0001	-	4.5		FQ	#	.2	
Calcium	mg/L	09/11/2007	0001	-	65		FQ	#	.016	
Chloride	mg/L	09/11/2007	0001	-	4600		FQ	#	100	
Magnesium	mg/L	09/11/2007	0001	-	32		FQ	#	.045	
Manganese	mg/L	09/11/2007	0001	-	0.13		FQ	#	.0015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	-	0.1	U	FQ	#	.1	
Oxidation Reduction Potential	mV	09/11/2007	N001	-	127		FQ	#		
pH	s.u.	09/11/2007	N001	-	7.68		FQ	#		
Potassium	mg/L	09/11/2007	0001	-	23		FQ	#	.22	
Selenium	mg/L	09/11/2007	0001	-	0.00021		FQ	#	.000097	
Sodium	mg/L	09/11/2007	0001	-	3500		FQ	#	.11	
Specific Conductance	umhos /cm	09/11/2007	N001	-	39960		FQ	#		
Strontium	mg/L	09/11/2007	0001	-	6.4		FQ	#	.00032	
Sulfate	mg/L	09/11/2007	0001	-	1800		FQ	#	100	
Temperature	C	09/11/2007	N001	-	17		FQ	#		
Total Dissolved Solids	mg/L	09/11/2007	0001	-	12000		FQ	#	400	
Turbidity	NTU	09/11/2007	N001	-	14.3		FQ	#		
Uranium	mg/L	09/11/2007	0001	-	0.00087		FQ	#	.0000059	

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- > Result above upper detection limit.

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

DATA QUALIFIERS:

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

QA QUALIFIER:

Validated according to quality assurance guidelines.

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**Surface Water Quality Data
Floodplain Locations**

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Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0501 SURFACE LOCATION S. bank San Juan River just E of Disposal Cell

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/10/2007	0001	103			#		
Ammonia Total as N	mg/L	09/10/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/10/2007	0001	54			#	.0016	
Chloride	mg/L	09/10/2007	0001	9.2		J	#	.4	
Magnesium	mg/L	09/10/2007	0001	9			#	.0045	
Manganese	mg/L	09/10/2007	0001	0.0025	B		#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2007	0001	0.23			#	.01	
Oxidation Reduction Potential	mV	09/10/2007	N001	138			#		
pH	s.u.	09/10/2007	N001	8.35			#		
Potassium	mg/L	09/10/2007	0001	2.8	N		#	.022	
Selenium	mg/L	09/10/2007	0001	0.00041			#	.000049	
Sodium	mg/L	09/10/2007	0001	24	E		#	.0023	
Specific Conductance	umhos/cm	09/10/2007	N001	459			#		
Strontium	mg/L	09/10/2007	0001	0.61			#	.000032	
Sulfate	mg/L	09/10/2007	0001	96		J	#	1	
Temperature	C	09/10/2007	N001	22.54			#		
Turbidity	NTU	09/10/2007	N001	83.1			#		
Uranium	mg/L	09/10/2007	0001	0.0011			#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0887 SURFACE LOCATION Distributary channel of San Juan River; Adjusted 33 Ft. North of GPS Location

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers		Detection Limit	Uncertainty
					Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	882		#		
Ammonia Total as N	mg/L	09/12/2007	0001	0.1	U	#	.1	
Calcium	mg/L	09/12/2007	0001	57		#	.0016	
Chloride	mg/L	09/12/2007	0001	8.4		#	1	
Magnesium	mg/L	09/12/2007	0001	8.5		#	.0045	
Manganese	mg/L	09/12/2007	0001	0.0021	B U	#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	0.028		#	.01	
Oxidation Reduction Potential	mV	09/12/2007	N001	76		#		
pH	s.u.	09/12/2007	N001	8.59		#		
Potassium	mg/L	09/12/2007	0001	2.8	EN	#	.022	
Selenium	mg/L	09/12/2007	0001	0.00049		#	.000049	
Sodium	mg/L	09/12/2007	0001	23	E	#	.0023	
Specific Conductance	umhos/cm	09/12/2007	N001	446		#		
Strontium	mg/L	09/12/2007	0001	0.61		#	.000032	
Sulfate	mg/L	09/12/2007	0001	100		#	2.5	
Temperature	C	09/12/2007	N001	21.18		#		
Uranium	mg/L	09/12/2007	0001	0.0014		#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0897 SURFACE LOCATION S. bank San Juan River, just below Many Devils Wash confluence

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	99			#		
Ammonia Total as N	mg/L	09/13/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2007	0001	54			#	.0016	
Chloride	mg/L	09/13/2007	0001	11			#	1	
Magnesium	mg/L	09/13/2007	0001	9.8			#	.0045	
Manganese	mg/L	09/13/2007	0001	0.0061		U	#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	0.75			#	.01	
Oxidation Reduction Potential	mV	09/13/2007	N001	144			#		
pH	s.u.	09/13/2007	N001	8.43			#		
Potassium	mg/L	09/13/2007	0001	2.7			#	.022	
Selenium	mg/L	09/13/2007	0001	0.0019			#	.000049	
Sodium	mg/L	09/13/2007	0001	30			#	.0023	
Specific Conductance	umhos/cm	09/13/2007	N001	511			#		
Strontium	mg/L	09/13/2007	0001	0.59			#	.000032	
Sulfate	mg/L	09/13/2007	0001	120			#	2.5	
Temperature	C	09/13/2007	N001	16.64			#		
Uranium	mg/L	09/13/2007	0001	0.0012			#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0898 SURFACE LOCATION S. bank San Juan River, N of floodplain background area

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	118			#	
Ammonia Total as N	mg/L	09/12/2007	0001	0.1	U		#	.1
Calcium	mg/L	09/12/2007	0001	53			#	.0016
Chloride	mg/L	09/12/2007	0001	9.3			#	.4
Magnesium	mg/L	09/12/2007	0001	8.4			#	.0045
Manganese	mg/L	09/12/2007	0001	0.0016	B	U	#	.00015
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	0.22			#	.01
Oxidation Reduction Potential	mV	09/12/2007	N001	104			#	
pH	s.u.	09/12/2007	N001	8.43			#	
Potassium	mg/L	09/12/2007	0001	2.6			#	.022
Selenium	mg/L	09/12/2007	0001	0.00045			#	.000049
Sodium	mg/L	09/12/2007	0001	23			#	.0023
Specific Conductance	umhos/cm	09/12/2007	N001	432			#	
Strontium	mg/L	09/12/2007	0001	0.59			#	.000032
Sulfate	mg/L	09/12/2007	0001	99			#	1
Temperature	C	09/12/2007	N001	18.63			#	
Uranium	mg/L	09/12/2007	0001	0.0011			#	.0000059

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0939 SURFACE LOCATION Distributary channel of San Juan River

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	106			#		
Ammonia Total as N	mg/L	09/12/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2007	0001	60			#	.0016	
Chloride	mg/L	09/12/2007	0001	9.2			#	.4	
Magnesium	mg/L	09/12/2007	0001	8.7			#	.0045	
Manganese	mg/L	09/12/2007	0001	0.033			#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	0.014			#	.01	
Oxidation Reduction Potential	mV	09/12/2007	N001	73			#		
pH	s.u.	09/12/2007	N001	7.75			#		
Potassium	mg/L	09/12/2007	0001	3.2			#	.022	
Selenium	mg/L	09/12/2007	0001	0.00057			#	.000049	
Sodium	mg/L	09/12/2007	0001	23			#	.0023	
Specific Conductance	umhos/cm	09/12/2007	N001	489			#		
Strontium	mg/L	09/12/2007	0001	0.64			#	.000032	
Sulfate	mg/L	09/12/2007	0001	100			#	1	
Temperature	C	09/12/2007	N001	23.33			#		
Uranium	mg/L	09/12/2007	0001	0.0014			#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0940 SURFACE LOCATION S. bank San Juan River about 2500 ft E of US Hwy 666 bridge

Parameter	Units	Sample Date	ID	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	107			#		
Ammonia Total as N	mg/L	09/12/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2007	0001	53			#	.0016	
Chloride	mg/L	09/12/2007	0001	9.2			#	.4	
Dissolved Oxygen	mg/L	09/12/2007	N001	5.77			#		
Magnesium	mg/L	09/12/2007	0001	8.4			#	.0045	
Manganese	mg/L	09/12/2007	0001	0.0012	B		#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	0.22			#	.01	
Oxidation Reduction Potential	mV	09/12/2007	N001	0			#		
pH	s.u.	09/12/2007	N001	8.36			#		
Potassium	mg/L	09/12/2007	0001	2.7			#	.022	
Selenium	mg/L	09/12/2007	0001	0.00037			#	.000049	
Sodium	mg/L	09/12/2007	0001	24			#	.0023	
Specific Conductance	umhos/cm	09/12/2007	N001	571			#		
Strontium	mg/L	09/12/2007	0001	0.59			#	.000032	
Sulfate	mg/L	09/12/2007	0001	98			#	1	
Temperature	C	09/12/2007	N001	23.8			#		
Uranium	mg/L	09/12/2007	0001	0.001			#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0956 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	102			#		
Ammonia Total as N	mg/L	09/13/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2007	0001	53			#	.0016	
Chloride	mg/L	09/13/2007	0001	9.1			#	.4	
Dissolved Oxygen	mg/L	09/13/2007	N001	6.02			#		
Magnesium	mg/L	09/13/2007	0001	8.4			#	.0045	
Manganese	mg/L	09/13/2007	0001	0.0035	B		#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	0.21			#	.01	
Oxidation Reduction Potential	mV	09/13/2007	N001	180			#		
pH	s.u.	09/13/2007	N001	8.41			#		
Potassium	mg/L	09/13/2007	0001	2.6			#	.022	
Selenium	mg/L	09/13/2007	0001	0.0005			#	.000049	
Sodium	mg/L	09/13/2007	0001	23			#	.0023	
Specific Conductance	umhos/cm	09/13/2007	N001	465			#		
Strontium	mg/L	09/13/2007	0001	0.57			#	.000032	
Sulfate	mg/L	09/13/2007	0001	99			#	1	
Temperature	C	09/13/2007	N001	23.52			#		
Uranium	mg/L	09/13/2007	0001	0.0011			#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 0965 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers		Detection Limit	Uncertainty
					Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	107		#		
Ammonia Total as N	mg/L	09/13/2007	0001	0.1	U	#	.1	
Calcium	mg/L	09/13/2007	0001	54		#	.0016	
Chloride	mg/L	09/13/2007	0001	9.2		#	.4	
Dissolved Oxygen	mg/L	09/13/2007	N001	6		#		
Magnesium	mg/L	09/13/2007	0001	8.6		#	.0045	
Manganese	mg/L	09/13/2007	0001	0.0032	B	#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	0.21		#	.01	
Oxidation Reduction Potential	mV	09/13/2007	N001	122		#		
pH	s.u.	09/13/2007	N001	8.46		#		
Potassium	mg/L	09/13/2007	0001	2.7		#	.022	
Selenium	mg/L	09/13/2007	0001	0.00047		#	.000049	
Sodium	mg/L	09/13/2007	0001	24		#	.0023	
Specific Conductance	umhos/cm	09/13/2007	N001	413		#		
Strontium	mg/L	09/13/2007	0001	0.59		#	.000032	
Sulfate	mg/L	09/13/2007	0001	100		#	1	
Temperature	C	09/13/2007	N001	22		#		
Uranium	mg/L	09/13/2007	0001	0.0012		#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1203 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/11/2007	0001	95			#		
Ammonia Total as N	mg/L	09/11/2007	0001	0.1	U		#	.1	
Ammonia Total as N	mg/L	09/11/2007	0002	0.1	U		#	.1	
Calcium	mg/L	09/11/2007	0001	52			#	.0016	
Calcium	mg/L	09/11/2007	0002	53			#	.0016	
Chloride	mg/L	09/11/2007	0001	9.1		J	#	.4	
Chloride	mg/L	09/11/2007	0002	9.3		J	#	.4	
Dissolved Oxygen	mg/L	09/11/2007	N001	5.53			#		
Magnesium	mg/L	09/11/2007	0001	8.7			#	.0045	
Magnesium	mg/L	09/11/2007	0002	8.8			#	.0045	
Manganese	mg/L	09/11/2007	0001	0.0028	B		#	.00015	
Manganese	mg/L	09/11/2007	0002	0.0028	B		#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0001	0.2			#	.01	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2007	0002	0.2			#	.01	
Oxidation Reduction Potential	mV	09/11/2007	N001	109			#		
pH	s.u.	09/11/2007	N001	8.4			#		
Potassium	mg/L	09/11/2007	0001	2.7			#	.022	
Potassium	mg/L	09/11/2007	0002	2.7			#	.022	
Selenium	mg/L	09/11/2007	0001	0.00044			#	.000049	
Selenium	mg/L	09/11/2007	0002	0.00039			#	.000049	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1203 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Sodium	mg/L	09/11/2007	0001	24			#	.0023	
Sodium	mg/L	09/11/2007	0002	24			#	.0023	
Specific Conductance	umhos/cm	09/11/2007	N001	440			#		
Strontium	mg/L	09/11/2007	0001	0.59			#	.000032	
Strontium	mg/L	09/11/2007	0002	0.6			#	.000032	
Sulfate	mg/L	09/11/2007	0001	96		J	#	1	
Sulfate	mg/L	09/11/2007	0002	98		J	#	1	
Temperature	C	09/11/2007	N001	21.97			#		
Uranium	mg/L	09/11/2007	0001	0.0011			#	.0000059	
Uranium	mg/L	09/11/2007	0002	0.0011			#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 1/3/2008

Location: 1205 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	110			#		
Ammonia Total as N	mg/L	09/12/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2007	0001	57			#	.0016	
Chloride	mg/L	09/12/2007	0001	9.5			#	.4	
Dissolved Oxygen	mg/L	09/12/2007	N001	5.52			#		
Magnesium	mg/L	09/12/2007	0001	8.8			#	.0045	
Manganese	mg/L	09/12/2007	0001	0.001	B		#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	0.24			#	.01	
Oxidation Reduction Potential	mV	09/12/2007	N001	19			#		
pH	s.u.	09/12/2007	N001	8.24			#		
Potassium	mg/L	09/12/2007	0001	2.7			#	.022	
Selenium	mg/L	09/12/2007	0001	0.00048			#	.000049	
Sodium	mg/L	09/12/2007	0001	24			#	.0023	
Specific Conductance	umhos/cm	09/12/2007	N001	436			#		
Strontium	mg/L	09/12/2007	0001	0.6			#	.000032	
Sulfate	mg/L	09/12/2007	0001	100			#	1	
Temperature	C	09/12/2007	N001	18.75			#		
Uranium	mg/L	09/12/2007	0001	0.0011			#	.0000059	

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- > Result above upper detection limit.

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

DATA QUALIFIERS:

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

QA QUALIFIER:

Validated according to quality assurance guidelines.

**Surface Water Quality Data
Terrace Locations**

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Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0662 SURFACE LOCATION Bob Lee Wash, just below outflow ditch confluence

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	59			#		
Ammonia Total as N	mg/L	09/13/2007	0001	0.1	U		#	.1	
Ammonia Total as N	mg/L	09/13/2007	0002	0.1	U		#	.1	
Calcium	mg/L	09/13/2007	0001	110			#	.0031	
Calcium	mg/L	09/13/2007	0002	120			#	.0016	
Chloride	mg/L	09/13/2007	0001	58			#	10	
Chloride	mg/L	09/13/2007	0002	54			#	10	
Magnesium	mg/L	09/13/2007	0001	14			#	.009	
Magnesium	mg/L	09/13/2007	0002	14			#	.0045	
Manganese	mg/L	09/13/2007	0001	0.0061	B	U	#	.0003	
Manganese	mg/L	09/13/2007	0002	0.0084			#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	0.64			#	.02	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0002	0.64			#	.01	
Oxidation Reduction Potential	mV	09/13/2007	N001	212			#		
pH	s.u.	09/13/2007	N001	7.98			#		
Potassium	mg/L	09/13/2007	0001	12			#	.045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0662 SURFACE LOCATION Bob Lee Wash, just below outflow ditch confluence

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Potassium	mg/L	09/13/2007	0002	16		#	.022	
Selenium	mg/L	09/13/2007	0001	0.0013		#	.000049	
Selenium	mg/L	09/13/2007	0002	0.0014		#	.000049	
Sodium	mg/L	09/13/2007	0001	640		#	.11	
Sodium	mg/L	09/13/2007	0002	710		#	.023	
Specific Conductance	umhos/cm	09/13/2007	N001	4178		#		
Strontium	mg/L	09/13/2007	0001	11		#	.000065	
Strontium	mg/L	09/13/2007	0002	11		#	.00032	
Sulfate	mg/L	09/13/2007	0001	2200		#	25	
Sulfate	mg/L	09/13/2007	0002	2000		#	25	
Temperature	C	09/13/2007	N001	23.71		#		
Total Dissolved Solids	mg/L	09/13/2007	0002	3200		#	200	
Uranium	mg/L	09/13/2007	0001	0.00034		#	.0000059	
Uranium	mg/L	09/13/2007	0002	0.00027		#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0786 SURFACE LOCATION Escarpment seep at US Hwy 666 bridge

Parameter	Units	Sample Date	Sample ID	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	09/13/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2007	0001	450			#	.0031	
Chloride	mg/L	09/13/2007	0001	51			#	10	
Magnesium	mg/L	09/13/2007	0001	410			#	.009	
Manganese	mg/L	09/13/2007	0001	0.31			#	.0003	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	6			#	.05	
Potassium	mg/L	09/13/2007	0001	33			#	.045	
Selenium	mg/L	09/13/2007	0001	0.02			#	.00024	
Sodium	mg/L	09/13/2007	0001	540			#	.11	
Strontium	mg/L	09/13/2007	0001	6.5			#	.000065	
Sulfate	mg/L	09/13/2007	0001	4100			#	25	
Uranium	mg/L	09/13/2007	0001	0.028			#	.00003	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0889 SURFACE LOCATION Many Devils Wash, just below knickpoint

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Ammonia Total as N	mg/L	09/13/2007	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2007	0001	440			#	.039	
Chloride	mg/L	09/13/2007	0001	2300			#	100	
Magnesium	mg/L	09/13/2007	0001	1600			#	.11	
Manganese	mg/L	09/13/2007	0001	0.0038	U	J	#	.0038	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	900			#	5	
Oxidation Reduction Potential	mV	09/13/2007	N001	209			#		
pH	s.u.	09/13/2007	N001	8.33			#		
Potassium	mg/L	09/13/2007	0001	95			#	.56	
Selenium	mg/L	09/13/2007	0001	2.1			#	.049	
Sodium	mg/L	09/13/2007	0001	9200			#	.23	
Specific Conductance	umhos/cm	09/13/2007	N001	40922			#		
Strontium	mg/L	09/13/2007	0001	9.2			#	.00081	
Sulfate	mg/L	09/13/2007	0001	26000			#	250	
Temperature	C	09/13/2007	N001	19.93			#		
Uranium	mg/L	09/13/2007	0001	0.28			#	.000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0934 SURFACE LOCATION Upper part of 2nd wash, W of US Hwy 666

Parameter	Units	Sample Date	ID	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/13/2007	0001	98			#		
Ammonia Total as N	mg/L	09/13/2007	0001	0.11			#	.1	
Calcium	mg/L	09/13/2007	0001	59			#	.0016	
Chloride	mg/L	09/13/2007	0001	24			#	1	
Magnesium	mg/L	09/13/2007	0001	9			#	.0045	
Manganese	mg/L	09/13/2007	0001	0.22			#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2007	0001	0.22			#	.01	
Oxidation Reduction Potential	mV	09/13/2007	N001	147			#		
pH	s.u.	09/13/2007	N001	8.15			#		
Potassium	mg/L	09/13/2007	0001	15			#	.022	
Selenium	mg/L	09/13/2007	0001	0.00062			#	.000049	
Sodium	mg/L	09/13/2007	0001	25			#	.0023	
Specific Conductance	umhos/cm	09/13/2007	N001	446			#		
Strontium	mg/L	09/13/2007	0001	0.62			#	.000032	
Sulfate	mg/L	09/13/2007	0001	100			#	2.5	
Temperature	C	09/13/2007	N001	17.01			#		
Uranium	mg/L	09/13/2007	0001	0.0012			#	.0000059	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 1/3/2008

Location: 0942 SURFACE LOCATION Pond N of Shiprock high School and US Hwy 64

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers		Detection Limit	Uncertainty
					Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/12/2007	0001	325		#		
Ammonia Total as N	mg/L	09/12/2007	0001	0.1	U	#	.1	
Calcium	mg/L	09/12/2007	0001	530		#	.16	
Chloride	mg/L	09/12/2007	0001	37		#	4	
Magnesium	mg/L	09/12/2007	0001	190		#	.0045	
Manganese	mg/L	09/12/2007	0001	0.025		#	.00015	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2007	0001	58		#	.5	
Oxidation Reduction Potential	mV	09/12/2007	N001	15		#		
pH	s.u.	09/12/2007	N001	7.58		#		
Potassium	mg/L	09/12/2007	0001	17		#	.022	
Selenium	mg/L	09/12/2007	0001	0.37		#	.0049	
Sodium	mg/L	09/12/2007	0001	410		#	.23	
Specific Conductance	umhos/cm	09/12/2007	N001	3020		#		
Strontium	mg/L	09/12/2007	0001	5.4		#	.000032	
Sulfate	mg/L	09/12/2007	0001	1200		#	10	
Temperature	C	09/12/2007	N001	18.5		#		
Uranium	mg/L	09/12/2007	0001	0.037		#	.0000059	

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.

H Holding time expired, value suspect.
I Increased detection limit due to required dilution.
J Estimated
N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
P > 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
U Analytical result below detection limit.
W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X,Y,Z Laboratory defined qualifier, see case narrative.

DATA QUALIFIERS:

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

QA QUALIFIER:

Validated according to quality assurance guidelines.

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BLANKS REPORT

LAB: PARAGON (Fort Collins, CO)

RIN: 07081119

Report Date: 1/3/2008

Parameter	Site Code	Location ID	Sample Date	Sample ID	Units	Result	Qualifiers Lab	Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	SHP02	0999	09/13/2007	0001	mg/L	.1	U		.1		E
Ammonia Total as N	SHP02	0999	09/13/2007	0002	mg/L	.1	U		.1		E
Calcium	SHP02	0999	09/13/2007	0001	mg/L	.56	B		.0016		E
Calcium	SHP02	0999	09/13/2007	0002	mg/L	.34	B		.0016		E
Chloride	SHP02	0999	09/13/2007	0001	mg/L	.2	U		.2		E
Chloride	SHP02	0999	09/13/2007	0002	mg/L	.2	U		.2		E
Magnesium	SHP02	0999	09/13/2007	0001	mg/L	.089	B		.0045		E
Magnesium	SHP02	0999	09/13/2007	0002	mg/L	.26	B		.0045		E
Manganese	SHP02	0999	09/13/2007	0001	mg/L	.0042	B		.00015		E
Manganese	SHP02	0999	09/13/2007	0002	mg/L	.0026	B		.00015		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	09/13/2007	0001	mg/L	.01	U		.01		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	09/13/2007	0002	mg/L	.01	U		.01		E
Potassium	SHP02	0999	09/13/2007	0001	mg/L	.27	B	U	.022		E
Potassium	SHP02	0999	09/13/2007	0002	mg/L	.29	B	U	.022		E
Selenium	SHP02	0999	09/13/2007	0001	mg/L	.000049	U		.000049		E
Selenium	SHP02	0999	09/13/2007	0002	mg/L	.000049	U		.000049		E
Sodium	SHP02	0999	09/13/2007	0001	mg/L	.28	B	U	.0023		E
Sodium	SHP02	0999	09/13/2007	0002	mg/L	.4	B	U	.0023		E

BLANKS REPORT

LAB: PARAGON (Fort Collins, CO)

RIN: 07081119

Report Date: 1/3/2008

Parameter	Site Code	Location ID	Sample Date	Sample ID	Units	Result	Qualifiers Lab	Data	Detection Limit	Uncertainty	Sample Type
Strontium	SHP02	0999	09/13/2007	0001	mg/L	.0021	B		.000032		E
Strontium	SHP02	0999	09/13/2007	0002	mg/L	.0022	B		.000032		E
Sulfate	SHP02	0999	09/13/2007	0001	mg/L	.56			.5		E
Sulfate	SHP02	0999	09/13/2007	0002	mg/L	.5	U		.5		E
Total Dissolved Solids	SHP02	0999	09/13/2007	0001	mg/L	20	U		20		E
Uranium	SHP02	0999	09/13/2007	0001	mg/L	.000027	B	U	.000059		E
Uranium	SHP02	0999	09/13/2007	0002	mg/L	.00003	B	U	.000059		E

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

SAMPLE TYPES: E Equipment Blank.

