

Data Validation Package

September 2005
Shiprock, New Mexico, Disposal Site
Data Validation Package

January 2006



U.S. Department of Energy
Office of Legacy Management

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Sampling Event Summary

Site: Shiprock, New Mexico, Disposal Site

Sampling Period: September 19-22, 2005

Ground water and surface water sampling and analysis are performed semiannually at the Shiprock Disposal Site as specified in the *Ground Water Compliance Action Plan for Remediation at the Shiprock, New Mexico, Disposal Site* (Draft, February 2005). Sampling and analysis was conducted as specified in the *FY 2005 Sampling Frequencies and Analyses* (January 2005) and the *Environmental Procedures Catalog* (STO 6). Monitoring of terrace locations is performed to determine the effectiveness of active remediation and to confirm that milling-related constituents do not affect the current beneficial, limited use of the ground water. Monitoring of floodplain locations is performed to determine the progress of the natural flushing process and the effectiveness of ground water removal to prevent contaminants from reaching the San Juan River.

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

Floodplain surface water analyte concentrations were compared to statistical benchmark values derived using data from 16 samplings 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.

San Juan River downgradient locations 0957 and 0965 are sampled to determine if COCs from the floodplain contaminant plume are entering the river. These are adjacent locations located on the westside and eastside of the river respectively. Analyte concentrations at these locations remain comparable showing no evidence of contamination entering the river.

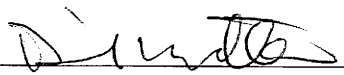
Table 1. Shiprock Locations that Exceed Standards

Analyte	Standard ^a	Proposed ACL ^b	Site Code	Location	Concentration
Manganese		5.18	SHP01	0608	5.7
				0615	6.9
				0618	8.6
				0619	6.4
				0735	5.6
Nitrate as Nitrogen	10		SHP01	0608	650
				0614	1100
				0615	1200
				0618	220
				0735	1200
				1008	46
				1077	270
1089	71				
Selenium	0.01	0.05	SHP01	0608	0.011
				0614	0.11
				0615	0.78
				0618	0.22
				0735	0.27
				1008	0.13
				1077	0.023
1089	0.094				
Uranium	0.044		SHP01	0608	2
				0614	3
				0615	3.4
				0618	2.9
				0619	1.2
				0735	0.56
				0736	0.32
				1008	1.3
				1077	2.9
1089	1.3				
Manganese		5.18	SHP02	0730	18.0
				1008	506
Nitrate as Nitrogen	10		SHP02	0730	110
				0817	1400
				0818	1600
				0830	65
				0832	800
				0835	55
				0838	50
				0839	600
				0841	740
				0846	17
				1060	83
				1071	2800
1078	810				

Analyte	Standard ^a	Proposed ACL ^b	Site Code	Location	Concentration
Nitrate as Nitrogen	10		SHP02	1079	76
				1091	1700
				1092	1900
				1093	3600
				1094	3800
				0818	2.3
				0830	0.019
				0832	3.8
				0835	0.11
				Selenium	0.01
0838	0.18				
0841	3				
0846	0.11				
1060	0.36				
1071	0.16				
1078	2.6				
1079	0.31				
1091	0.31				
1092	1.4				
Uranium	0.044		SHP02	0817	8.1
				0818	0.13
				0832	0.2
				0835	0.051
				0836	0.069
				0839	0.6
				0841	0.12
				1071	0.088
				1078	0.13
				1091	0.12
1092	0.12				
1093	0.073				