Static Water Level Data

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STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 1/3/2008

Location Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0501		09/10/2007				
0608	4893.35	09/11/2007		7.24	4886.11	
0610	4895.7	09/11/2007		11.87	4883.83	
0612	4893.35	09/11/2007		8.26	4885.09	
0614	4892.79	09/11/2007		8.97	4883.82	
0615	4892.23	09/12/2007				
0618	4891.51	09/12/2007		8.42	4883.09	
0619	4892.19	09/12/2007		9.42	4882.77	
0622	4890.06	09/12/2007		6.68	4883.38	
0626	4891.4	09/13/2007		7.96	4883.44	
0628	4889.87	09/13/2007		6.41	4883.46	
0630	4887.62	09/13/2007		4.11	4883.51	
0734	4886.55	09/13/2007		6.78	4879.77	
0735	4895.85	09/10/2007		6.9	4888.95	
0736	4887.99	09/13/2007		6.47	4881.52	
0768	4892.33	09/12/2007				D
0775	4892.2	09/12/2007				D
0784	4882.21	09/12/2007		8.11	4874.1	
0792	4891.52	09/12/2007		8.66	4882.86	
0793	4891.05	09/12/2007		7.98	4883.07	
0797	4908.04	09/12/2007		10.22	4897.82	
0798	4891.55	09/12/2007		9.04	4882.51	
0850	4907.51	09/12/2007		9.04	4898.47	
0853	4891.41	09/12/2007		8.05	4883.36	
0855	4888.18	09/13/2007		7.44	4880.74	
0856	4887.57	09/13/2007		7.58	4879.99	
0857	4894.02	09/12/2007		10.83	4883.19	

STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 1/3/2008

Location Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0887		09/12/2007				
0897		09/13/2007				
0898		09/12/2007				
0939		09/12/2007				
0940		09/12/2007				
0956		09/13/2007				
0965		09/13/2007				
1009	4892.1	09/12/2007		9	4883.1	
1089	4891.5	09/12/2007				F
1104		09/12/2007				F
1105		09/12/2007				
1109		09/11/2007				F
1110		09/11/2007				F
1111	4889.85	09/11/2007		7.51	4882.34	
1112	4890.01	09/11/2007				D
1113	4892	09/11/2007				D
1114	4892.86	09/10/2007		6.64	4886.22	
1115	4895.59	09/10/2007		10.4	4885.19	
1116	4898.84	09/10/2007				D
1117	4896.7	09/10/2007		10.16	4886.54	
1118		09/12/2007				F
1203		09/11/2007				
1205		09/12/2007				

WATER LEVEL FLAGS: D Dry F Flowing (Water Level does not apply)

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 1/3/2008

Location Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0600	4955.87	09/11/2007		34.12	4921.75	
0602	4956.89	09/11/2007		20.5	4936.39	
0603	4978.62	09/11/2007		30.98	4947.64	
0662		09/13/2007				
0725	4908.58	09/13/2007		21.79	4886.79	
0726	4939.95	09/13/2007		25.74	4914.21	
0728	4964.46	09/11/2007		25.12	4939.34	
0730	4977.75	09/11/2007		Could not be measured		
0731	4972.15	09/11/2007		24.82	4947.33	
0786		09/13/2007				
0812	5004.98	09/11/2007		61.14	4943.84	
0813	4984.37	09/11/2007		43.37	4941	
0814	4968.12	09/12/2007		32.41	4935.71	
0815	4953.67	09/11/2007		26	4927.67	
0816	4937.92	09/12/2007		Could not be measured		
0817	4957.34	09/12/2007		19.4	4937.94	
0818	4998.25	09/12/2007				F
0819	4955.76	09/11/2007		20.61	4935.15	
0826	4950.73	09/11/2007		17.98	4932.75	
0827	4946.92	09/11/2007		27.07	4919.85	
0830	4960.77	09/10/2007		17.53	4943.24	
0832	4964.65	09/13/2007		29.28	4935.37	
0833	4940.52	09/13/2007		30.4	4910.12	
0835	4930.48	09/13/2007		21	4909.48	
0836	4901.74	09/11/2007		25.35	4876.39	
0837	4889.54	09/13/2007		16.2	4873.34	
0838	4937.7	09/13/2007		28.13	4909.57	

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 1/3/2008

Location Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0839	4943.21	09/11/2007		Could not be measured		
0841	4984.05	09/11/2007		45.8	4938.25	
0843	4883.56	09/13/2007		11.87	4871.69	
0844	4948.46	09/13/2007		32.03	4916.43	
0846	4934.57	09/13/2007		25.5	4909.07	
0848	4949.91	09/11/2007		40.06	4909.85	
0884		09/13/2007				
0934		09/13/2007				
0942		09/12/2007				
1007	4962.01	09/13/2007		44.72	4917.29	
1057	4984.83	09/12/2007		39.22	4945.61	
1058	4973.58	09/10/2007		48.11	4925.47	
1059	4970.52	09/10/2007		23.32	4947.2	
1060	4970.62	09/11/2007		37.65	4932.97	
1068	4927.97	09/12/2007		7.48	4920.49	
1070	5000.62	09/12/2007				F
1071	4987.16	09/12/2007				F
1072	4985.3	09/11/2007		45.02	4940.28	
1073	4991.43	09/11/2007		50	4941.43	
1074	4959.52	09/10/2007		38.24	4921.28	
1078	4982.94	09/12/2007				F
1079	4925.22	09/13/2007		17.37	4907.85	
1087		09/12/2007				F
1088		09/12/2007				F
1091	4976.18	09/10/2007				F
1092	4976.17	09/10/2007				F
1093	4975.52	09/10/2007				F
1095		09/12/2007				F
1096		09/12/2007				F

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 1/3/2008

Location Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
1120		09/13/2007		22.28		
1122		09/13/2007		22.26		
DM7	4974.44	09/11/2007		48.45	4925.99	
MW1	4955.64	09/11/2007		49.63	4906.01	

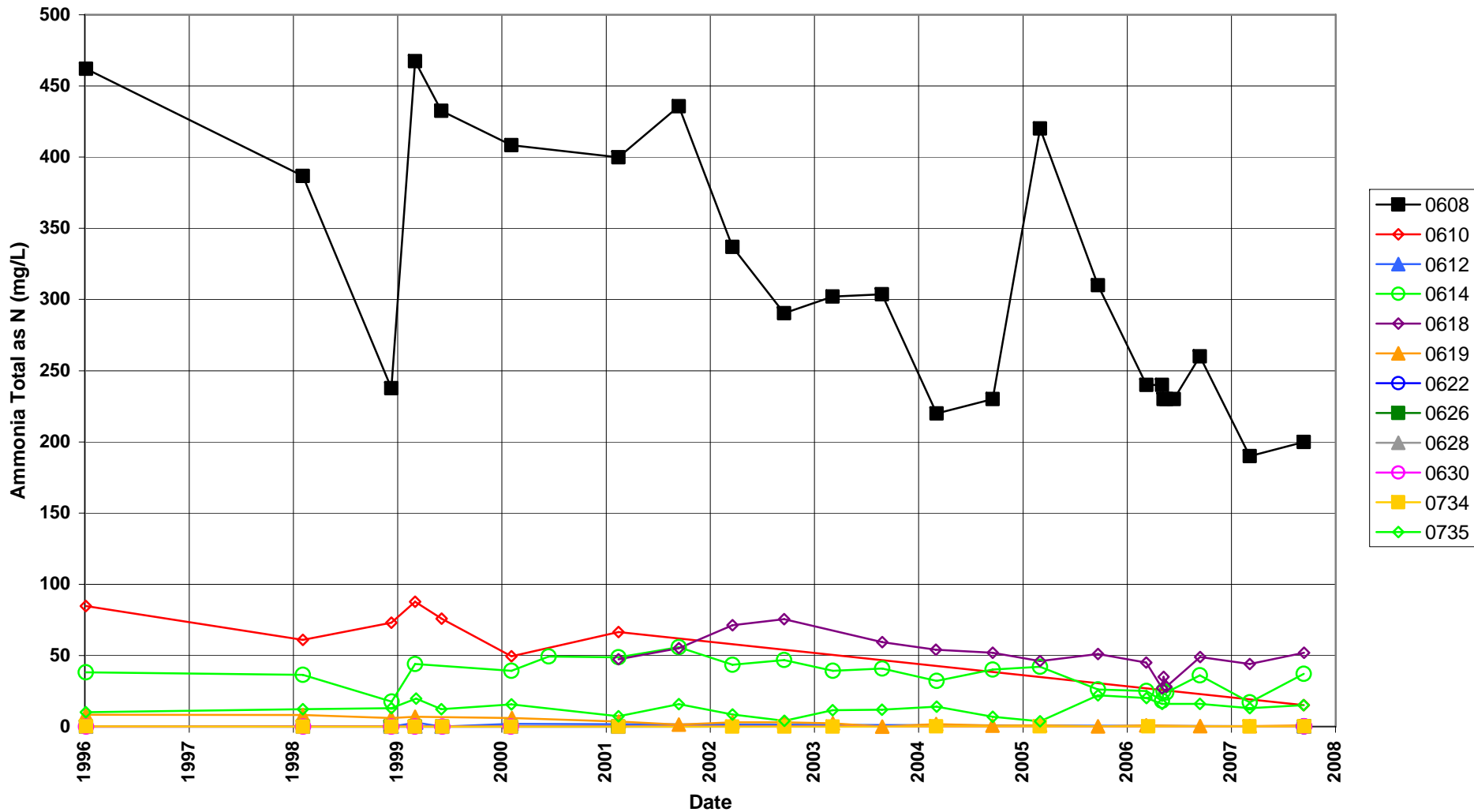
WATER LEVEL FLAGS: D Dry F Flowing (Water Level does not apply)

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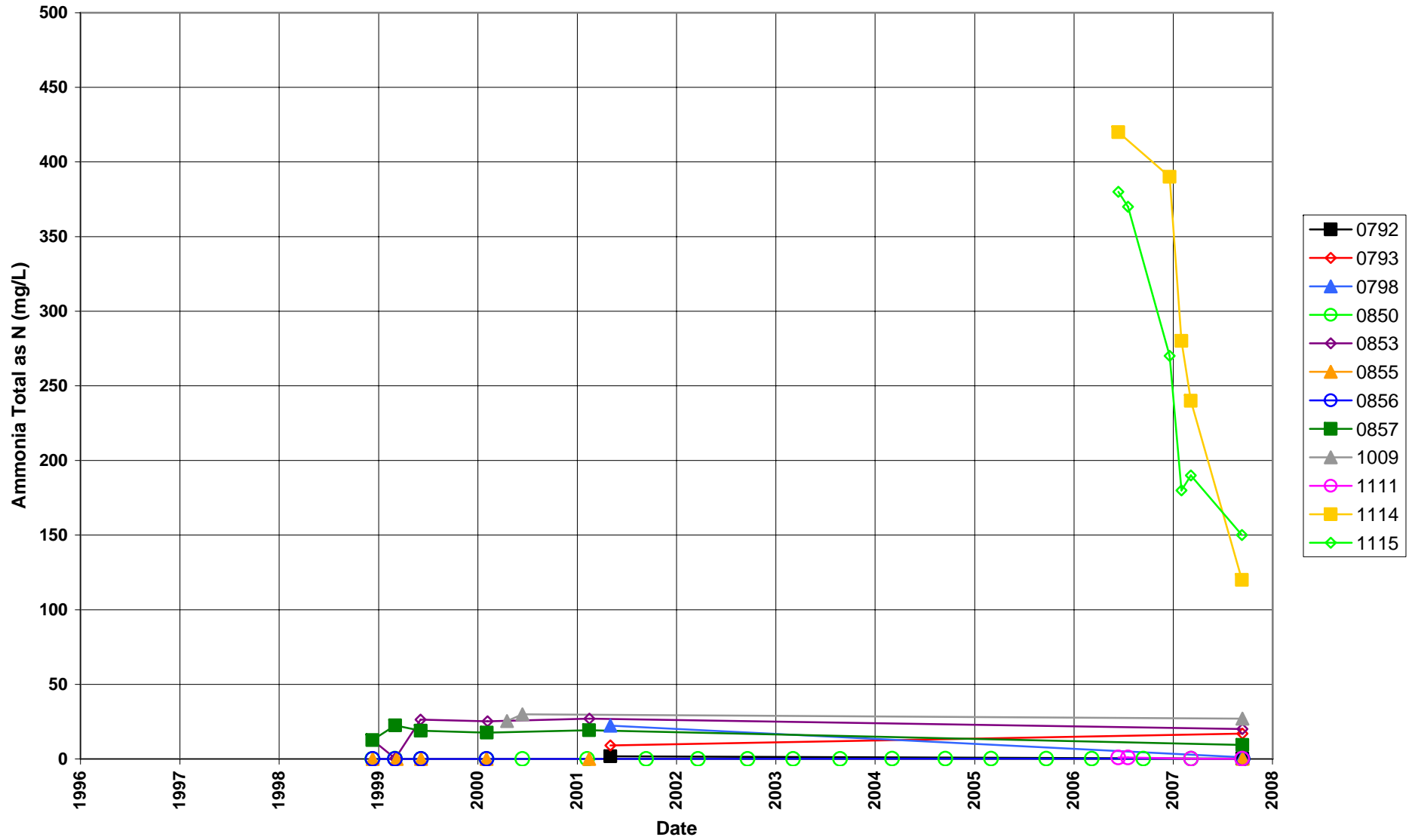
**Time Versus Concentration Graphs
Floodplain Locations**

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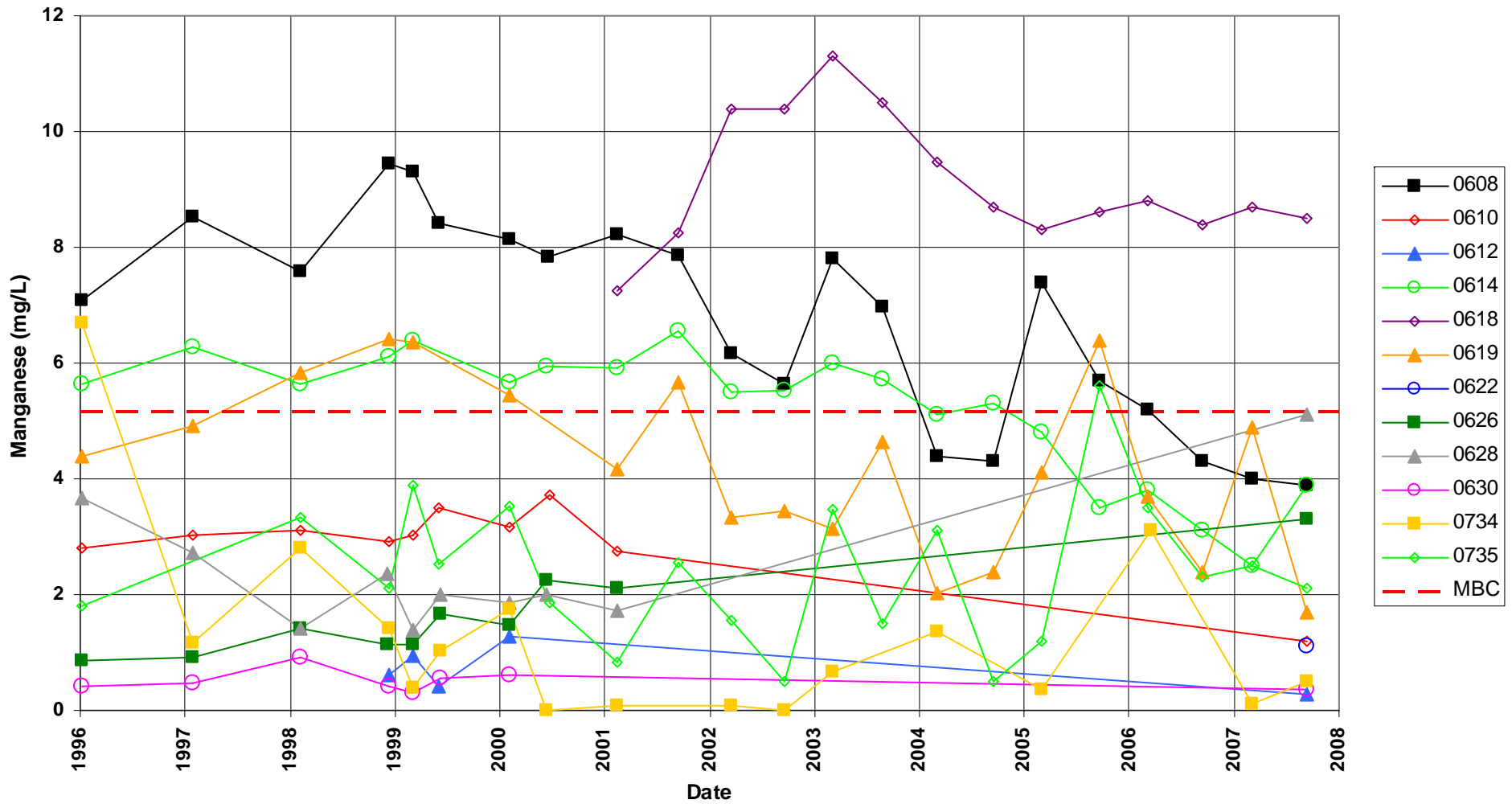
Shiprock Disposal Site (Floodplain) Ammonia Total as N Concentration



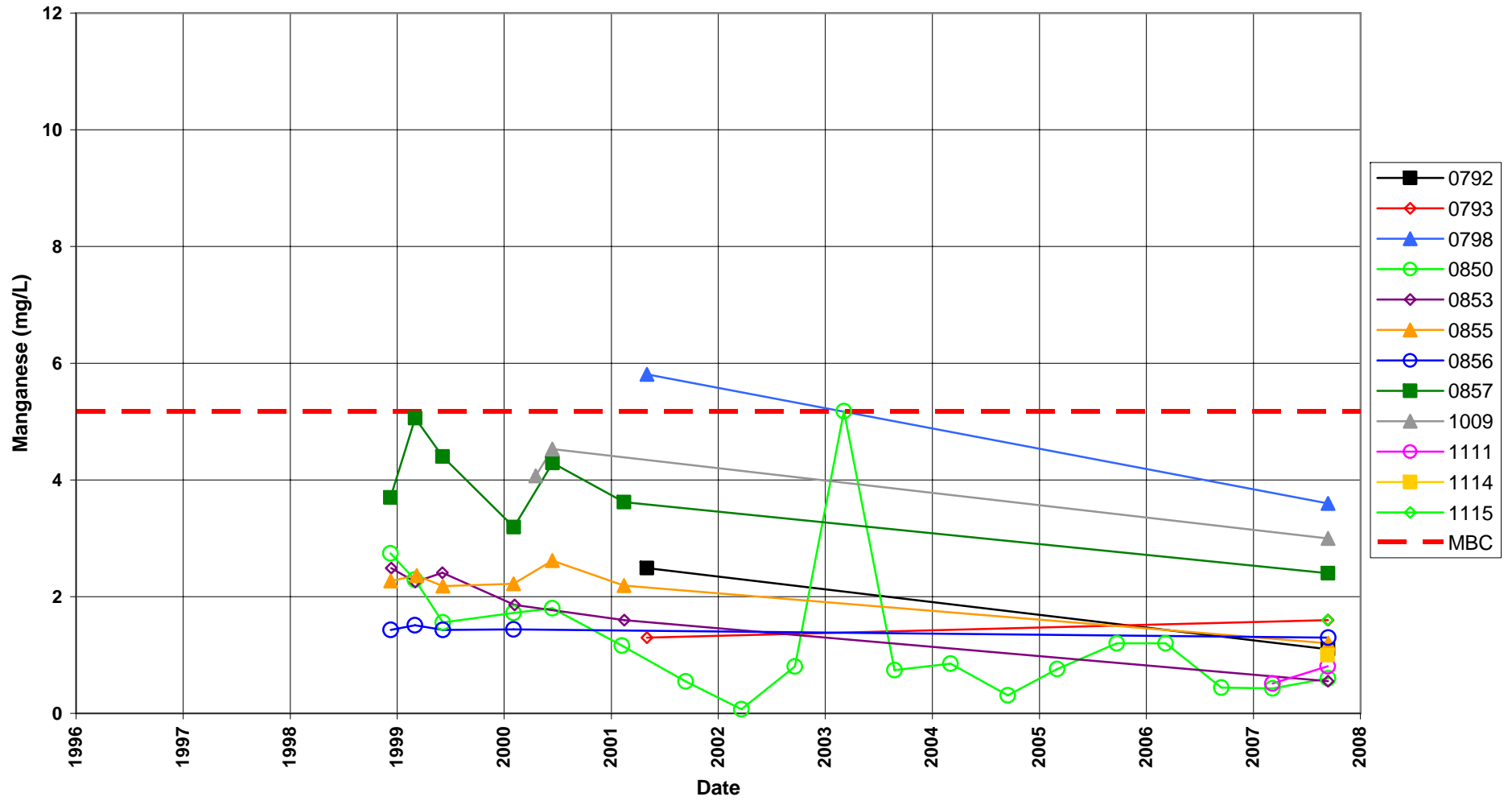
Shiprock Disposal Site (Floodplain) Ammonia Total as N Concentration



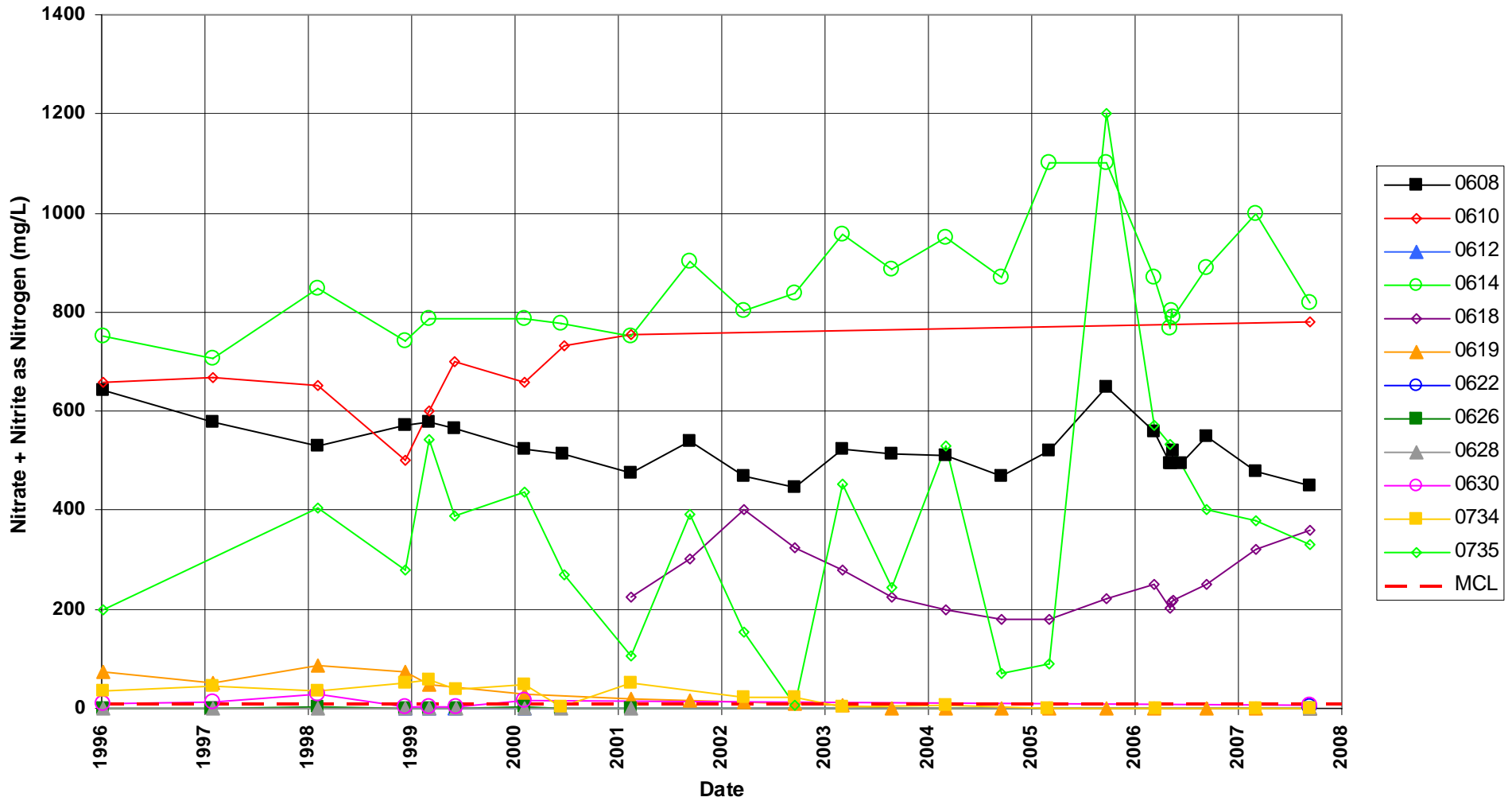
Shiprock Disposal Site (Floodplain)
Manganese Concentration
 Maximum Background Concentration = 5.18 mg/L



Shiprock Disposal Site (Floodplain)
Manganese Concentration
Maximum Background Concentration = 5.18 mg/L

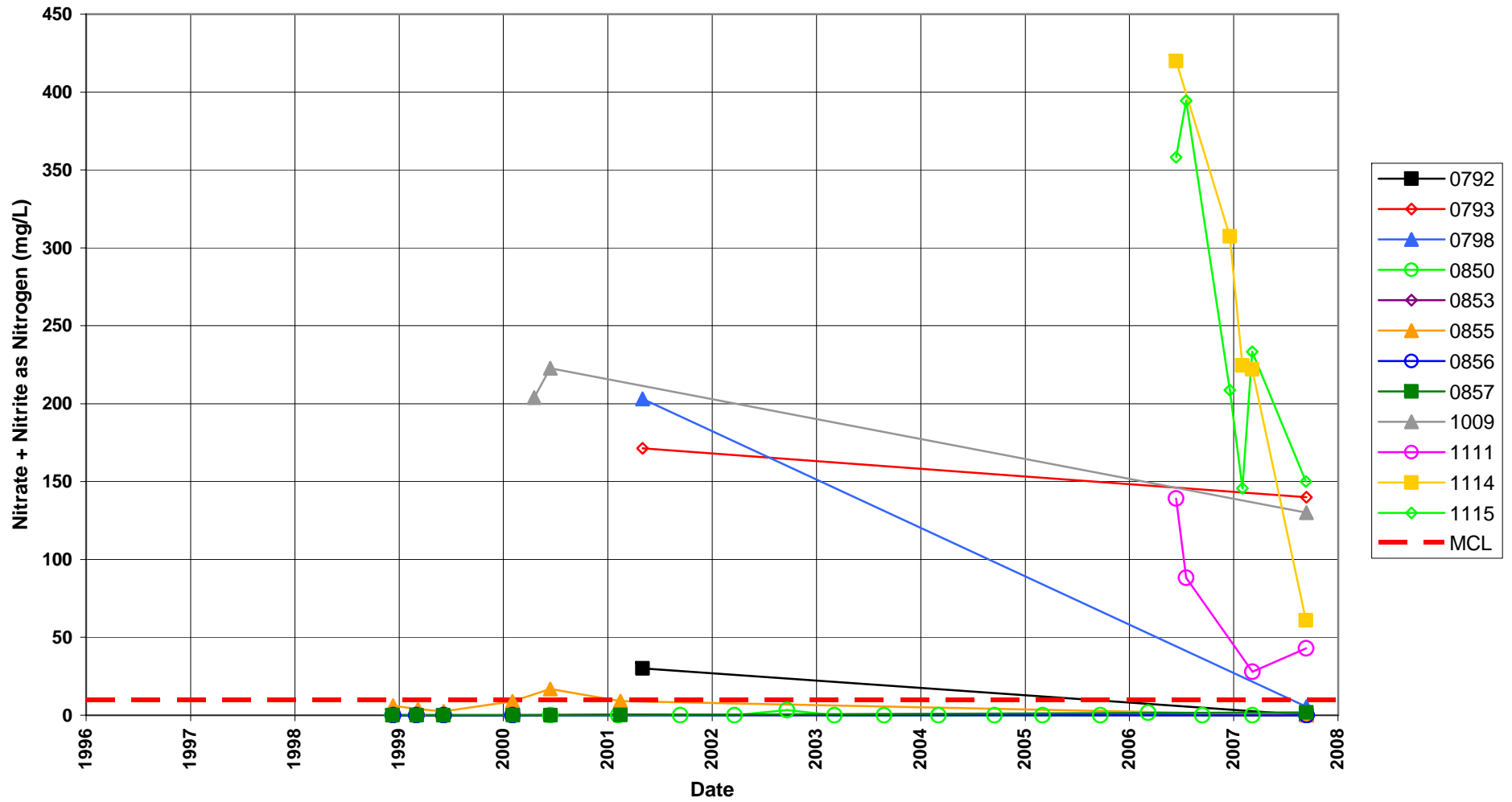


Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
 Maximum Contaminant Level = 10.0 mg/L

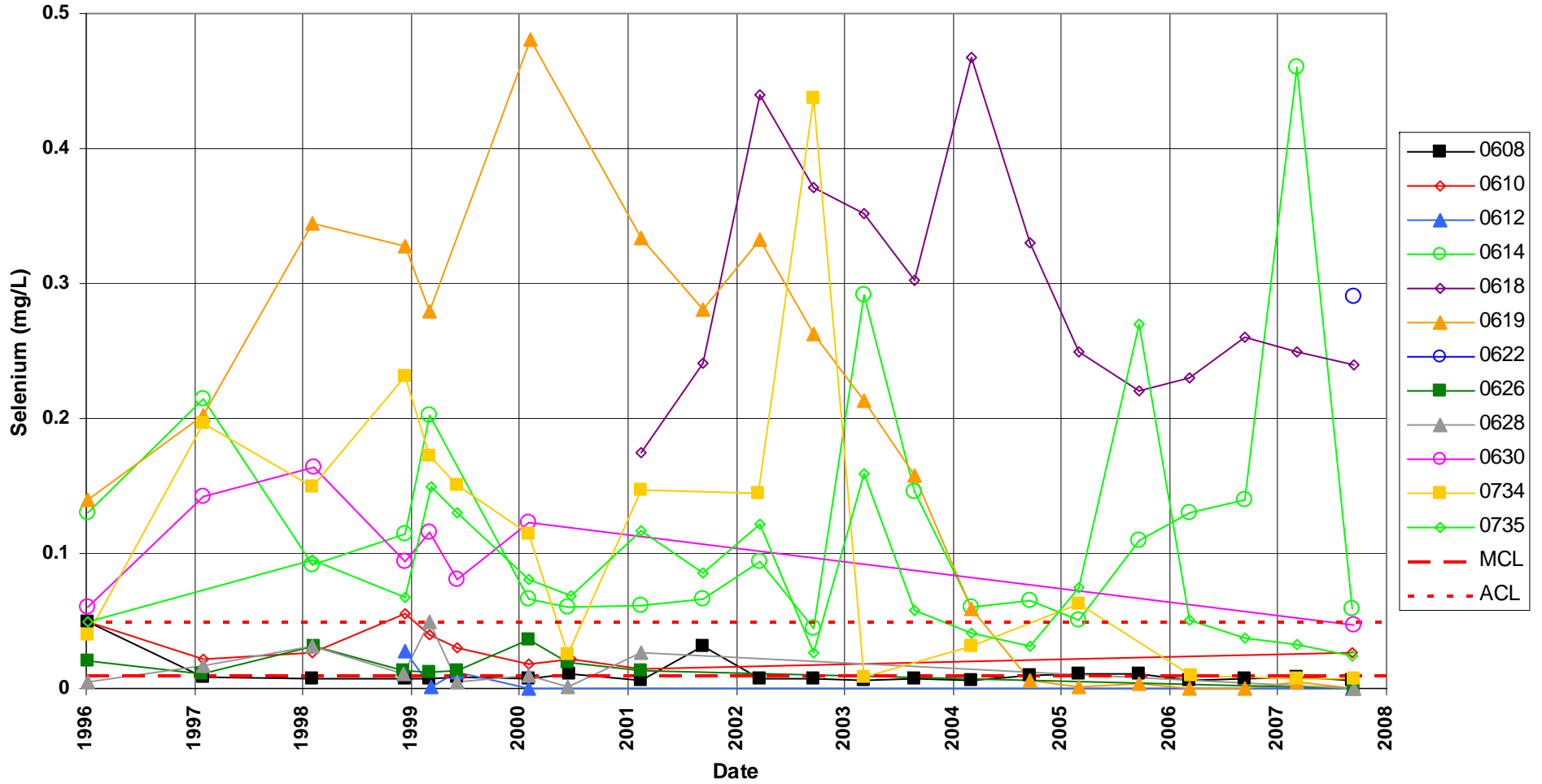


Shiprock Disposal Site (Floodplain) Nitrate + Nitrite as Nitrogen Concentration

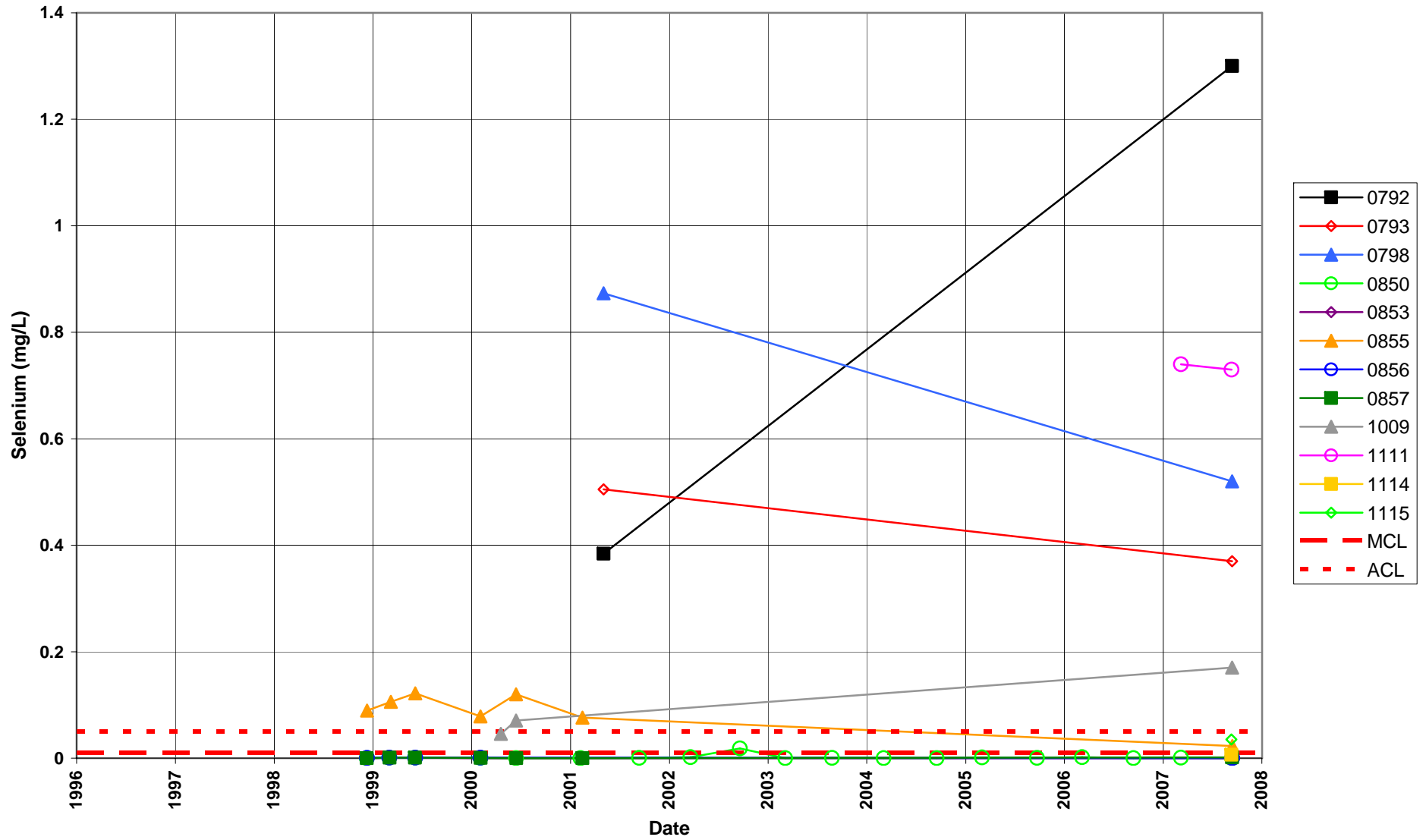
Maximum Contaminant Level = 10.0 mg/L



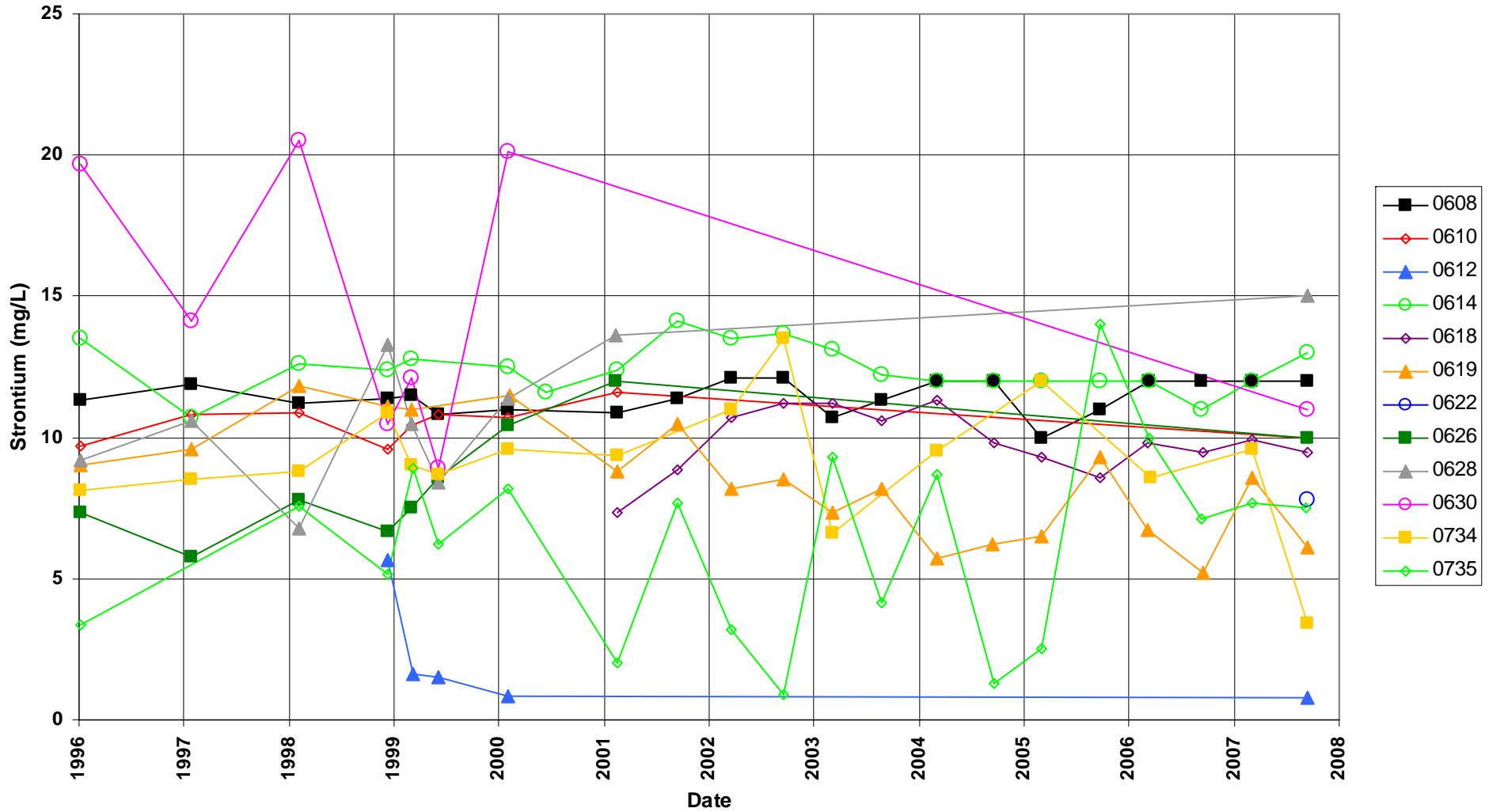
Shiprock Disposal Site (Floodplain)
Selenium Concentration
 Maximum Contaminant Level = 0.01 mg/L
 Proposed Alternate Concentration Limit = 0.05 mg/L



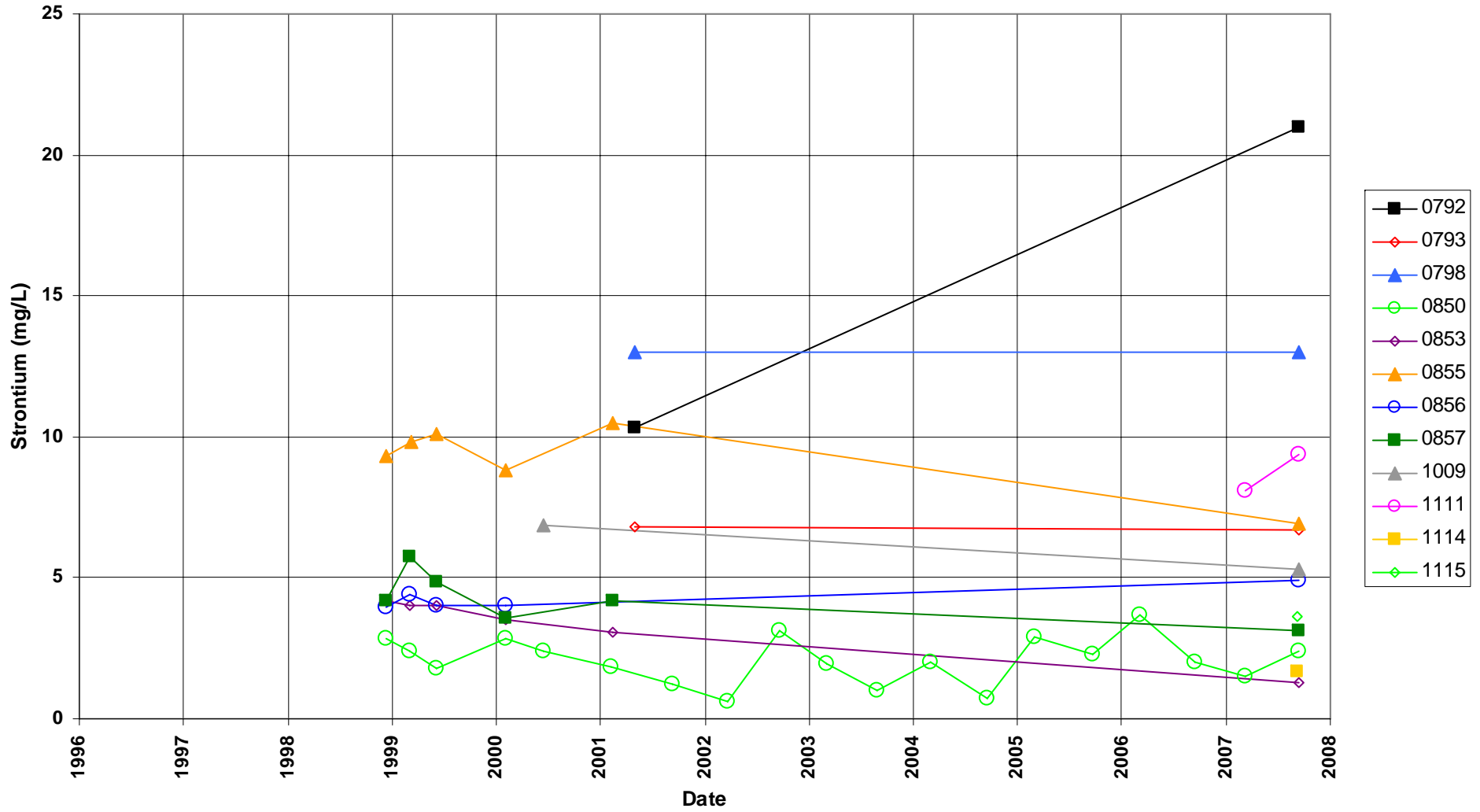
Shiprock Disposal Site (Floodplain)
Selenium Concentration
 Maximum Contaminant Level = 0.01 mg/L
 Proposed Alternate Concentration Limit = 0.05 mg/L