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

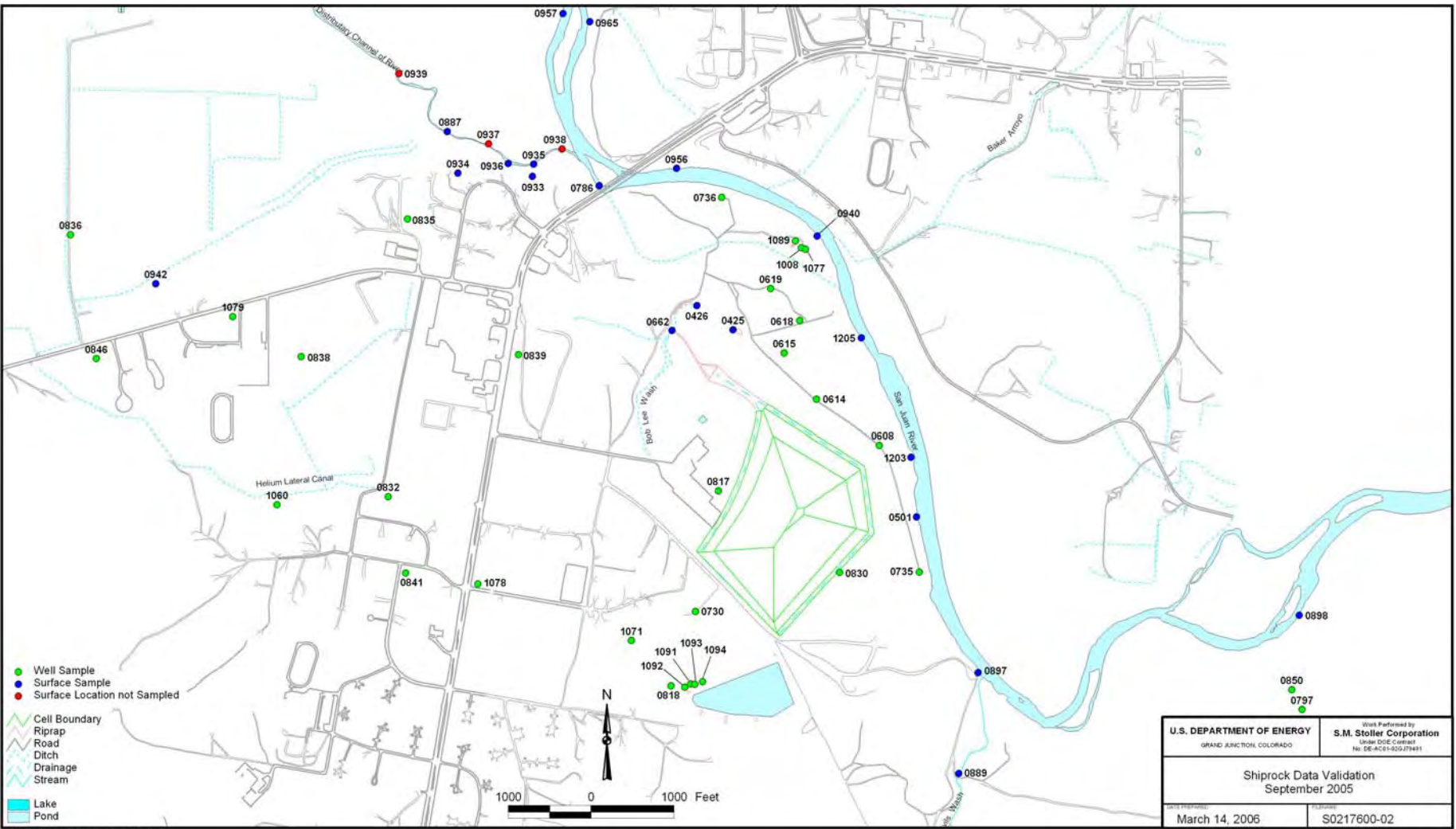
^b Proposed alternate concentration limit.



 David Miller
 Site Lead, S.M. Stoller

3/14/06

 Date



Shiprock, New Mexico, Sample Location Map

Data Assessment Summary

Water Sampling Field Activities Verification Checklist

Project	Shiprock, New Mexico	Date(s) of Water Sampling	September 19-22, 2005
Date(s) of Verification	December 20, 2005	Name of Verifier	Steve Donovan

	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 4, 2005
		Well 0734 was not sampled because it was dry. Well 1070 was not sampled because there was no power to the pump. Surface water locations 0655, 0884, 0885, 0932, and 0959 were not sampled because there was insufficient water. Surface water locations 0937, 0938, and 0939 were inadvertently overlooked and, therefore, not sampled.
2. Were the sampling locations specified in the planning documents sampled?	No	
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	
	Yes	
5. Were the number and types (alkalinity, temperature, Ec, pH, turbidity, DO, ORP) of field measurements taken as specified?	Yes	
6. Was the Category of the well documented?	No	No category indicated for well 0850
7. Were the following conditions met when purging a Category I well: Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	Yes	
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	Yes	
Was the flow rate less than 500 mL/min?	Yes	
If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	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	One signature only at some locations
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?	Yes	
20. Were water levels measured at the locations specified in the planning documents?	Yes	

Laboratory Performance Assessment

General Information

Report Number (RIN): 05080225
Sample Event: September 19-22, 2005
Site(s): Shiprock, New Mexico
Laboratory: Paragon Analytics, Fort Collins, Colorado
Work Order No.: 0509194
Analysis: Metals, Inorganics
Validator: Steve Donovan
Review Date: November 10, 2005