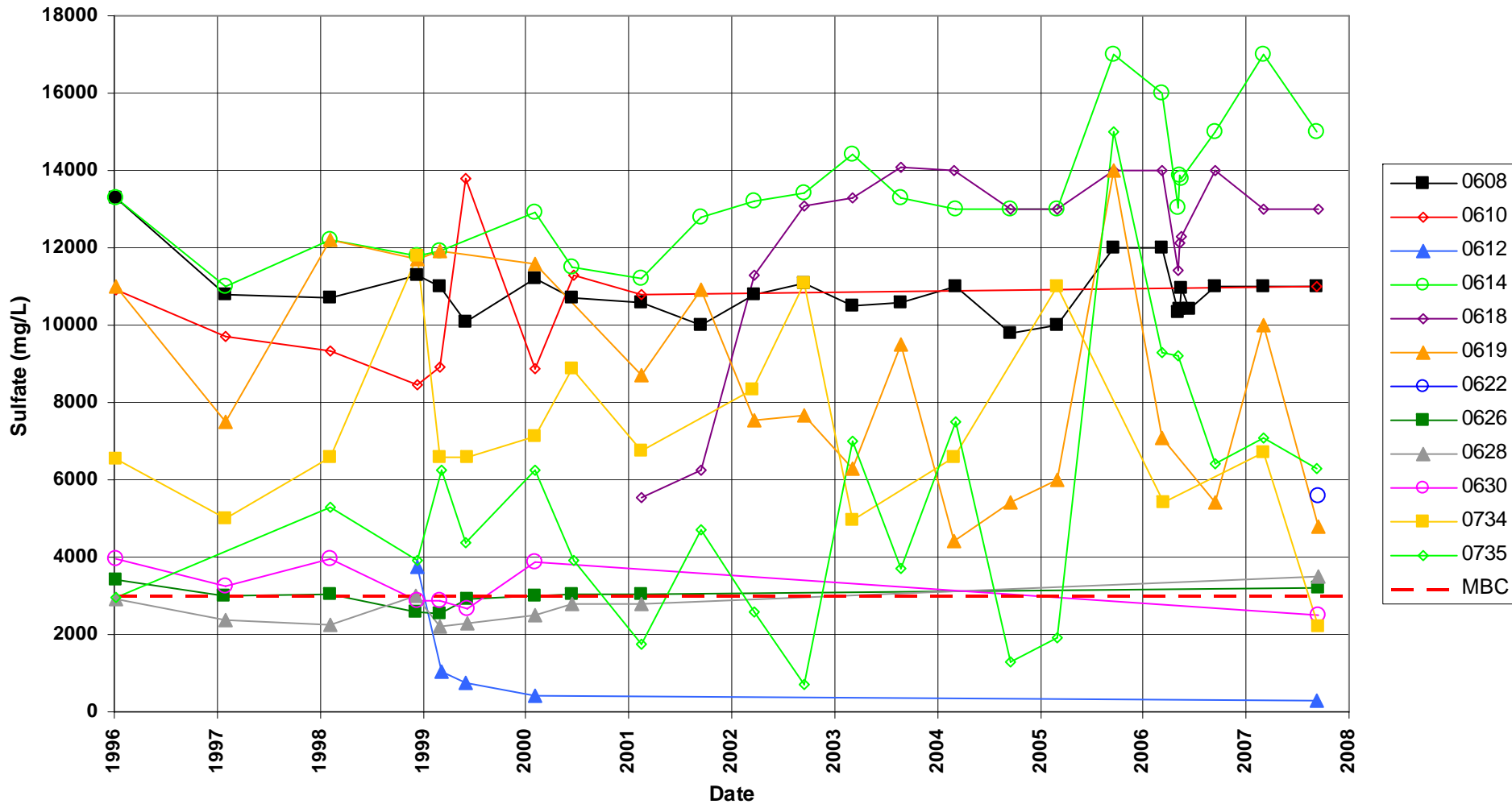
Shiprock Disposal Site (Floodplain)
Strontium Concentration



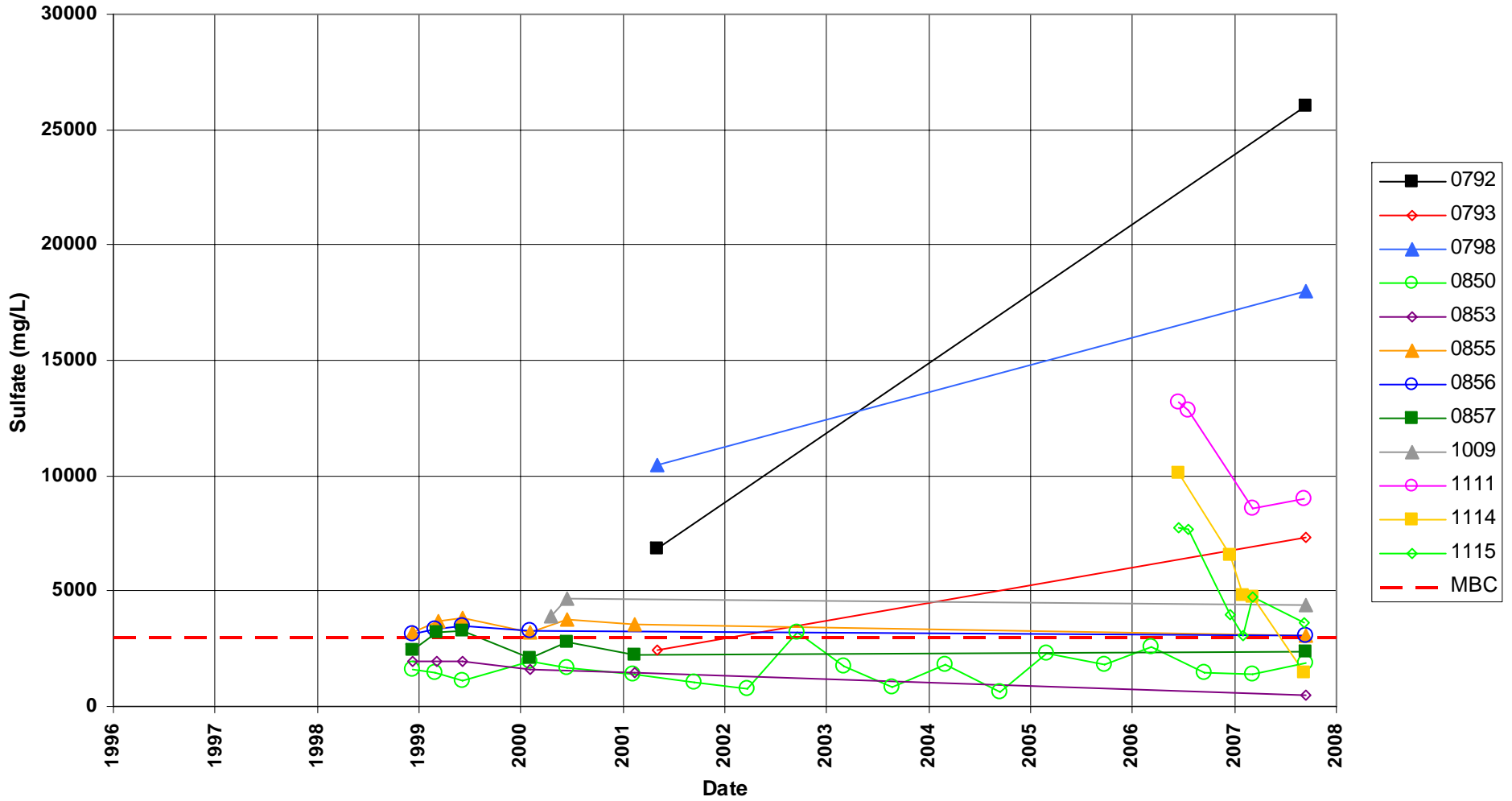
Shiprock Disposal Site (Floodplain) Strontium Concentration



Shiprock Disposal Site (Floodplain)
Sulfate Concentration
 Maximum Background Concentration = 3000 mg/L



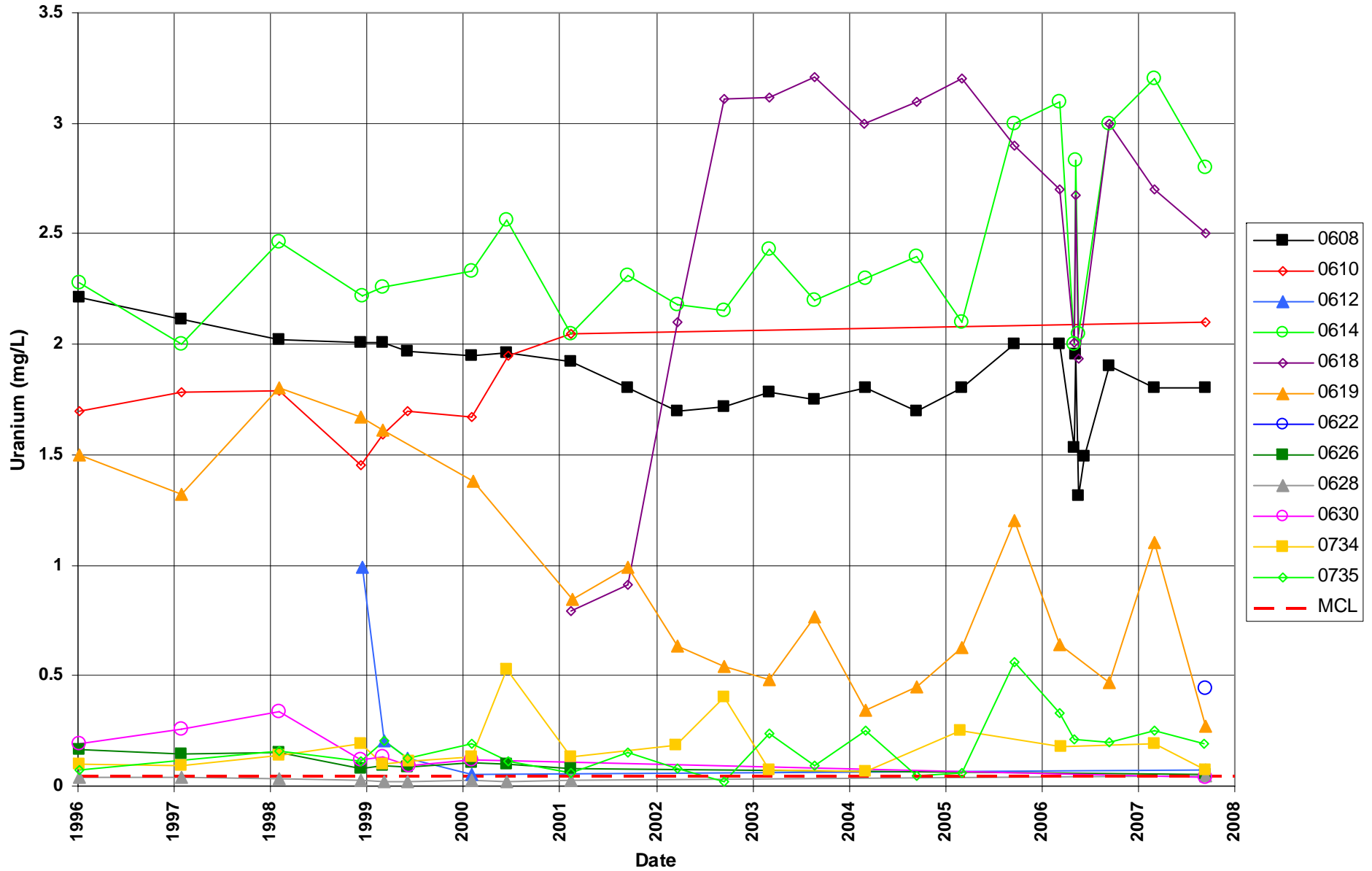
Shiprock Disposal Site (Floodplain)
Sulfate Concentration
 Maximum Background Concentration = 3000 mg/L



Shiprock Disposal Site (Floodplain)

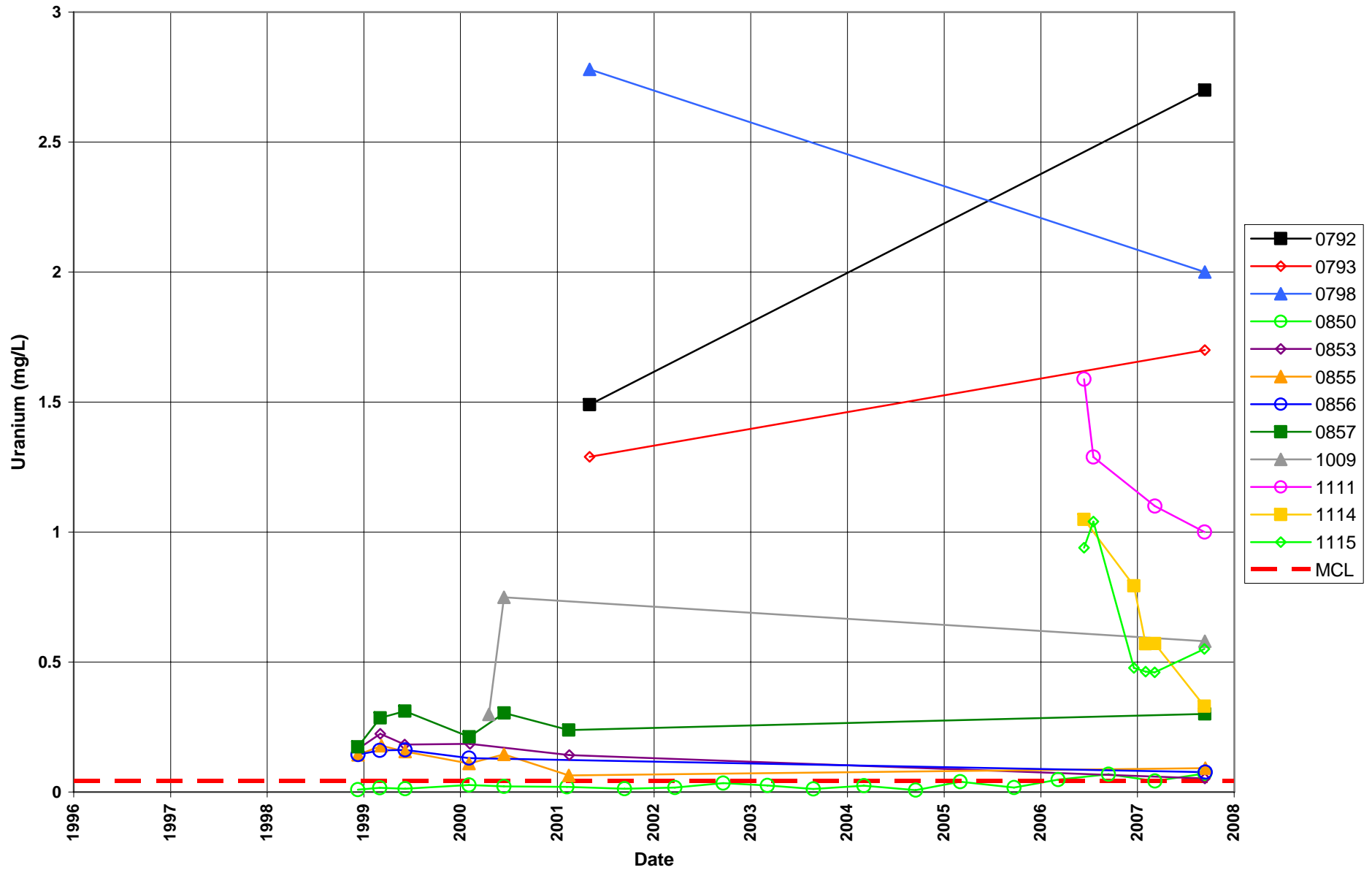
Uranium Concentration

Maximum Contaminant Level = 0.044 mg/L



Shiprock Disposal Site (Floodplain) Uranium Concentration

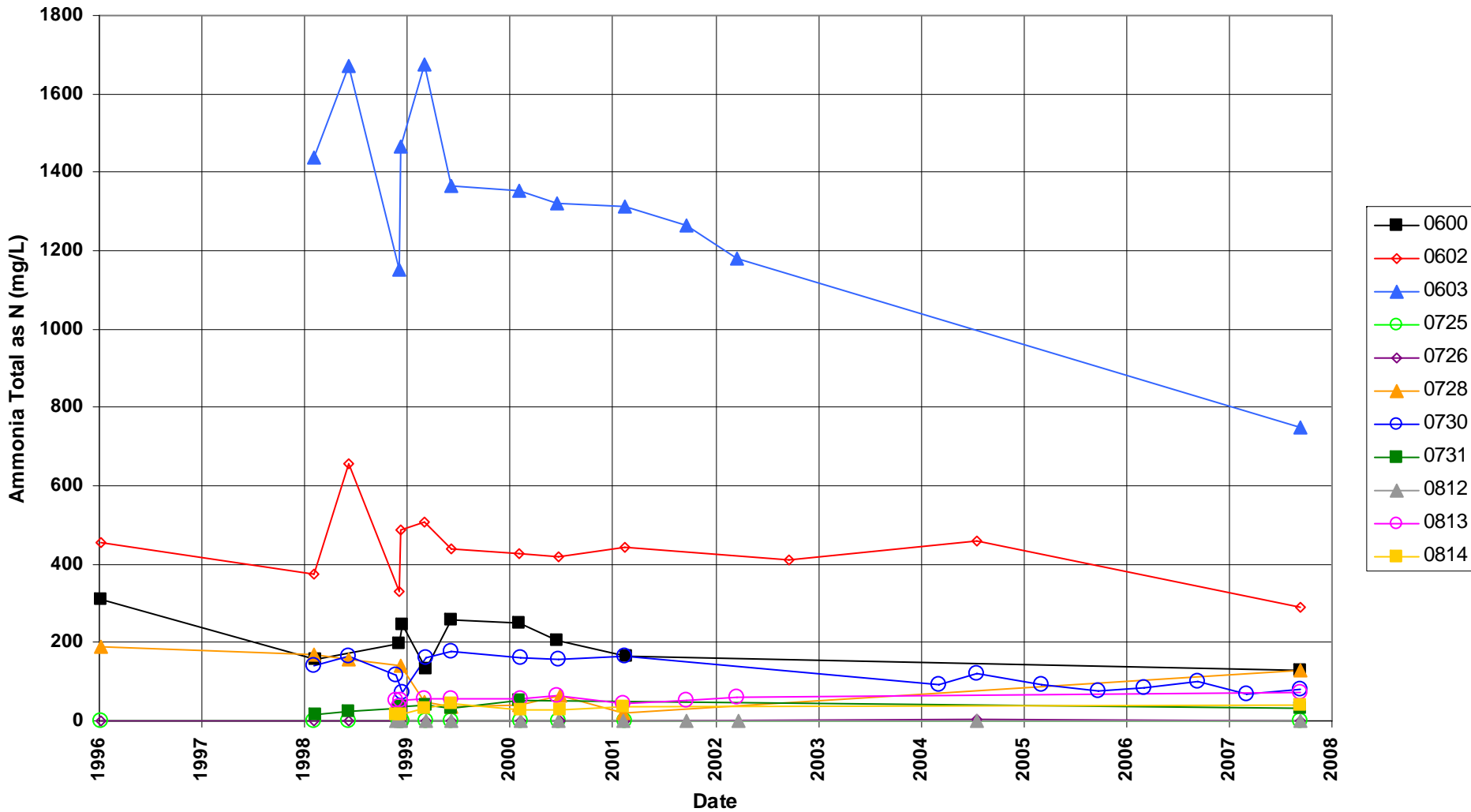
Maximum Contaminant Level = 0.044 mg/L



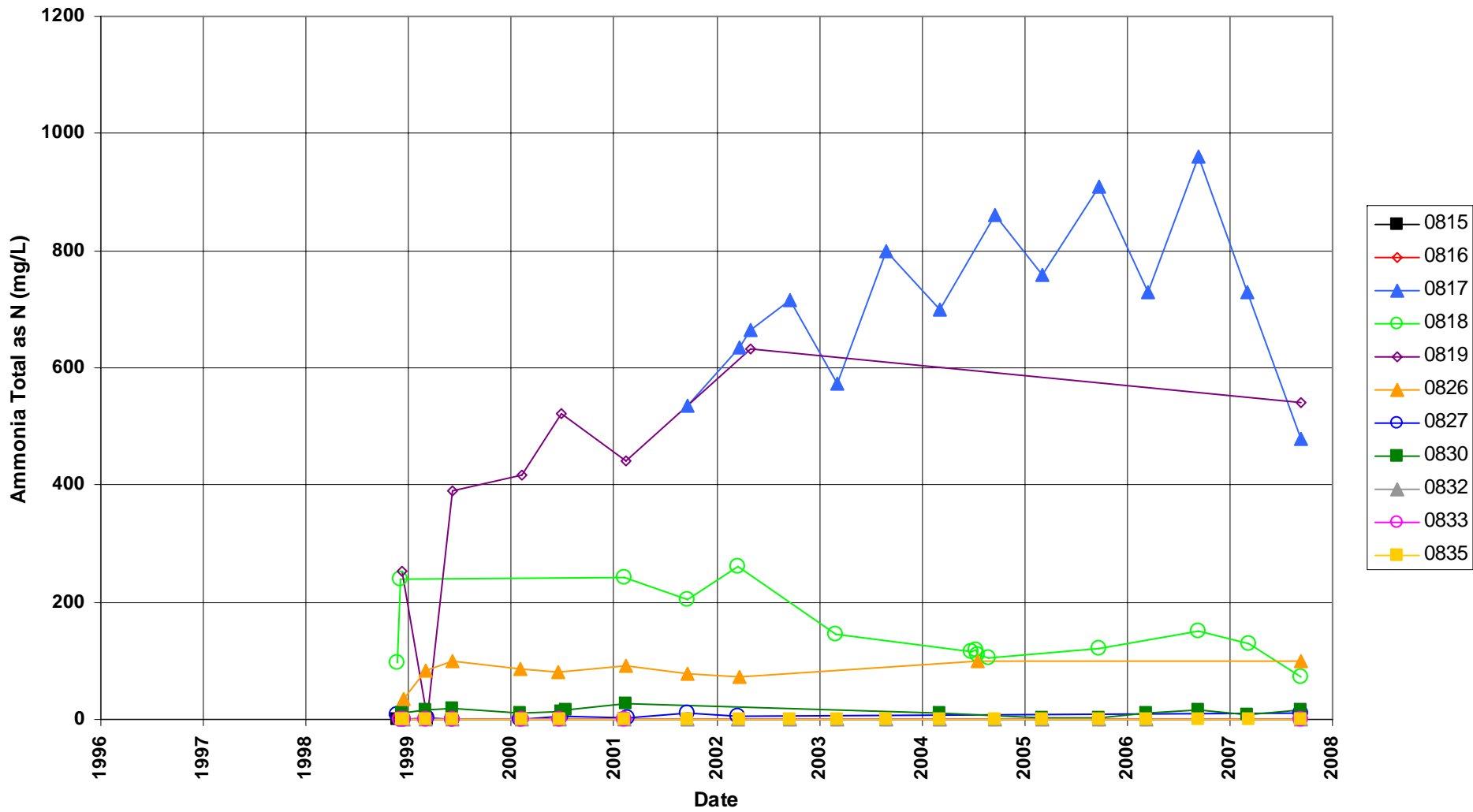
**Time Versus Concentration Graphs
Terrace Locations**

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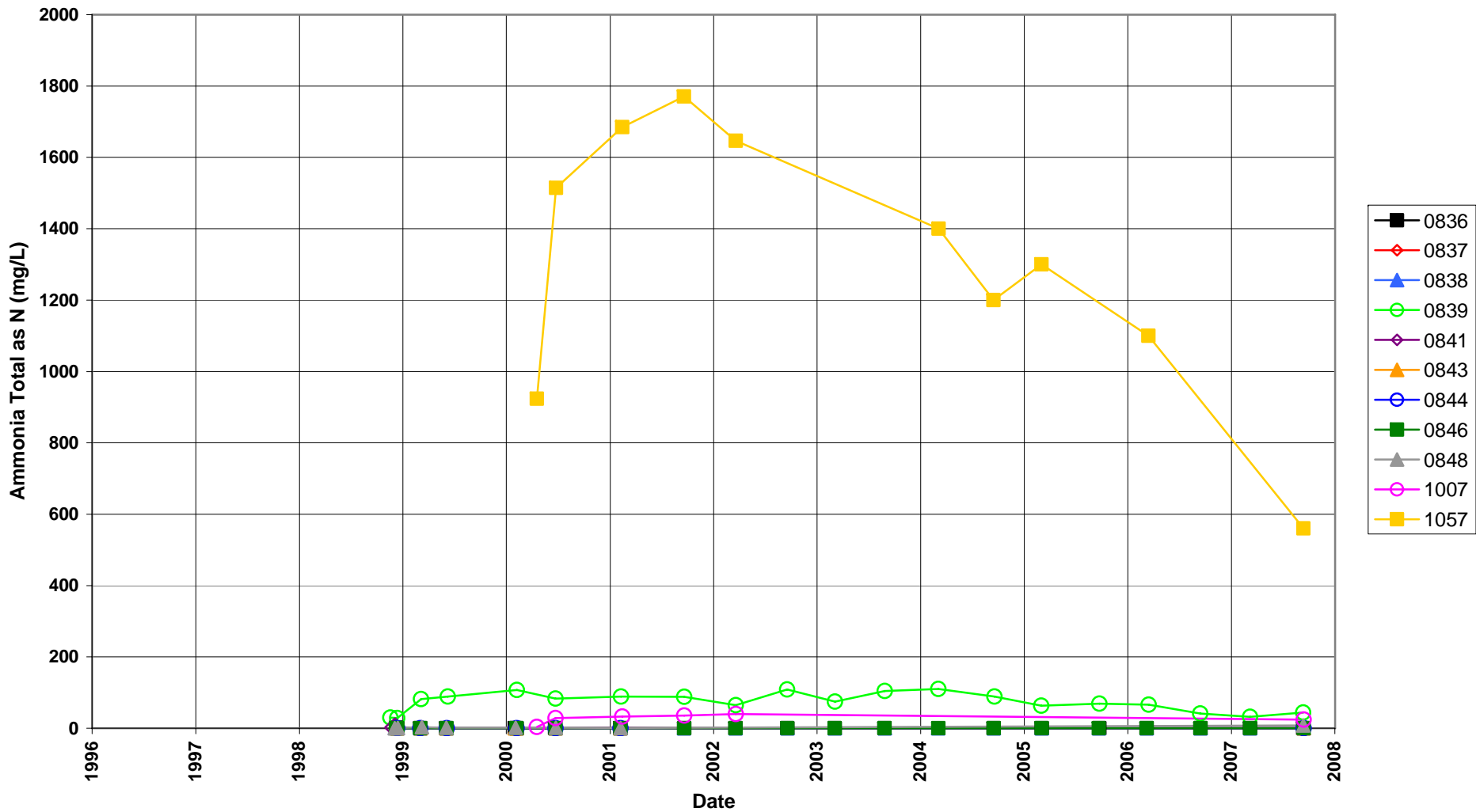
Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration



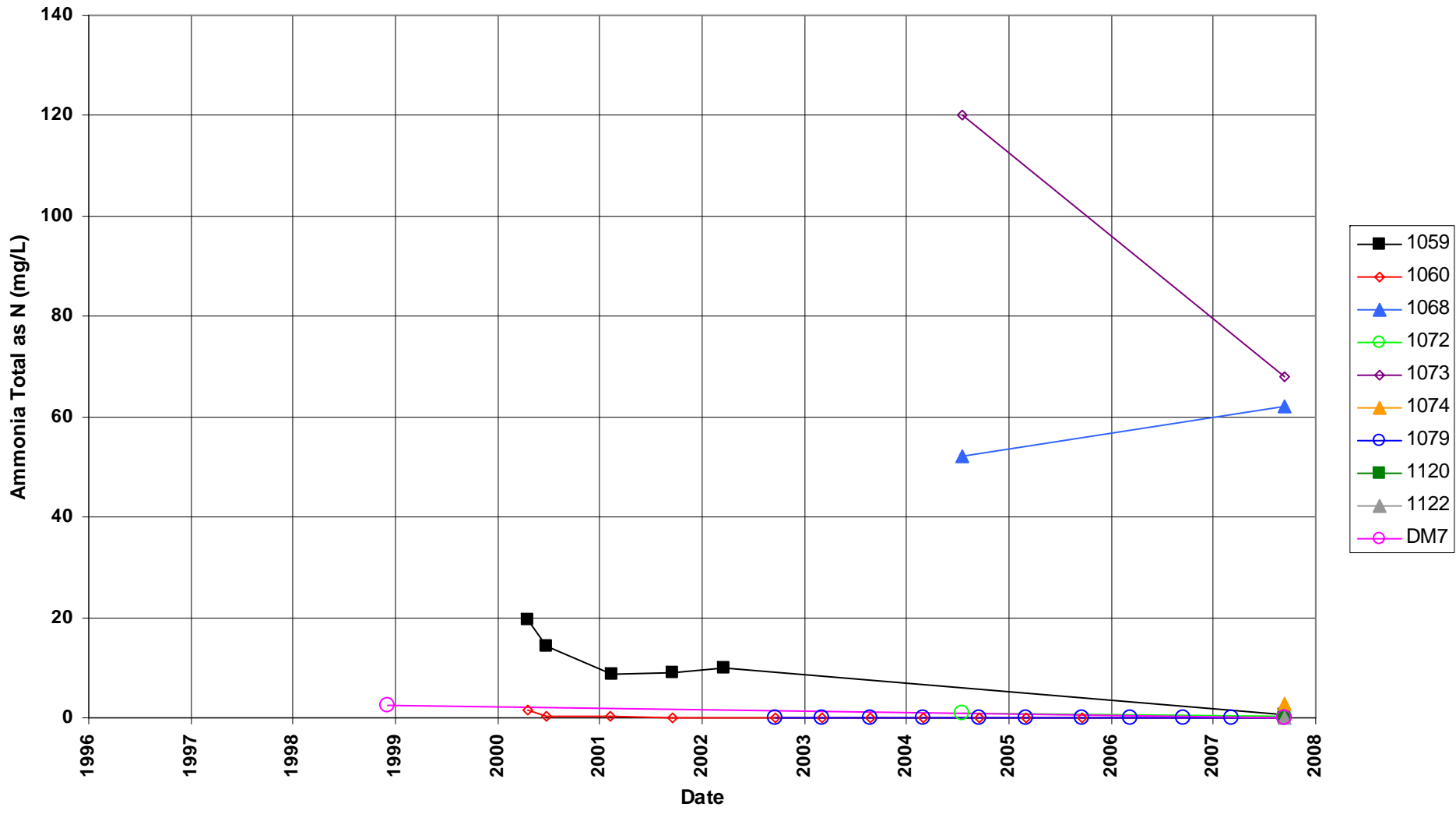
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration



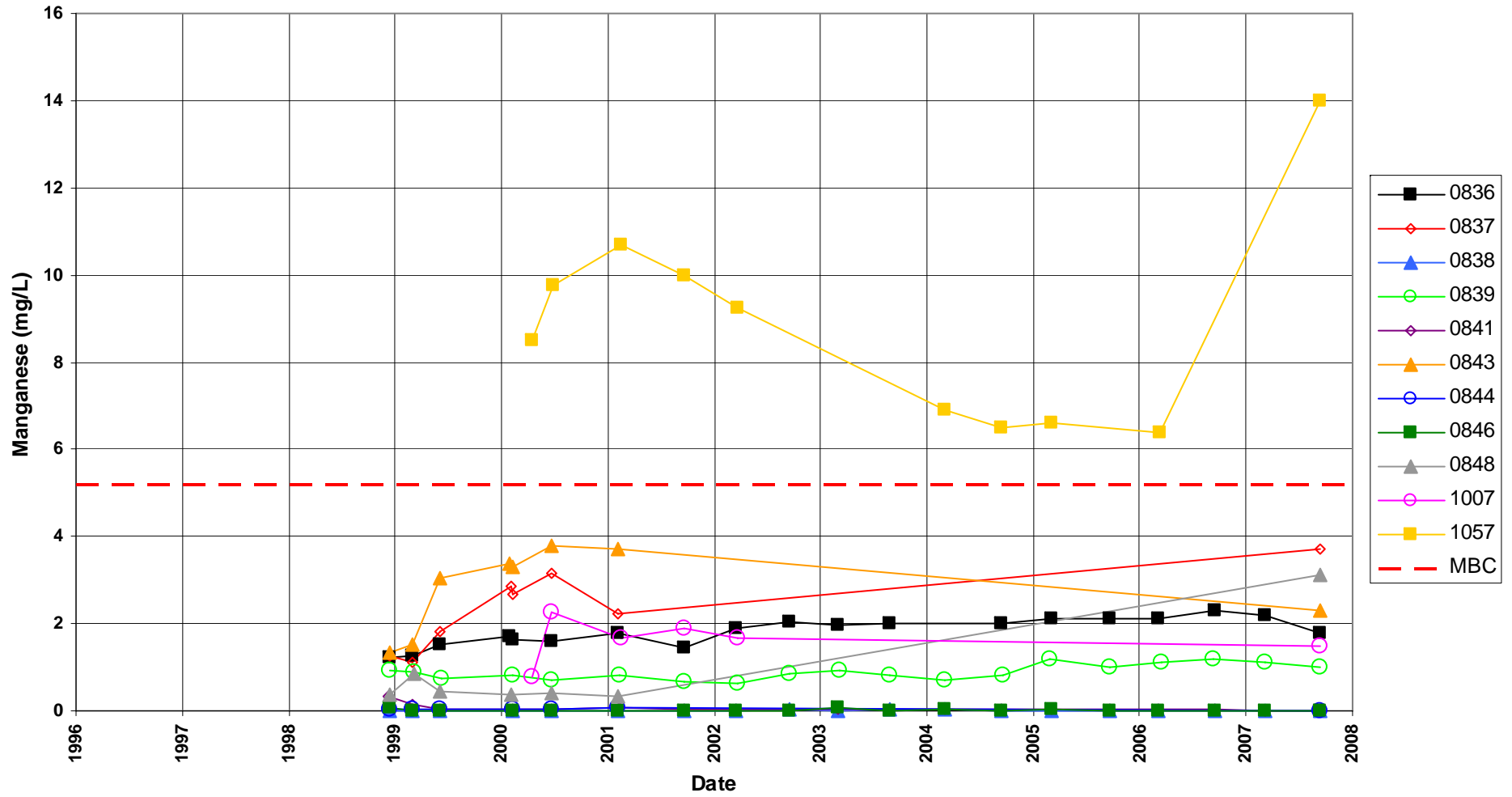
Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration



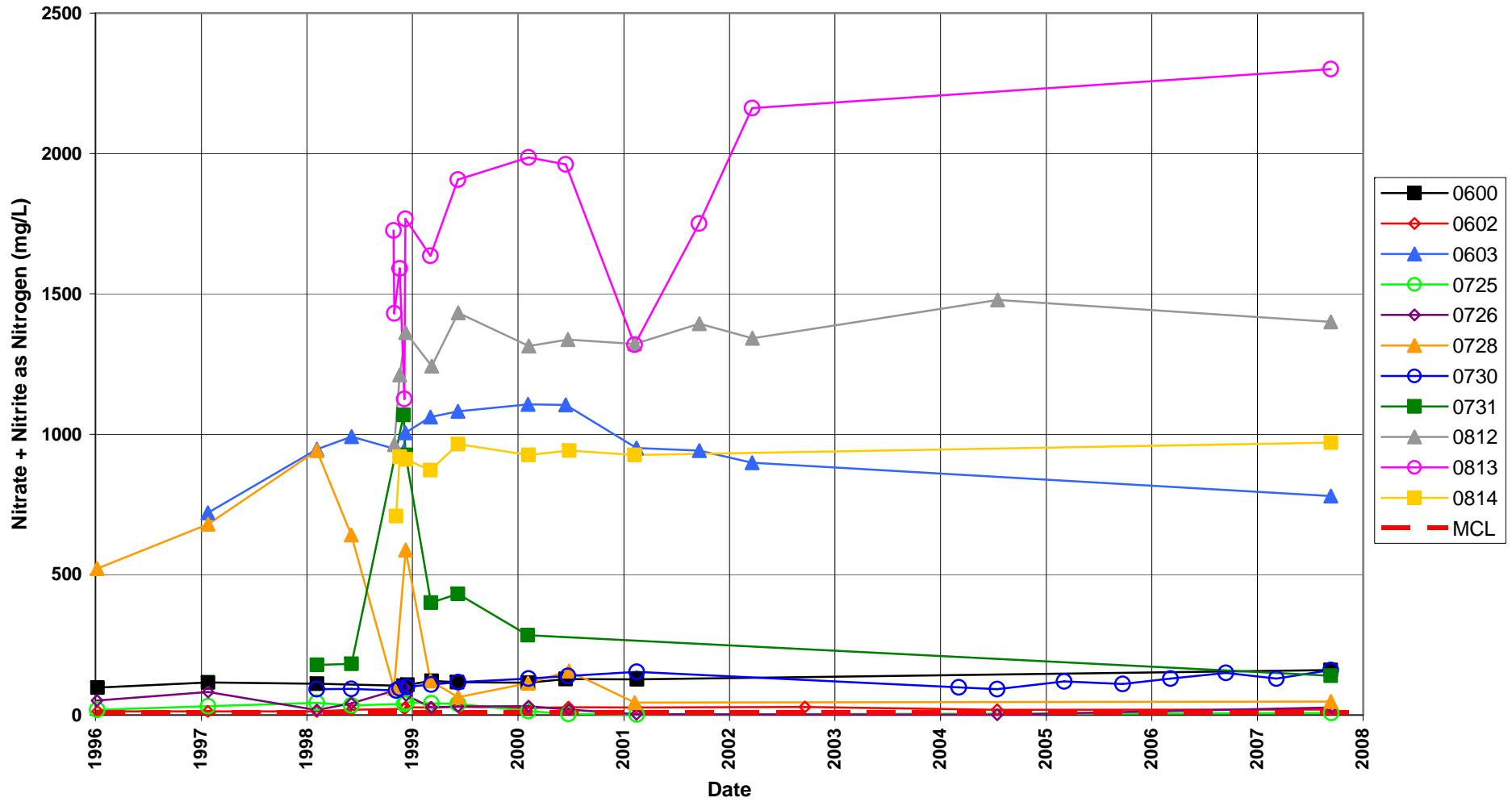
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration



Shiprock Disposal Site (Terrace)
Manganese Concentration
Maximum Background Concentration = 5.18 mg/L

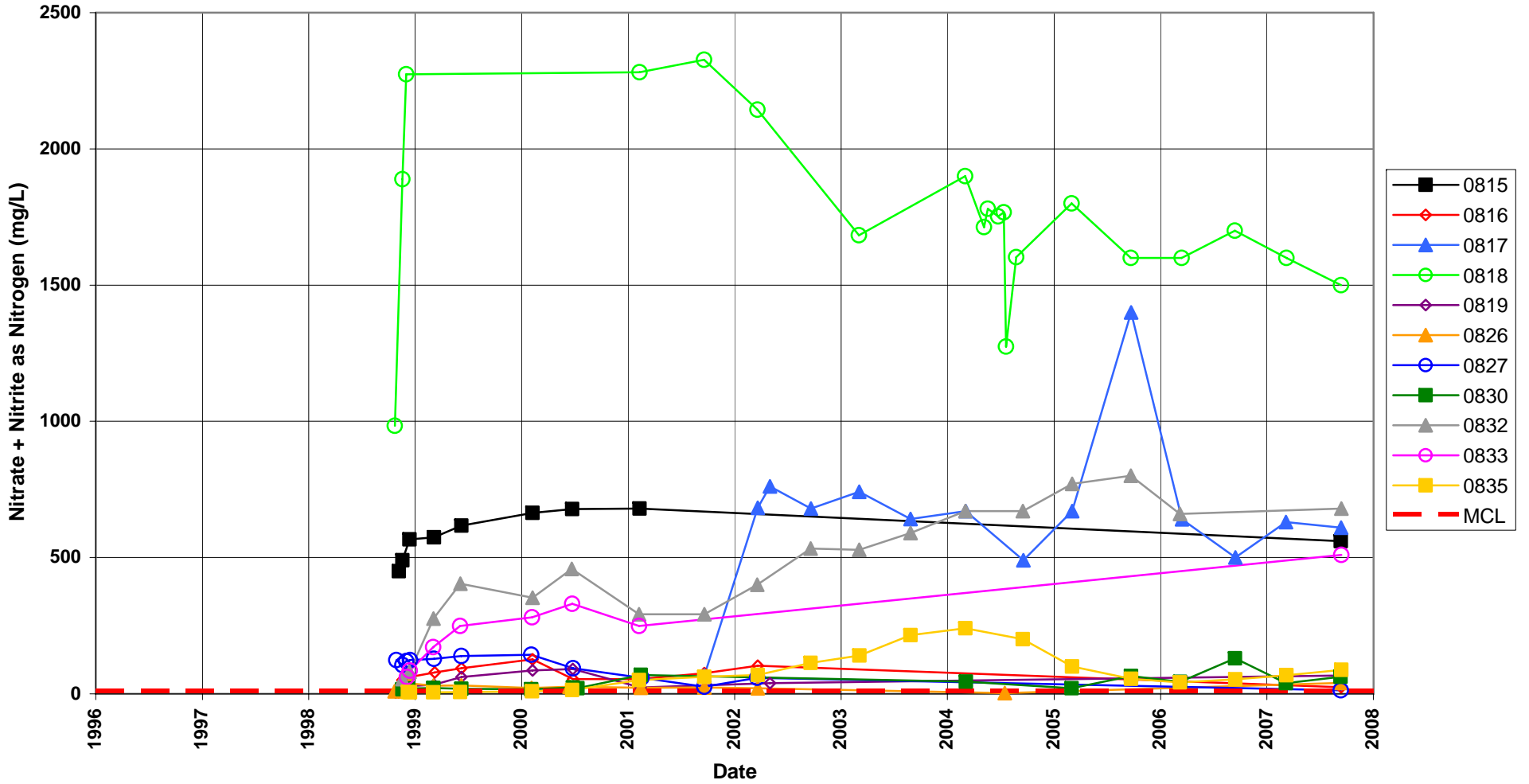


Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level = 10.0 mg/L



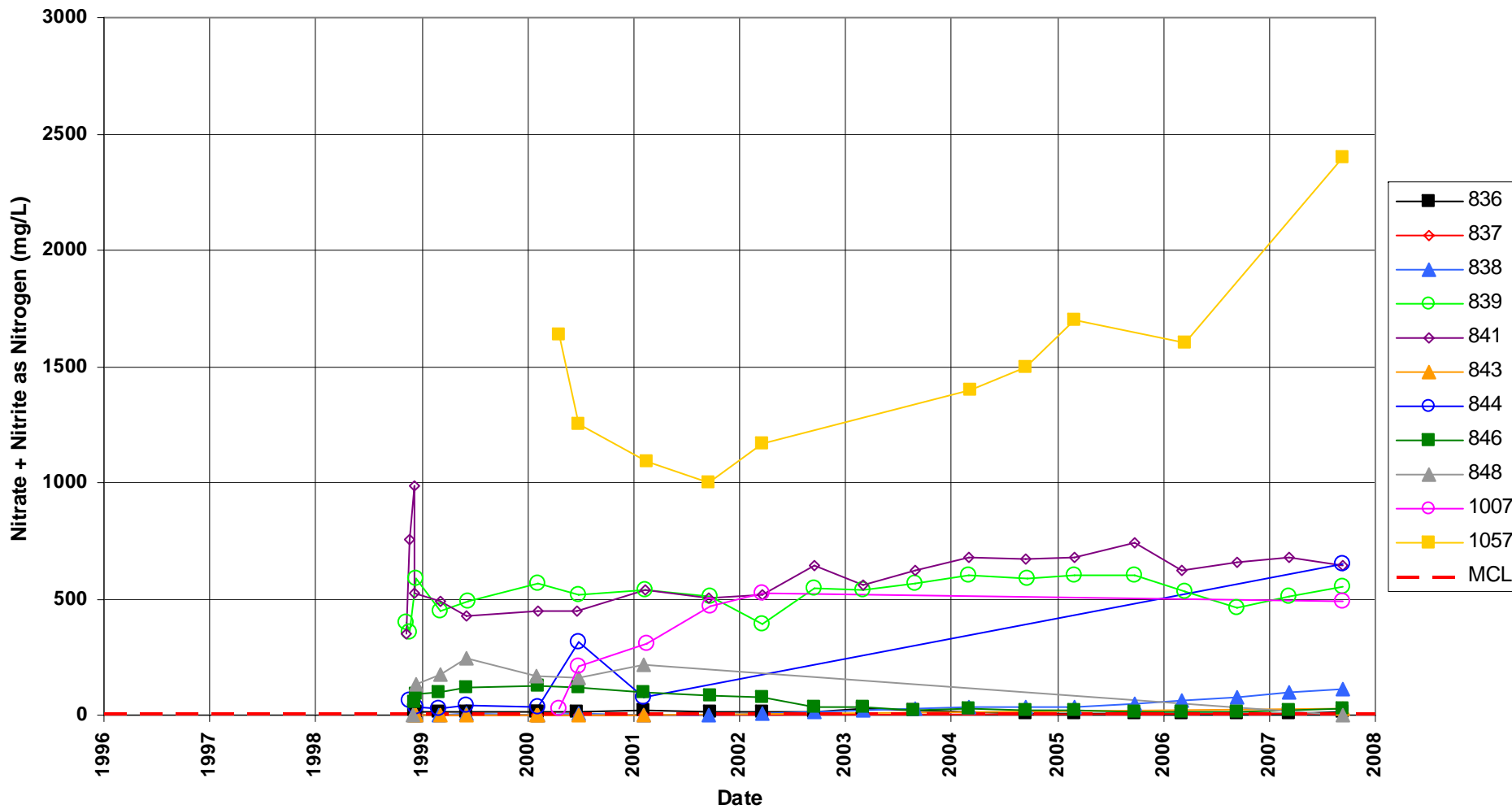
Shiprock Disposal Site (Terrace) Nitrate + Nitrite as Nitrogen Concentration