This validation was performed according to the *Environmental Procedures Catalog* (STO 6), "Standard Practice for Validation of Laboratory Data," GT-9(P). 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 (NH ₃ -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, Cl	MIS-A-039	SW-846 9056	SW-846 9056
Iron, Fe	GJO-16	SW-846 3005A	SW-846 6010B
Manganese, Mn	GJO-17	SW-846 3005A	SW-846 6010B
Nitrate + Nitrite as N (NO _x -N)	WCH-A-022	MCAWW 353.2	MCAWW 353.2
Selenium, Se	GJO-14	SW-846 3005A	SW-846 6020A
Sulfate, SO ₄	MIS-A-044	SW-846 9056	SW-846 9056
Total Dissolved Solids (TDS)	WCH-A-033	MCAWW 160.1	MCAWW 160.1
Total Organic Carbon (TOC)	WCH-A-025	MCAWW 415.1	MCAWW 415.1
Uranium, U	GJO-01	SW-846 3005A	SW-846 6020A

Sample Shipping/Receiving

Paragon Analytics in Fort Collins, Colorado, received 58 water samples on September 24, 2005, accompanied by a Chain of Custody (COC) form. The COC form was checked to confirm that all of the samples were listed on the form and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents including the COC form, and the sample tickets had no errors or omissions with the following exceptions: the COC form did not have relinquishment signatures; the requested analytes listed on the sample tickets for locations 2606 and 2609 did not match the analytes listed on the COC form; the samples were logged in using the information on the sample ticket.

Preservation and Holding Times

The sample shipments were received cool and intact with the temperature within the chilled coolers of 0.4 °C, 4.6 °C, and 2.8 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses and all samples were analyzed within the applicable holding times.

Data Qualifier Summary

The analytical results were qualified as listed in Table 3.

Table 3. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0509194-1	0425	NH ₃ -N	J	Matrix spike failure
0509194-6	0730	Fe	U	Less than 5 times the calibration blank
0509194-10	0818	Fe	U	Less than 5 times the calibration blank
0509194-11	0830	NH ₃ -N	J	Matrix spike failure
0509194-11	0830	Fe	U	Less than 5 times the calibration blank
0509194-12	0832	Mn	U	Less than 5 times the calibration blank
0509194-15	0838	Fe	U	Less than 5 times the calibration blank
0509194-19	0940	Se	J	Reporting limit verification failure
0509194-21	1071	Fe	U	Less than 5 times the calibration blank
0509194-22	1077	NH ₃ -N	J	Matrix spike failure
0509194-23	1078	NH ₃ -N	J	Matrix spike failure
0509194-23	1078	Fe	U	Less than 5 times the calibration blank
0509194-24	1079	Fe	U	Less than 5 times the calibration blank
0509194-27	1089	NH ₃ -N	J	Matrix spike failure
0509194-28	1091	NH ₃ -N	J	Matrix spike failure
0509194-28	1091	Fe	U	Less than 5 times the calibration blank
0509194-29	1092	NH ₃ -N	J	Matrix spike failure
0509194-30	1093	Fe	U	Less than 5 times the calibration blank
0509194-32	1203	Se	J	Reporting limit verification failure
0509194-33	1205	Se	J	Reporting limit verification failure
0509194-34	2604 (1078 Dup)	NH ₃ -N	J	Matrix spike failure
0509194-35	2605 (0818 Dup)	Fe	U	Less than 5 times the calibration blank
0509194-36	2606 (Equip Blank)	Ca	U	Less than 5 times the calibration blank
0509194-36	2606 (Equip Blank)	Mg	U	Less than 5 times the calibration blank
0509194-36	2606 (Equip Blank)	Na	U	Less than 5 times the calibration blank
0509194-36	2606 (Equip Blank)	U	U	Less than 5 times the calibration blank
0509194-37	0608	Fe	U	Less than 5 times the calibration blank
0509194-39	0619	NH ₃ -N	J	Matrix spike failure
0509194-40	0662	U	J	Reporting limit verification failure
0509194-41	0736	Fe	U	Less than 5 times the calibration blank
0509194-42	0797	Se	J	Reporting limit verification failure
0509194-43	0850	Se	J	Reporting limit verification failure
0509194-49	0934	Mn	U	Less than 5 times the calibration blank
0509194-50	0935	Mn	U	Less than 5 times the calibration blank