Maximum Contaminant Level = 10.0 mg/L

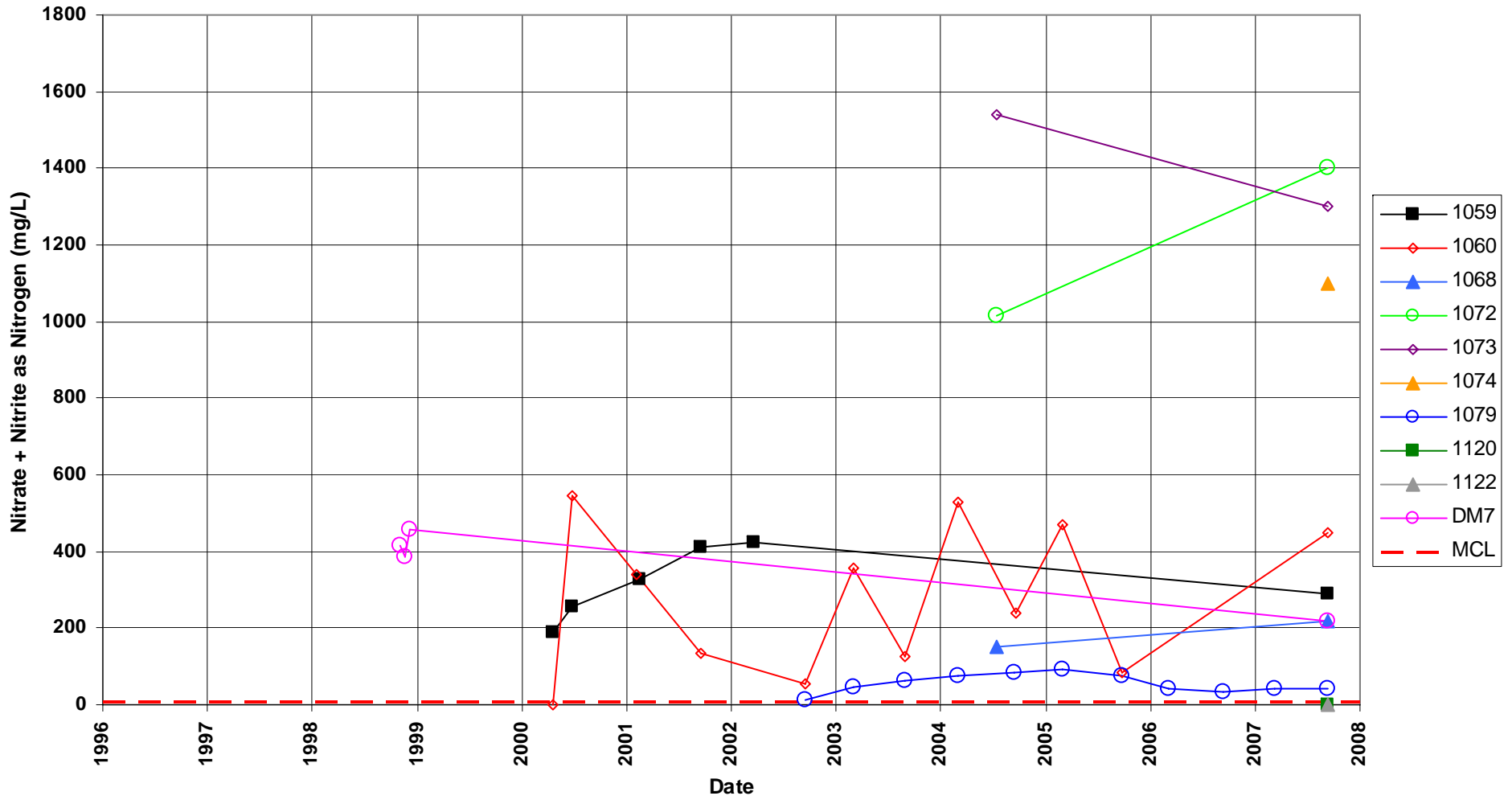


Shiprock Disposal Site (Terrace) Nitrate + Nitrite as Nitrogen Concentration

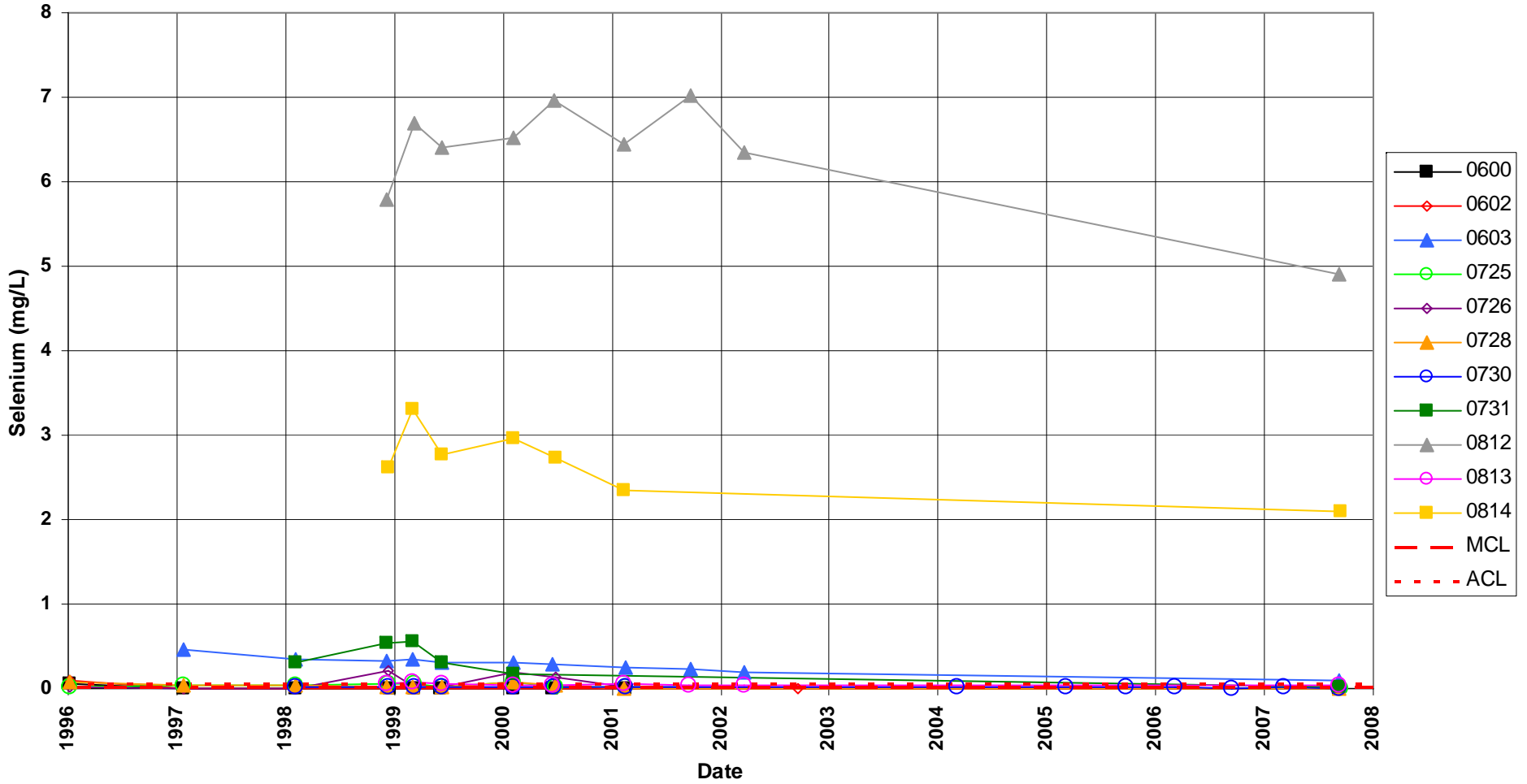
Maximum Contaminant Level = 10.0 mg/L



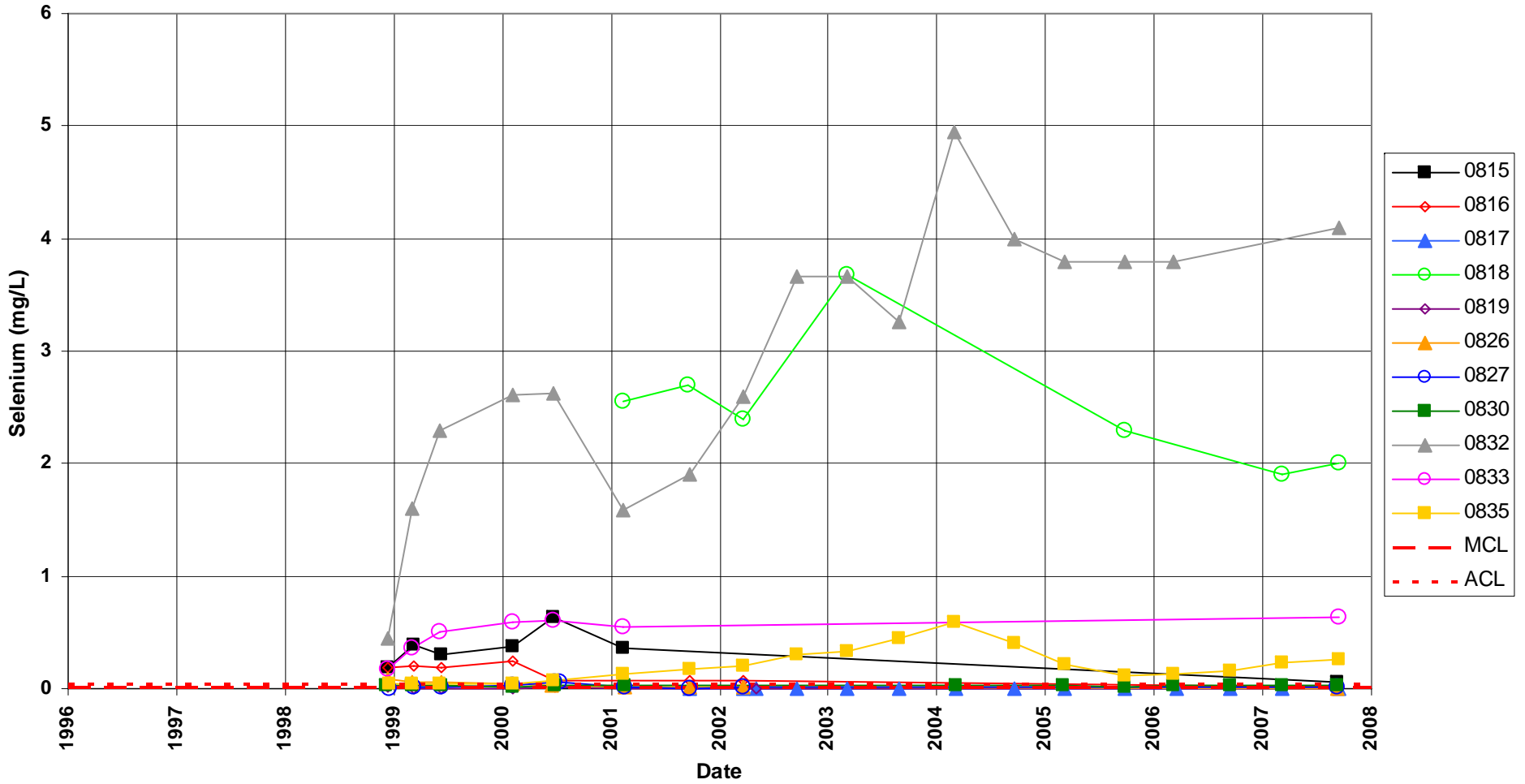
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level = 10.0 mg/L



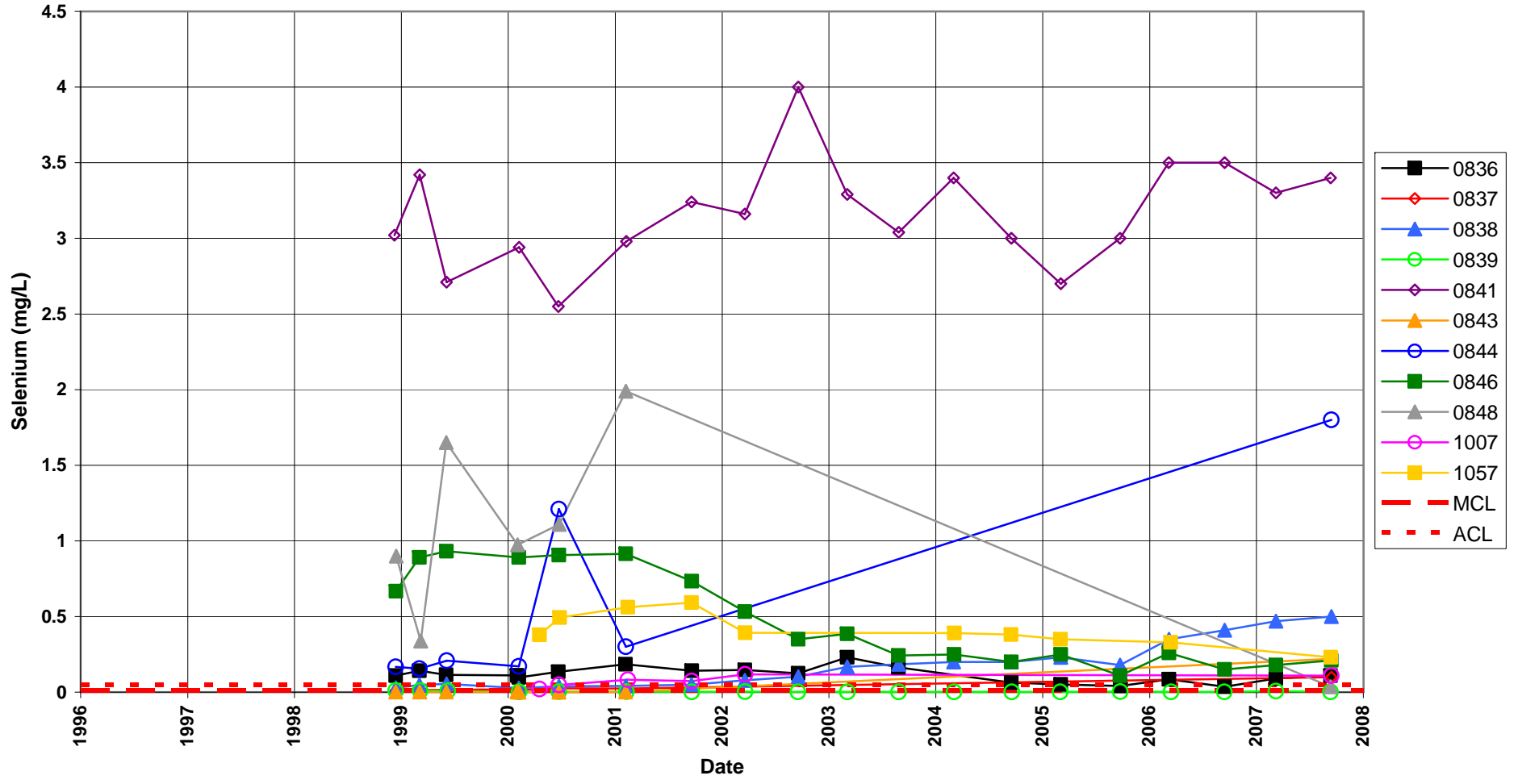
Shiprock Disposal Site (Terrace)
Selenium Concentration
 Maximum Contaminant Level = 0.01 mg/L
 Proposed Alternate Concentration Limit = 0.05 mg/L



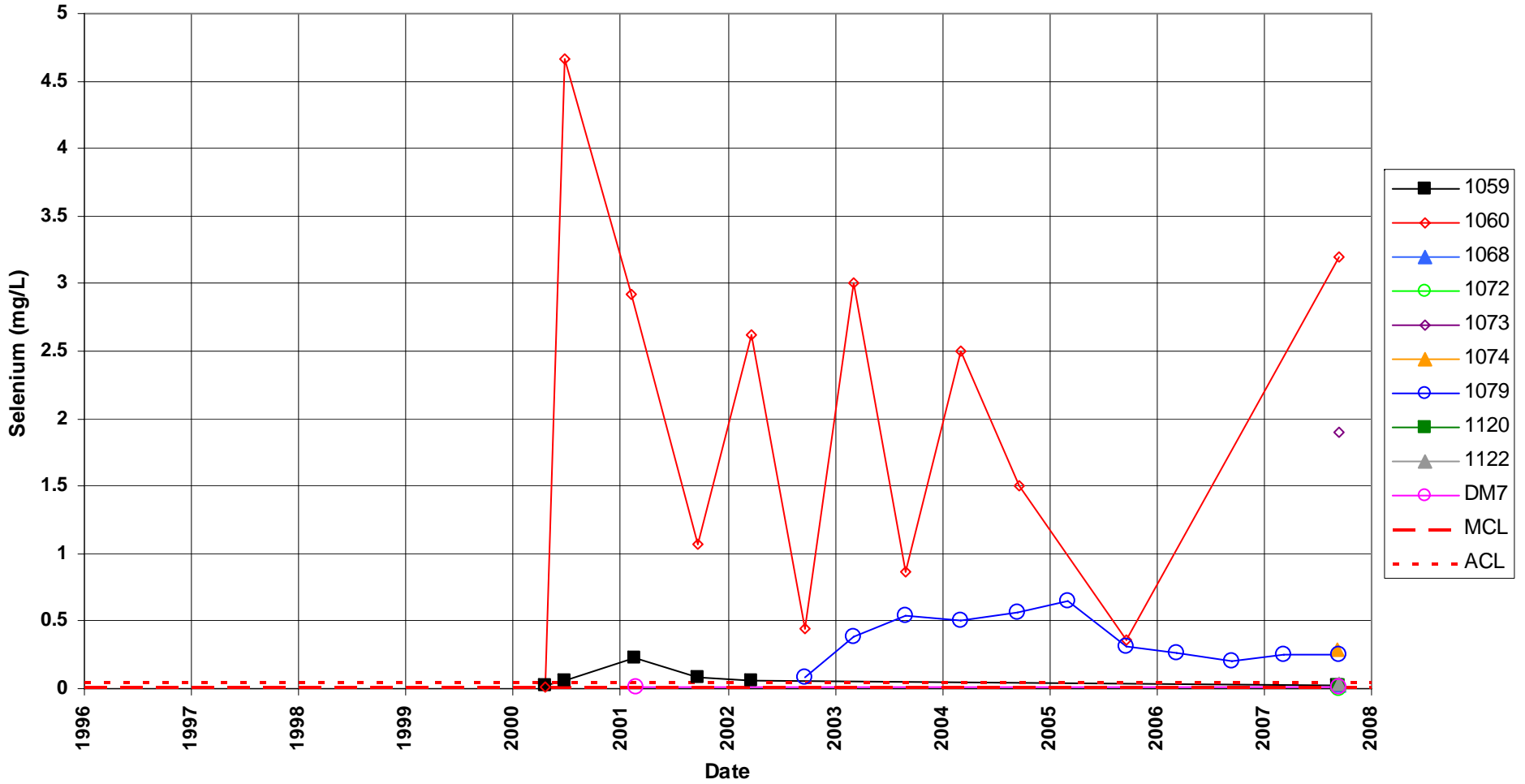
Shiprock Disposal Site (Terrace)
Selenium Concentration
 Maximum Contaminant Level = 0.01 mg/L
 Proposed Alternate Concentration Limit = 0.05 mg/L



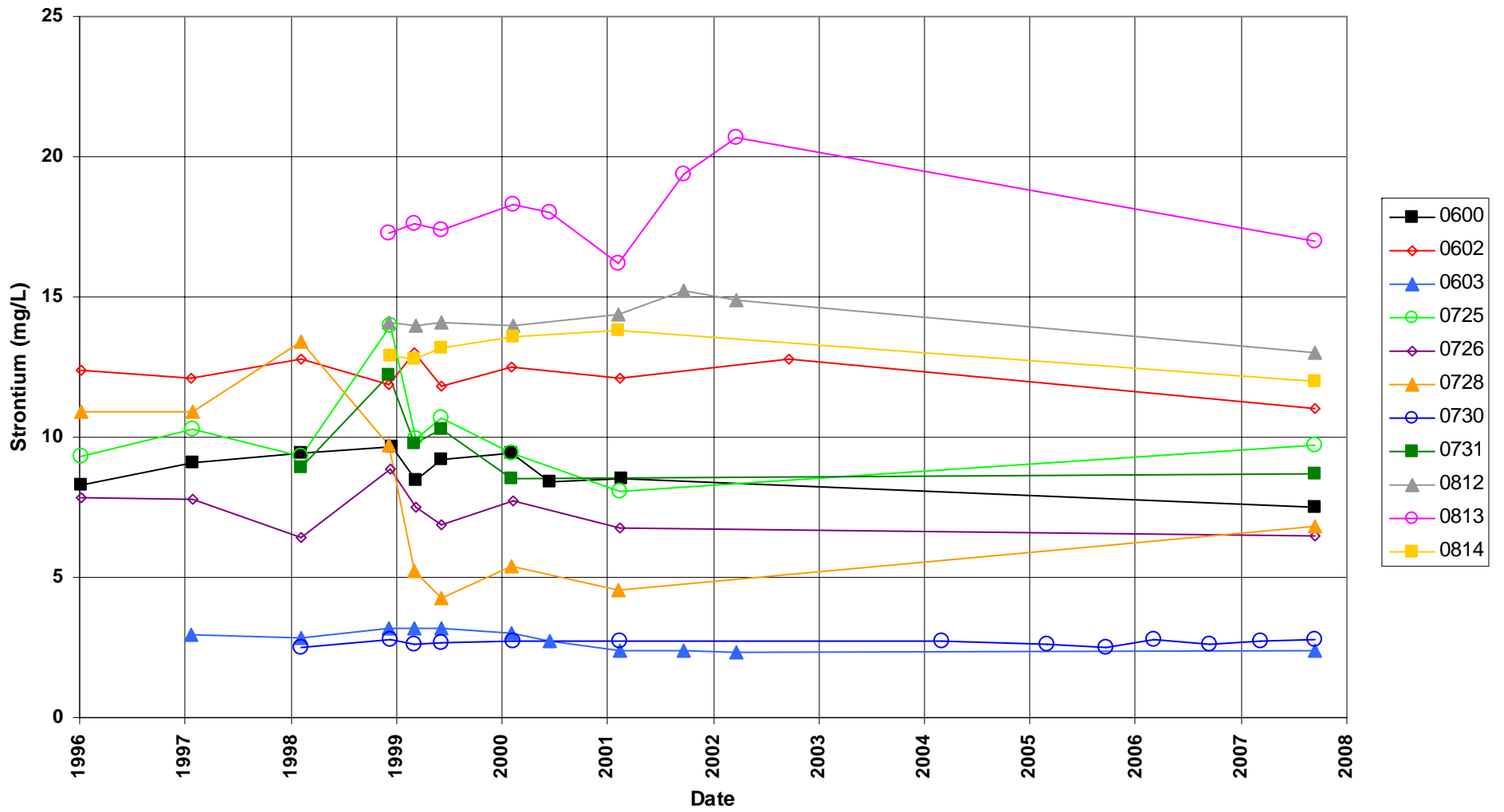
Shiprock Disposal Site (Terrace)
Selenium Concentration
 Maximum Contaminant Level = 0.01 mg/L
 Proposed Alternate Concentration Limit = 0.05 mg/L



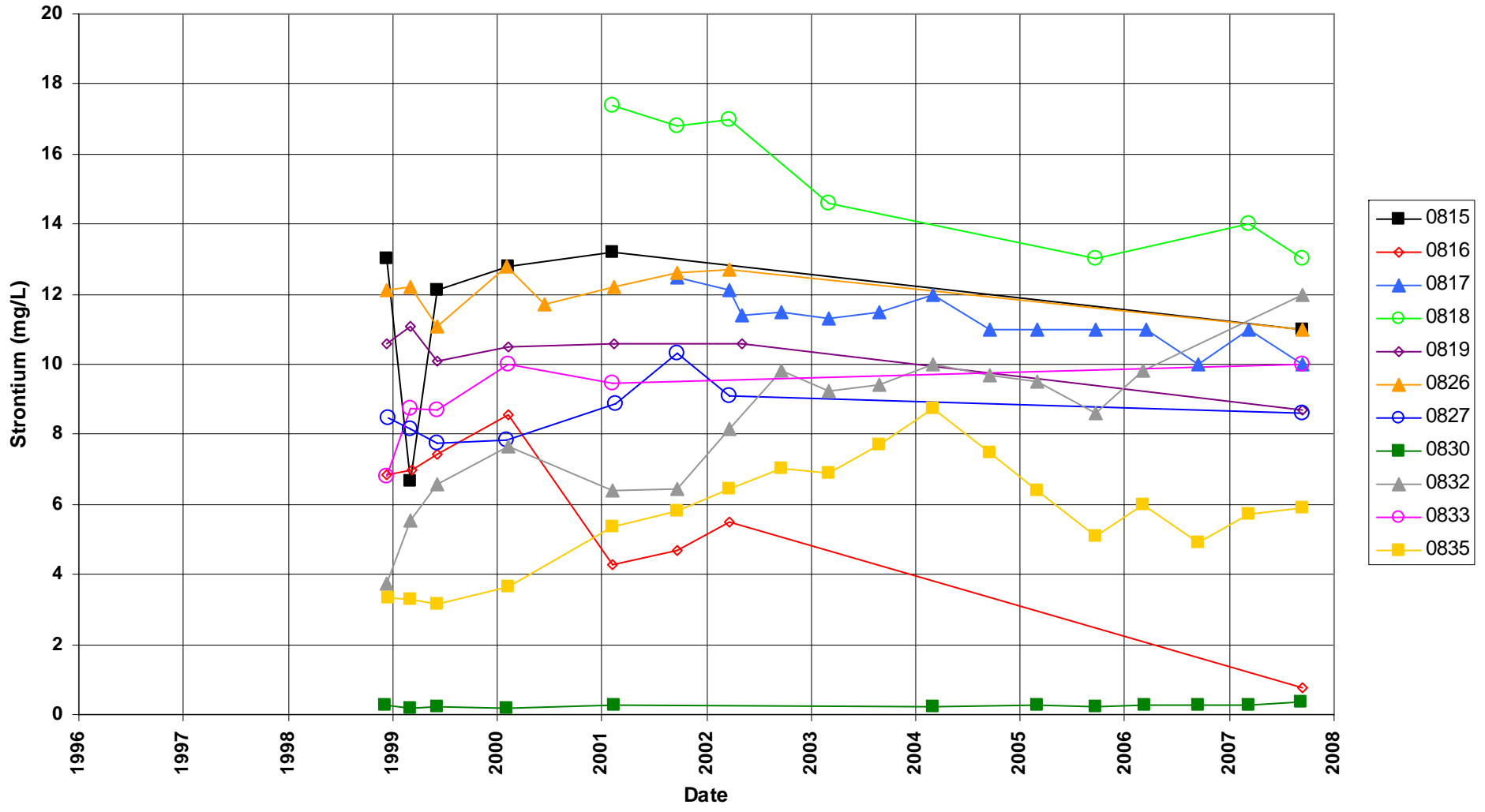
Shiprock Disposal Site (Terrace)
Selenium Concentration
 Maximum Contaminant Level = 0.01 mg/L
 Proposed Alternate Concentration Limit = 0.05 mg/L



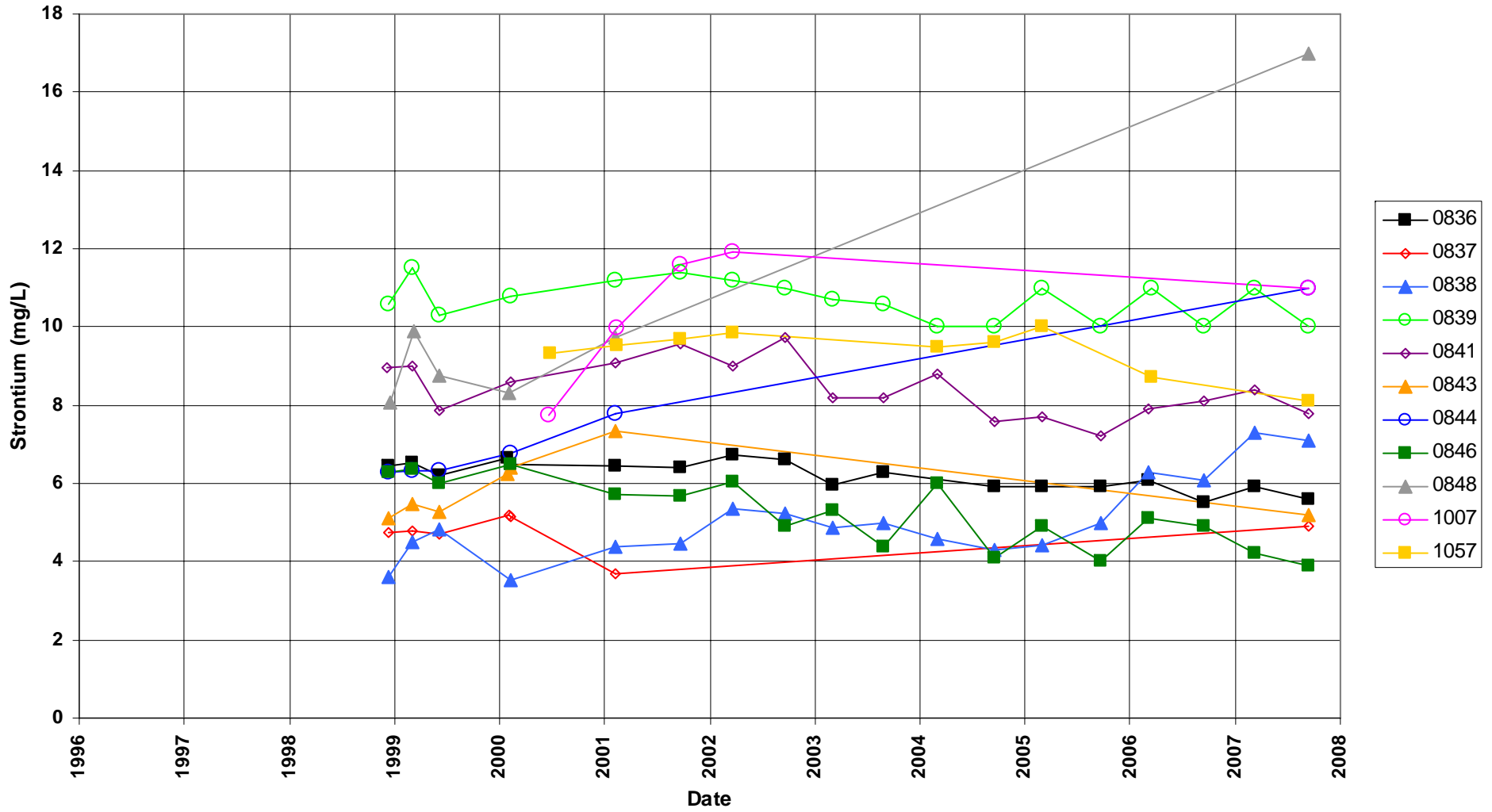
Shiprock Disposal Site (Terrace) Strontium Concentration



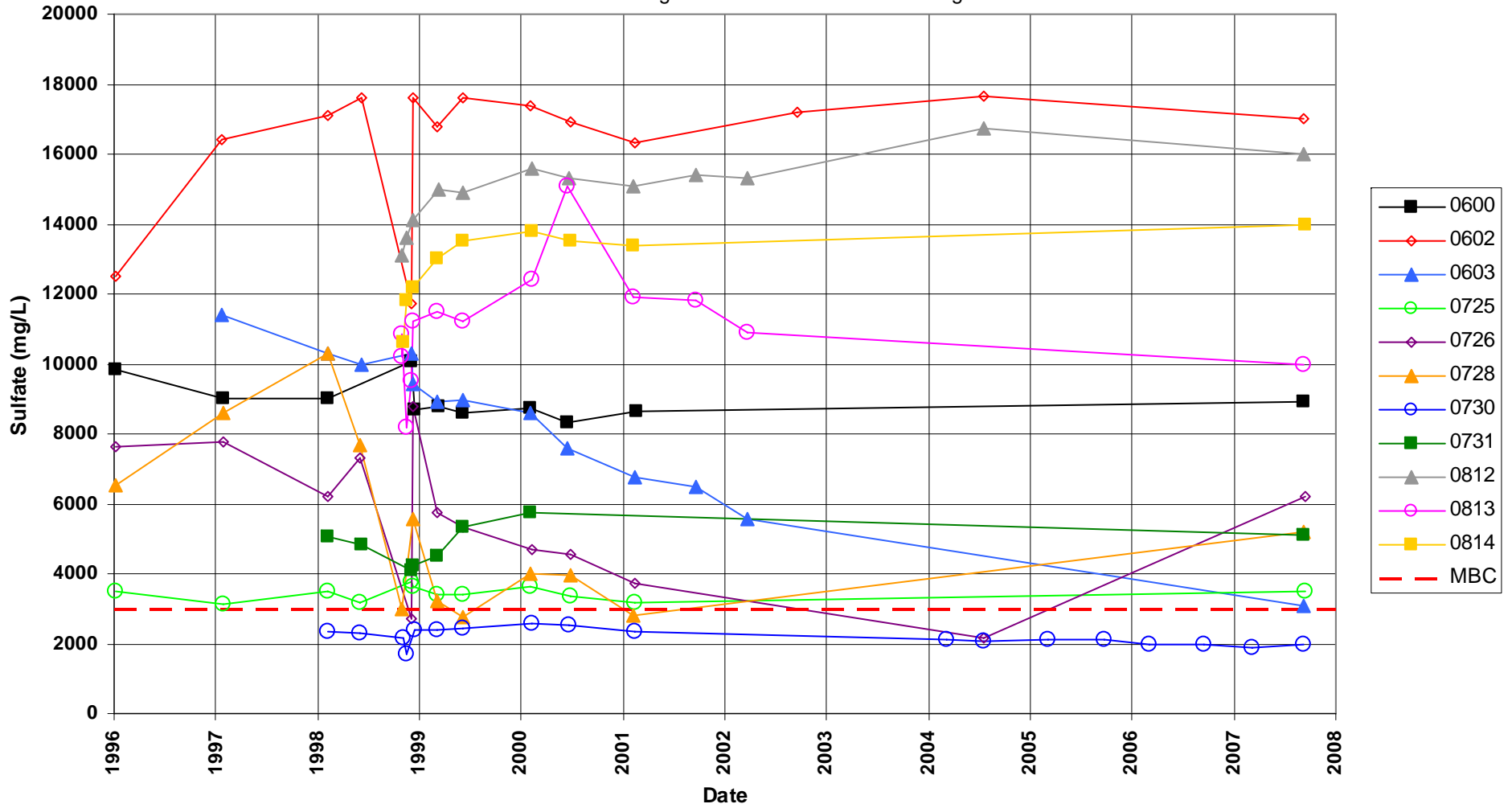
Shiprock Disposal Site (Terrace) Strontium Concentration



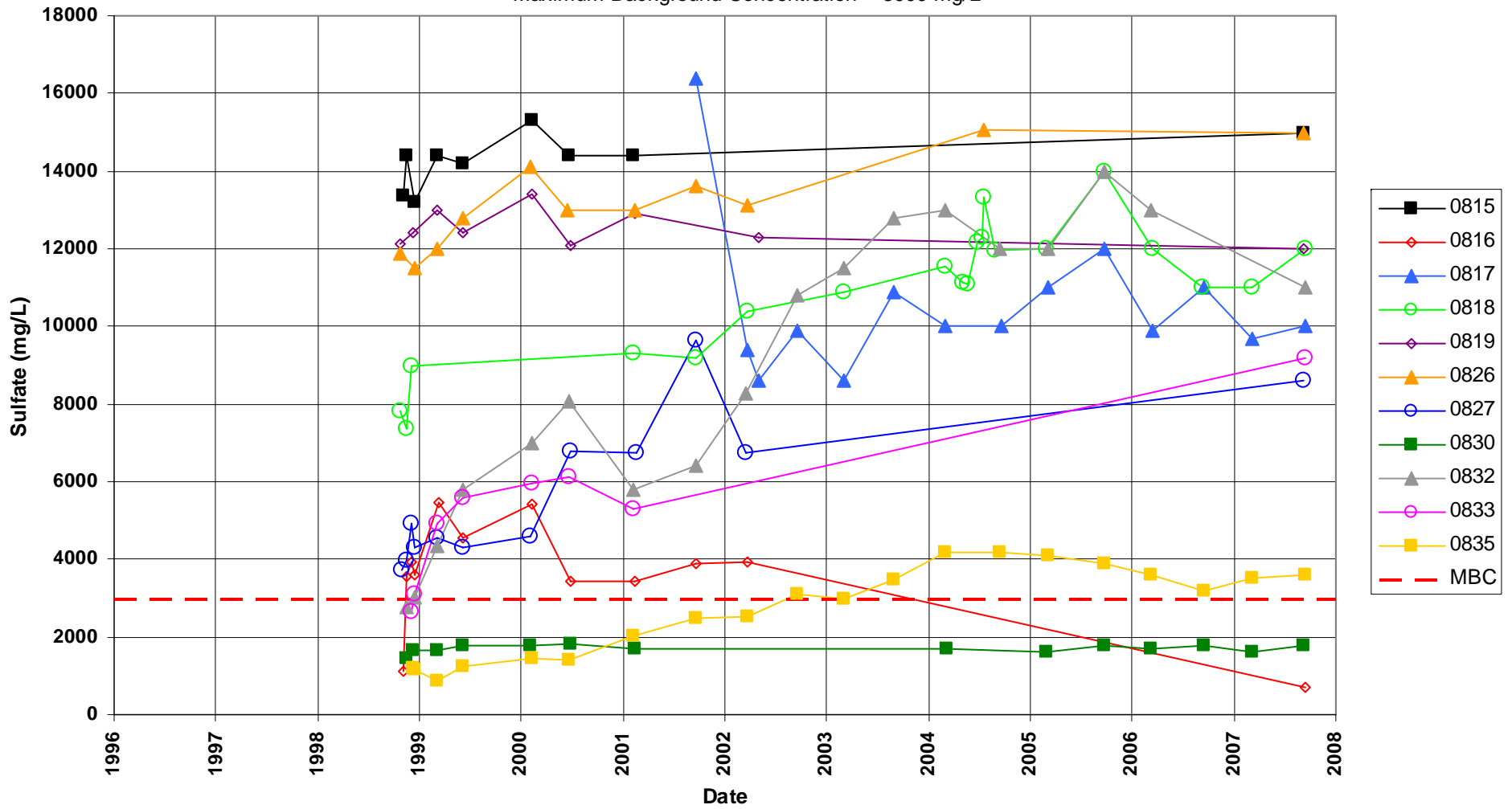
Shiprock Disposal Site (Terrace) Strontium Concentration



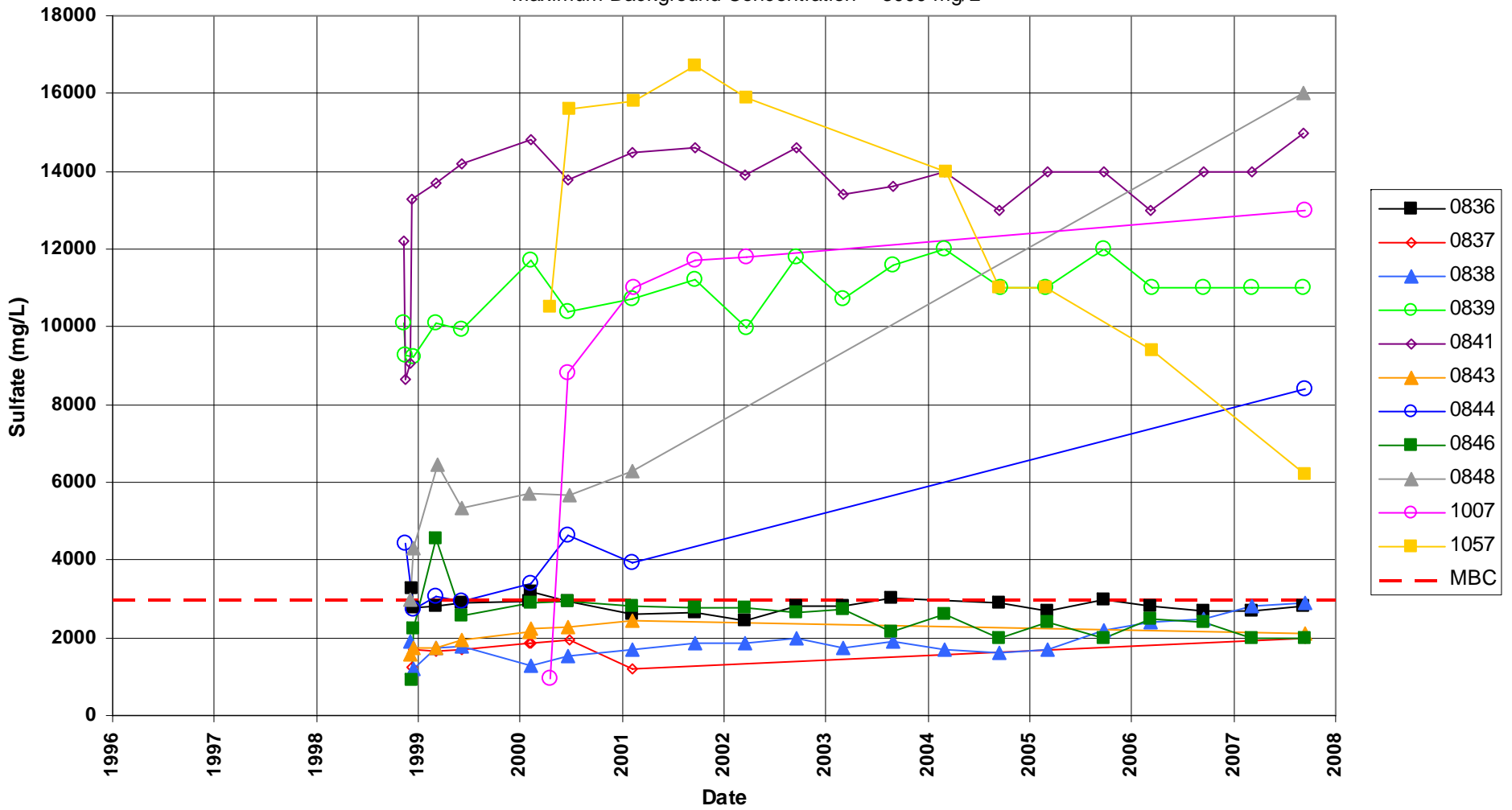
Shiprock Disposal Site (Terrace)
Sulfate Concentration
Maximum Background Concentration = 3000 mg/L



Shiprock Disposal Site (Terrace)
Sulfate Concentration
Maximum Background Concentration = 3000 mg/L

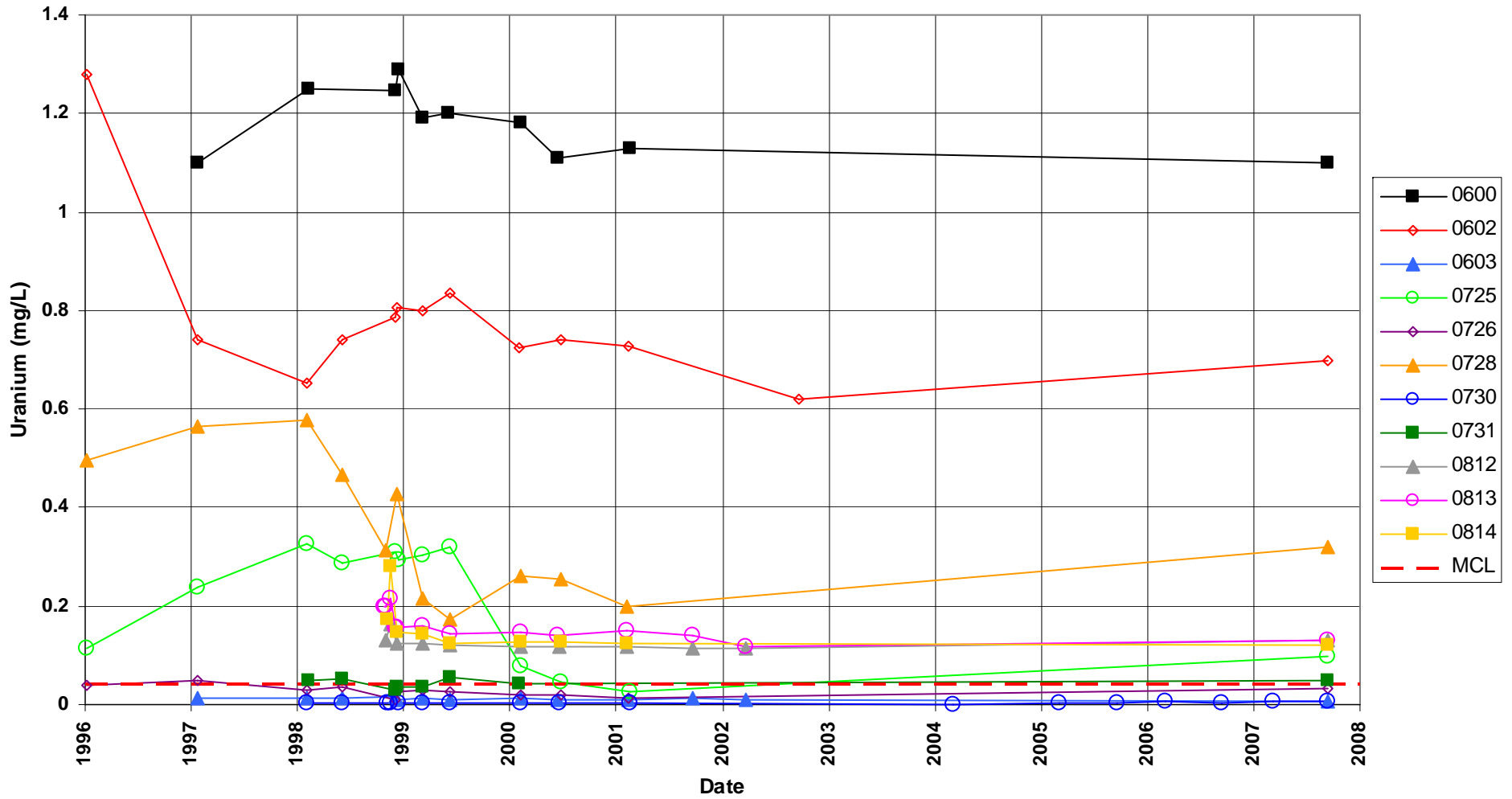


Shiprock Disposal Site (Terrace)
Sulfate Concentration
Maximum Background Concentration = 3000 mg/L