Table 3 (continued). Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0509194-57	2608 (Equip Blank)	Ca	U	Less than 5 times the calibration blank
0509194-57	2608 (Equip Blank)	Mg	U	Less than 5 times the calibration blank
0509194-57	2608 (Equip Blank)	Na	U	Less than 5 times the calibration blank
0509194-57	2608 (Equip Blank)	U	U	Less than 5 times the calibration blank
0509194-58	2609 (0850 Dup)	Se	J	Reporting limit verification failure

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 350.1

The initial calibrations for NH₃-N were performed on October 6, 2005, using six calibration standards. The resulting calibration curve had a correlation coefficient (r^2) value greater than 0.995 and an intercept less than three times the method detection limit (MDL). Initial and continuing calibration checks (CCVs) were made at the required frequency, resulting in nine CCVs. All initial and continuing calibration verification results were within the acceptance range.

Method SW-846 6010B

Calibrations for calcium, iron, magnesium, manganese, potassium, sodium, and strontium were performed on October 5, 2005. The initial calibrations were performed using four calibration standards resulting in calibration curves with correlation coefficient (r^2) values greater than 0.995. The absolute values of the calibration curve intercepts were less than three times the method detection limit (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 15 CCVs. All calibration check results met the acceptance criteria. A reporting limit verification check was made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit. The check results were within the acceptance range.

Method SW-846 9056

Initial calibrations were performed for chloride and sulfate using five calibration standards on September 29, 2005. The resulting calibration curves had correlation coefficient (r^2) values greater than 0.995 and intercepts less than three times the MDL. Initial calibration and calibration check standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 15 CCVs. All initial and continuing calibration verification results were within the acceptance range.

Method SW-846 6020A

Calibrations were performed for selenium on October 18, 2005; and for uranium on October 12, 2005, and October 18, 2005. The initial calibrations were performed using four calibration standards resulting in calibration curves with correlation coefficient (r^2) values greater than 0.995. The absolute values of the curve intercepts were less than three 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 14 CCVs for selenium and 21 CCVs for uranium. All initial and continuing calibration verification results were within the acceptance range. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curves near the practical quantitation limit. The check results were not within the acceptance range for selenium and uranium on October 18, 2005. The selenium and uranium results that are less than five times the practical quantitation limit are qualified with a “J” flag (estimated). The mass calibration and resolution was checked at the beginning of each analytical run in accordance with the procedure. Internal standard recoveries were stable and within acceptance ranges.

Method MCAWW 353.2

The initial calibrations for NO_x-N were performed on October 5, 2005, using seven calibration standards. The resulting calibration curve had a correlation coefficient (r^2) value greater than 0.995 and an intercept less than three times the MDL. Initial and continuing calibration checks were made at the required frequency, resulting in eight CCVs. All initial and continuing calibration verification results were within the acceptance range.

Method MCAWW 160.1

There are no initial or continuing calibration requirements associated with the determination of total dissolved solids (TDS).

Method MCAWW 415.1

The initial calibrations for TOC were performed on October 7, 2005, and October 11, 2005, using seven calibration standards. The resulting calibration curves had correlation coefficient (r^2) values greater than 0.995 and intercepts less than three times the MDL. Initial and continuing calibration checks were made at the required frequency, resulting in nine CCVs. All initial and continuing calibration verification results were within the acceptance range.

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 initial and continuing calibration blank (CCB) results were below the practical quantitation limits for calcium, iron, magnesium, manganese, potassium, selenium, sodium, strontium, and uranium with the exception of CCB2 and CCB4 analyzed on October 18, 2005. There were no samples associated with these CCBs. In cases where blank concentration exceeds the instrument detection limit, the associated sample results are qualified with a “U” flag (not detected) when the sample result is greater than the MDL but less than five times the blank concentration. The method blank results for NH₃-N, chloride, NO_x-N, sulfate, TDS, and TOC were below the method detection limits.

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

ICP interference check samples ICSA and ICSAB were analyzed at the required frequency and all results met the acceptance criteria with the exception of the ICSAB check samples analyzed for molybdenum on March 7, 2005. Sample results that were greater than the MDL and associated with this check sample are qualified with a “J” flag (estimated).

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. The MS/MSD recoveries were not evaluated for calcium, manganese, sodium, or strontium in cases where the analyte concentrations were greater than four times the concentration of the spike added. The MS/MSD recoveries met the acceptance criteria for all analytes with the following exception: the MS/MSD results for NH₃-N, location 0425, failed to meet the acceptance criteria. The sample results analyzed using a dilution factor of one that are greater than the reporting limit are qualified with a “J” flag (estimated).