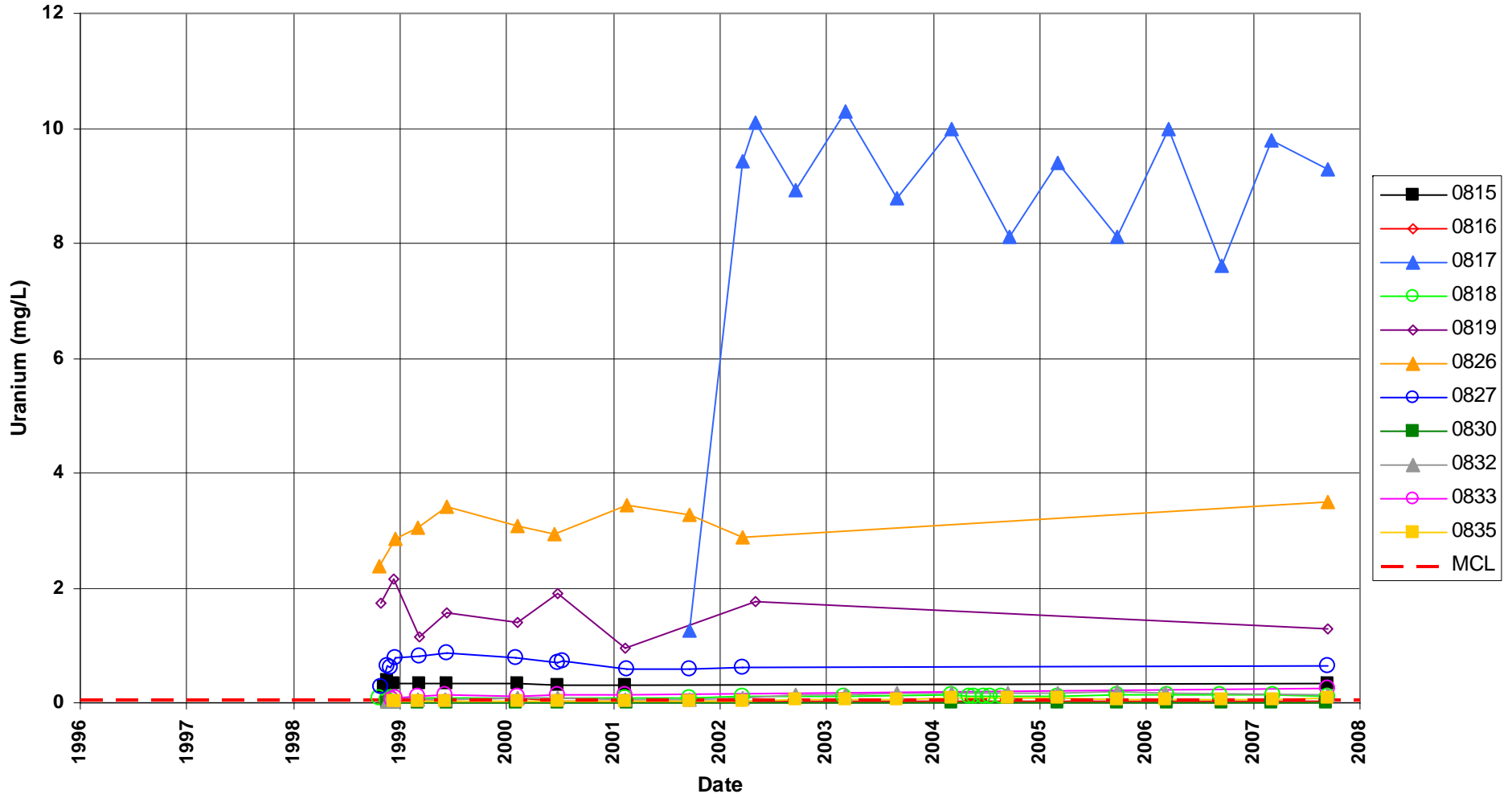
Shiprock Disposal Site (Terrace) Uranium Concentration

Maximum Contaminant Level = 0.044 mg/L

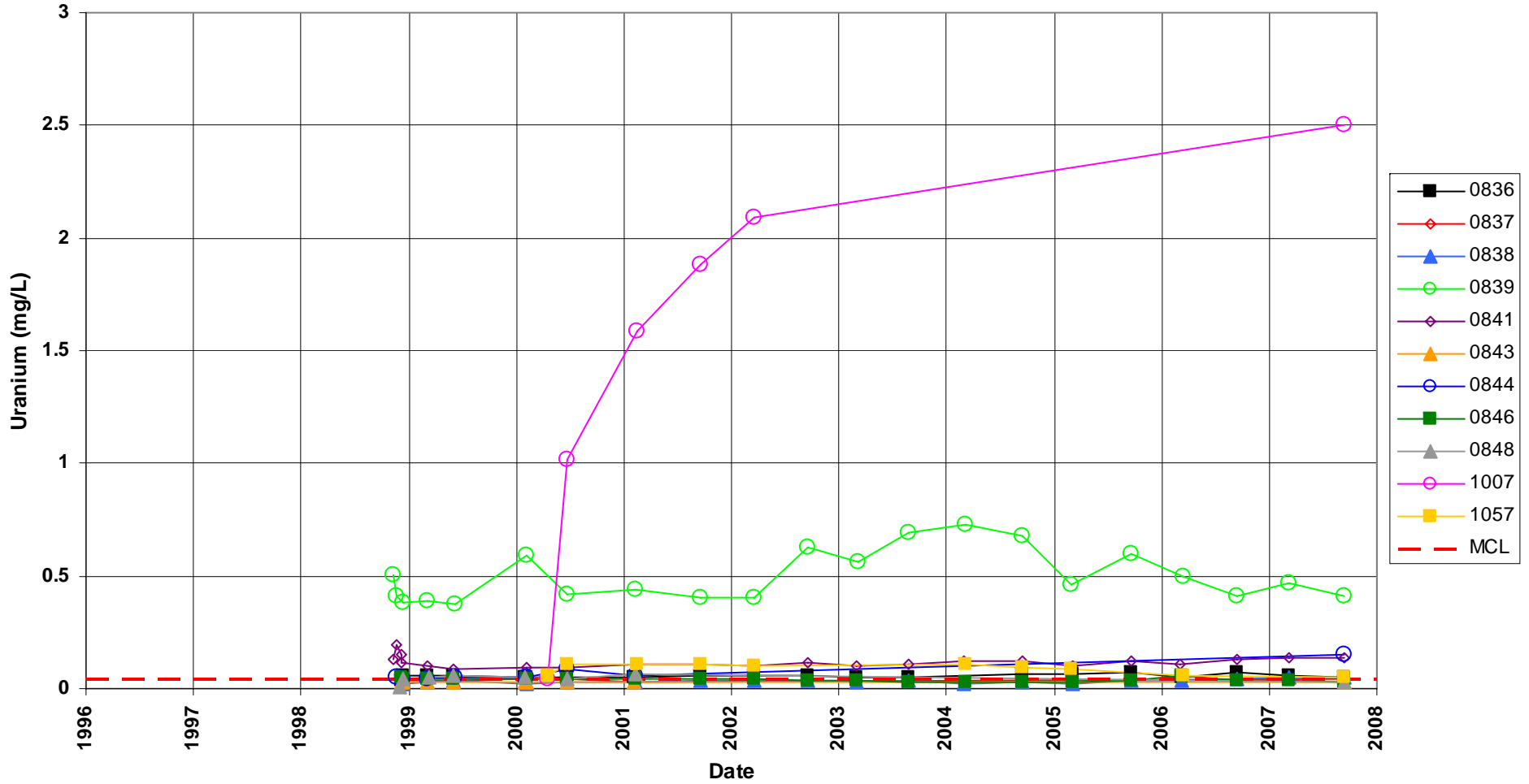


Shiprock Disposal Site (Terrace) Uranium Concentration

Maximum Contaminant Level = 0.044 mg/L



Shiprock Disposal Site (Terrace)
Uranium Concentration
Maximum Contaminant Level = 0.044 mg/L



Attachment 3
Sampling and Analysis Work Order

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established 1959

Task Order ST07-100
Control Number 1000-T07-1248

August 7, 2007

Richard P. Bush
Program Manager
U.S. Department of Energy
Grand Junction Office
2597 B 3/4 Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AC01-02GJ79491, Stoller
September 2007 Environmental Sampling at Shiprock, New Mexico

Reference: FY 2007 LM Task Order No. ST07-100-03

Dear Mr. Bush:

The purpose of this letter is to inform you of the upcoming sampling event at Shiprock, New Mexico. Enclosed are the map and tables specifying sample locations and analytes for routine monitoring. Water quality data will be collected from monitor wells and surface locations at this site as part of the routine environmental sampling scheduled to begin the week of September 10, 2007.

The following lists show the well and surface locations scheduled for sampling during this event.

Monitor Wells (filtered)*

<u>SHP01</u>						
608 Km	619 Al	735 Al	784 Al	853 Al	1104 Nr	1113 Nr
610 Al	622 Al	736 Al	792 Al	855 Al	1105 Nr	1114 Nr
612 Al	626 Al	768 Al	793 Al	856 Al	1109 Nr	1115 Nr
614 Al	628 Al	775 Al	797 Al	857 Al	1110 Nr	1116 Nr
615 Al	630 Al	782 Al	798 Al	1009 Al	1111 Nr	1117 Nr
618 Al	734 Al	783 Al	850 Al	1089 Al	1112 Nr	

<u>SHP02</u>						
600 Km	812 Al/Km	826 Al/Km	837 Al	1007 Al/Km	1071 Al/Km	1092 Al
602 Km	813 Al/Km	827 Al/Km	838 Al	1057 Al/Km	1072 Al/Km	1093 Al
603 Al/Km	814 Al/Km	828 Al/Km	839 Al	1058 Km	1073 Al/Km	1095 Nr
725 Al/Km	815 Al/Km	829 Km	841 Al	1059 Km	1074 Al/Km	1096 Nr
726 Km	816 Al/Km	830 Km	843 Al	1060 Al	1078 Al/Km	1120 Nr
728 Al/Km	817 Km	832 Al	844 Al/Km	1067 Al	1079 Al	1122 Nr
730 Al	818 Al	833 Al	846 Al	1068 Al	1087 Nr	DM7 Km
731 Al/Km	819 Km	835 Al	848 Al/Km	1069 Al/Km	1088 Nr	MW1 Km
804 Km	822 Km	836 Al	1006 Al/Km	1070 Al/Km	1091 Al	

*NOTE: Al = Alluvium; Km = Mancos Shale; Nr = No recovery of data for classifying

Surface Water (filtered)

			<u>SHP01</u>			
501	897	937	939	956	965	1203
655	898	938	940	959	1118	1205
887						

			<u>SHP02</u>			
662	884	889	933	934	936	942
786	885					

Water levels will be collected from additional (non-sampled) wells as shown in the attachment. QA/QC samples will be collected as directed in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management*. Access agreements are covered under the cooperative agreement.

If you have any questions, please call me at extension 6588 or Dave Miller at extension 6652.

Sincerely,

Clay Carpenter
Project Manager

CC/lcg/at
Enclosures (3)

cc: S. E. Donovan, Stoller (e)
L. C. Goodknight, Stoller (e)
D. E. Miller, Stoller (e)
EDD Delivery (e)

cc w/o enclosures:
Correspondence Control File (Thru C. Weston)

Constituent Sampling Breakdown For Individual Sites

Site	Shiprock	
Analyte	Groundwater	Surface Water
Approx. No. Samples/yr	73	57
<i>Field Measurements</i>		
Alkalinity	X	X
Dissolved Oxygen	X	
Redox Potential	X	X
pH	X	X
Specific Conductance	X	X
Turbidity	X	
Temperature	X	X
<i>Laboratory Measurements</i>		
Aluminum		
Ammonia as N (NH ₃ -N)	X	X
Antimony		
Arsenic		
Barium		
Beryllium		
Bromide		
BTEX		
Cadmium		
Calcium	X	X
Chloride	X	X
Chromium		
Cobalt		
Copper		
Fluoride		
Gamma Spec		
Gross Alpha		
Gross Beta		
Iron		
Lead		
Lead-210		
Magnesium	X	X
Manganese	X	X
Mercury		
Molybdenum		
Nickel		
Nickel-63		
Nitrate + Nitrite as N (NO ₃ +NO ₂)-N	X	X
Organics		
PCBs		
Phosphate		
Polonium-210		
Potassium	X	X
Radium-226		

Site	Shiprock	
Analyte	Groundwater	Surface Water
Radium-228		
Radon-222		
Selenium	X	X
Silica		
Sodium	X	X
Strontium	X	X
Sulfate	X	X
Sulfide		
Thallium		
Tin		
Total Dissolved Solids	X	
Total Organic Carbon		
Tritium		
Uranium	X	X
Uranium-234, -238		
Vanadium		
VOCs		
Zinc		
Total Analytes	13	12

Note: All analyte samples are considered filtered unless stated otherwise. All private well samples are to be unfiltered. The total number of analytes does not include field parameters.

Attachment 4
Trip Report

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Memorandum

Control Number N/A

DATE: October 3, 2007
TO: David Miller
FROM: Emile A. Bettez
SUBJECT: Routine Sampling Trip Report

Site: Shiprock, NM

Date of Sampling Event: September 10-14, 2007

Team Members: G. Baer, E. Bettez, S. Campbell, J. Price, D. Sellers, and J. Trevino

Number of Locations Sampled: Samples were collected from 69 monitor wells, 15 extraction wells, and 15 surface water locations. In addition, 5 duplicate samples and 2 equipment blanks were collected for QA/QC purposes.

Locations Not Sampled/Reason: Surface water locations 0655, 0885, 0889, 0933, 0936, 0937, 0938, and 0959 were dry. Wells 0736, 0768, 0775, 0804, 0822, 1006, 1067, 1069, 1112, 1113, and 1116 were dry or had insufficient water to sample. Wells 0783 and 0782 could not be found and are presumed destroyed by construction equipment.

Well 0828 had a casing that was 10 feet above ground due to soil grading work around it, so it could not be sampled.

Wells 0615 and 1105 may have water but were clogged with roots. This was confirmed by a visual inspection with a flashlight. Water was inaccessible with the equipment we had. These wells will need to be developed.

Field Variance: Well 0734 and seep 0786 had insufficient water to record parameters, but we were able to collect limited volume samples.

Quality Control Sample Cross Reference: The following are the false identifications assigned to the quality control samples:

False ID	True ID	Sample Type	Associated Matrix	Ticket Number
2608	1203	Duplicate	SW	NFD 312
2533	1089	Duplicate	GW	NFD 352
2534	0855	Duplicate	GW	NFD 364
2605	1057	Duplicate	GW	NFD 082
2535	NA	Equipment Blank	DI	NFK 938
2604	0662	Duplicate	SW	NFJ 148
2609	NA	Equipment Blank	DI	NFJ 150

RIN Number Assigned: All samples were assigned to RIN 07081119.

Sample Shipment: The first shipment was shipped via FedEx to Paragon Analytical from Farmington, New Mexico, on September 12. A second shipment to Paragon Analytical was prepared at GJO and sent via FedEx on September 14, with waybill 860501097114.

Water Level Measurements: Water levels were collected in all sampled wells, with the exception of the extraction wells. Water level data are provided in the Location Specific Table. These data represent depth to water (ft btoc) measurements.

Well Inspection Summary: Well inspections were conducted at all sampled wells. Riser caps were missing on wells MW-1, DM-7, and 0728, and bags were used as an interim measure. There were no labels on wells 0792, 0798, 0812, and 0833; the samplers painted numbers on them. Wells 0843, 0846, and 1068 need developing. Well 0817 needs a bladder pump. Wells 0782 and 0783 have apparently been destroyed by construction equipment.

Equipment: Wells were sampled using the low-flow procedure with dedicated bladder pumps and dedicated tubing, or with the peristaltic pump if needed. Surface water samples were collected with a portable peristaltic pump.

A bailer had to be used to collect samples in well 1060. The bladder pump had to be reset at the bottom of well 0832.

Data logger Transducers: Data loggers were successfully downloaded from 6 locations (5 well locations and 1 river location) in the floodplain area (SHP01) and 15 well locations in the terrace location (SHP02). The data logger at well location SHP02-0604 was replaced with a troll 4000 data logger and a new test started. All data has been uploaded to the database.

Regulatory: None.

Location Specific Information: The following is a table of samples collected:

Ticket Number	Location	Sample Date	Description	WL
NFD 301	0735	9/10/2007	Cat. I	6.90
NFD 302	0501	9/10/2007	SW	
NFD 303	1117	9/10/2007	Cat. I	10.16
NFD 304	1115	9/10/2007	Cat. I	10.40
NFD 305	1114	9/10/2007	Cat. I	6.64

Ticket Number	Location	Sample Date	Description	WL
NFD 076	1074	9/10/2007	Cat. II	38.24
NFD 077	0830	9/10/2007	Cat. I	17.53
NFD 078	1058	9/10/2007	Cat. II; purged dry during development.	48.11
NFD 079	1059	9/10/2007	Cat. II	23.32
NFJ 127	1091	9/10/2007	Cat. IV	
NFJ 128	1092	9/10/2007	Cat. IV	
NFJ 129	1093	9/10/2007	Cat. IV	
NFD 306	1109	9/11/2007	Cat. IV; DO is approximate; air mixed with water in sample	
NFD 307	0608	9/11/2007	Cat. I	7.24
NFD 308	1203	9/11/2007	SW. Duplicate sample suite taken at this location	
NFD 309	0610	9/11/2007	Cat. II. ¼ " Tubing installed	11.87
NFD 310	0612	9/11/2007	Cat. I; small pieces of vegetation (wood) in sample	8.26
NFD 311	0614	9/11/2007	Cat. I	8.97
NFD 356	0628	9/11/2007	Cat. I	6.41
NFD 313	1111	9/11/2007	Cat. I. Roots in well	7.51
NFD 314	1110	9/11/2007	Cat. IV	
NFD 080	0827	9/11/2007	Cat. III	27.07
NFD 081	0600	9/11/2007	Cat. III	34.12
NFD 083	MW-1	9/11/2007	Cat. III. Animal hair in well	49.63
NFD 084	0731	9/11/2007	Cat. III	24.82
NFD 085	0603	9/11/2007	Cat. I	30.98
NFD 086	DM-7	9/11/2007	Cat. III. PVC is 3 feet below top of casing.	48.45
NFD 087	0730	9/11/2007	Cat. I. WL below top of pump	<-
NFD 088	0839	9/11/2007	Cat. III. WL below top of pump	<-
NFD 089	0815	9/11/2007	Cat. III	26.00
NFD 090	0728	9/11/2007	Cat. III.	25.12
NFD 091	1072	9/11/2007	Cat. III	45.02
NFD 092	0813	9/11/2007	Cat. I	43.37
NFD 093	1073	9/11/2007	Cat. III	50.00
NFD 094	0812	9/11/2007	Cat. III	61.14
NFJ 130	0848	9/11/2007	Cat. I	40.06
NFJ 131	0841	9/11/2007	Cat. I	45.80
NFJ 132	1060	9/11/2007	Cat. II. WL below top of pump; bailed	37.65
NFJ 133	0836	9/11/2007	Cat. I	25.35
NFJ 149	0846	9/13/2007	Cat. I	25.50
NFJ 134	0602	9/11/2007	Cat. I	20.5
NFJ 135	0826	9/11/2007	Cat. I	17.98
NFJ 136	0819	9/11/2007	Cat. I	20.61
NFD 315	1009	9/12/2007	Cat. I	9.00
NFD 316	0853	9/12/2007	Cat. I	8.05
NFD 317	1205	9/12/2007	SW	
NFD 318	0793	9/12/2007	Cat. I	7.98
NFD 319	0857	9/12/2007	Cat. I Installed ¼ " tubing in well	10.83
NFD 320	0618	9/12/2007	Cat. I	8.42
NFD 321	0792	9/12/2007	Cat. I	8.66
NFD 322	0619	9/12/2007	Cat. I. Sulphur smell	9.42
NFD 323	0798	9/12/2007	Cat. I. Water has a yellow tint	9.04
NFD 324	0940	9/12/2007	SW	

Ticket Number	Location	Sample Date	Description	WL
NFD 325	1089	9/12/2007	Cat. IV. Duplicate sample suite taken at this location	
NFD 351	1104	9/12/2007	Cat. IV	
NFD 353	0622	9/12/2007	Cat. I	6.68
NFD 354	1118	9/12/2007	SW	
NFD 095	0814	9/12/2007	Cat. III	32.41
NFD 096	0816	9/12/2007	Cat. I. WL below top of pump	<-
NFD 097	0817	9/12/2007	Cat. I; needs bladder pump installed	19.40
NFD 098	1088	9/12/2007	Cat. IV	
NFD 099	1057	9/12/2007	Cat. I. Duplicate sample suite collected at this location	39.22
NFD 100	1095	9/12/2007	Cat. IV	
NFK 926	1071	9/12/2007	Cat. IV	
NFK 927	0818	9/12/2007	Cat. IV	
NFK 928	1070	9/12/2007	Cat. IV	
NFK 929	1096	9/12/2007	Cat. IV	
NFK 930	1078	9/12/2007	Cat. IV	
NFK 931	1087	9/12/2007	Cat. IV	
NFK 932	1068	9/12/2007	Cat. I	7.48
NFJ 137	0797	9/12/2007	Cat. II	10.22
NFJ 138	0898	9/12/2007	SW	
NFJ 139	0850	9/12/2007	Cat. I	9.04
NFJ 140	0939	9/12/2007	SW	
NFJ 141	0887	9/12/2007	SW	
NFJ 142	0784	9/12/2007	Cat. I	8.11
NFJ 143	0942	9/12/2007	SW	
NFD 355	0626	9/13/2007	Cat. I	7.96
NFD 357	0630	9/13/2007	Cat. I. Installed ¼" tubing	4.11
NFD 358	0856	9/13/2007	Cat. I	7.58
NFD 359	0734	9/13/2007	Cat. III. Insufficient water to collect parameters	6.78
NFD 360	0786	9/13/2007	SW. Insufficient water to collect parameters	
NFD 361	0855	9/13/2007	Cat. I. Duplicate sample suite collected at this location	7.44
NFD 362	0956	9/13/2007	SW	
NFD 363	0965	9/13/2007	SW	
NFD 365	0837	9/13/2007	Cat. I	16.20
NFD 366	0843	9/13/2007	Cat. I. Black particles in water. Turbidity leveled at ~20 NTUs	11.87
NFK 933	0726	9/13/2007	Cat. III	25.74
NFK 934	0725	9/13/2007	Cat. I	21.79
NFK 935	0832	9/13/2007	Cat. III. WL below top of pump	29.28
NFK 936	0844	9/13/2007	Cat. III	32.03
NFK 937	0835	9/13/2007	Cat. I	21.00
NFK 939	0833	9/13/2007	Cat. III	30.40
NFK 940	0838	9/13/2007	Cat. I	28.13
NFK 941	1079	9/13/2007	Cat. I	17.37
NFK 942	1120	9/13/2007	Cat. III	22.28
NFJ 144	0934	9/13/2007	SW	
NFJ 145	0884	9/13/2007	SW	
NFJ 146	0897	9/13/2007	SW	
NFJ 147	0662	9/13/2007	SW. Duplicate sample suite collected at this location	

Institutional Controls: We observed that there are no gates or fences impeding access to the site.

Fences, Gates, Locks: No problems encountered.

Signs: No missing or vandalized signs were observed.

Trespassing/Site Disturbances: N/A

Site Issues

Disposal Cell/Drainage Structure Integrity: OK

Vegetation/Noxious Weed Concerns: Access to surface water locations 0501 and 1203 were very overgrown with vegetation and were difficult to access.

Maintenance Requirements: None observed.

Corrective Action Required/Taken: N/A

(EAB/lcg)

cc: R. P. Bush, DOE (e)
S. E. Donivan, Stoller (e)
EDD Delivery (e)

Errata for the Shiprock Trip Report Dated October 3, 2007

Number of Locations Sampled: Change “collected from 69 monitor wells” to “collected from 71 monitor wells” and “15 surface water locations” to “16 surface water locations.” This will add up to a total of 109 locations sampled.

Location Specific Information: Add the following rows to the table

NFK 943	1122	9/13/2007	Cat. I	22.26
NFK 944	1007	9/13/2007	Cat. III	44.72

Location Specific Information: Change this row

NFJ 145	0884	9/13/2007	SW	
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to

NFJ 145	0889	9/13/2007	SW	
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Reported by Gretchen Baer on May 21, 2008