Laboratory Replicate Analysis

The relative percent difference values for the laboratory replicate sample results for all analytes were less than 20 percent, indicating acceptable laboratory precision.

Laboratory Control Samples

Laboratory control samples (LCS) 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 analysis categories.

Metals Serial Dilution

Serial dilutions were performed during the metals analysis to monitor physical or chemical interferences that may exist in the sample matrix. Serial dilutions were prepared and analyzed for calcium, magnesium, manganese, potassium, selenium, sodium, strontium, and uranium. The potassium serial dilution data were not evaluated because the concentration of the undiluted sample was less than 50 times the practical quantitation limit. The acceptance criteria were met for all other analytes.

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.

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 31, 2005. 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 anion and cation results from this event and the charge balance, which is a relative percent difference calculation. Typically, a charge balance difference of 10 percent is considered acceptable.

Table 4. February 2005 Comparison of Major Anions and Cations

Well	Anions (meq/L)	Cations (meq/L)	Charge Balance (%)
0608	323.92	261.33	10.69
0614	466.76	410.66	6.39
0615	630.07	511.09	10.43
0618	347.54	294.30	8.30
0619	321.54	266.20	9.42
0730	51.92	43.25	9.11
0735	441.79	358.06	10.47
0736	196.49	155.04	11.79
0786	87.22	81.53	3.37
0797	70.51	61.39	6.92
0817	396.16	246.75	23.24
0818	454.76	379.71	8.99
0830	43.28	39.46	4.61
0832	388.07	319.58	9.68
0835	94.79	82.80	6.75
0836	73.03	64.66	6.08
0838	57.48	52.64	4.39

Well	Anions (meq/L)	Cations (meq/L)	Charge Balance (%)
0839	325.68	289.33	5.91
0841	386.07	285.98	14.89
0846	47.91	46.05	1.98
0850	44.86	39.01	6.98
1071	271.61	236.68	6.87
1077	537.58	417.38	12.59
1078	393.21	308.57	12.06
1079	62.28	60.33	1.59
1087	180.36	156.40	7.11
1088	528.28	413.51	12.19
1089	351.80	296.13	8.59
1091	450.58	374.84	9.04
1092	465.26	375.85	10.63
1093	400.94	344.72	7.54
1094	389.42	321.72	9.52

The charge balance differences for wells 0736, 0817, 0841, 1077, 1078, and 1088 are significantly greater than 10 percent. Data from wells 0817 and 0841 have historically not met the 10 percent criteria. Further review of the data for the other locations found no errors and the results are considered acceptable as qualified.

General Data Validation Worksheet

RIN: 05080225 **Lab Code:** PAR **Validator:** Steve Donivan **Validation Date:** 11/10/2005
Site: SHIPROCK **Analysis Type:** Metals General Chem Rad Organics
of Samples: 58 **Matrix:** WATER **Requested Analysis Completed:** Yes

Chain of Custody
 Present: OK Signed: OK Dated: OK

Sample
 Integrity: OK Preservation: OK Temperature: OK

Exceptions

Method	Analyte	Location	Ticket	Collection Date	Preparation Date	Analysis Date	Dilution Factor	Holding Time Met	Detection Limit Met

Comments: The reported detection limits are equal to or below contract requirements.
 All samples were analyzed within the applicable holding times.

GRAND JUNCTION SITE
Inorganics Data Validation Worksheet

RIN: 05080225 Lab Code: PAR Date Due: 10/22/2005
 Matrix: Water Site Code: SHP Date Completed: 11/1/2005

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
Ammonia as N	10/06/2005	0	1.0000	OK	OK	OK	OK	94	41	45	7		
Ammonia as N	10/06/2005						OK	96	103	104	0		
Ammonia as N	10/06/2005						OK	104	80	76	5		
Chloride	09/29/2005	-0.036	1.0000	OK	OK	OK	OK	99.0	103.0	101.0	1.00		
Chloride	09/29/2005						OK	98.0	98.0	94.0	2.00		
Chloride	09/29/2005						OK	100.0	98.0	97.0	1.00		
Nitrate+Nitrite as N	10/05/2005	0	0.9999	OK	OK	OK	OK	101.0	86.0	85.0	0		
Nitrate+Nitrite as N	10/05/2005						OK	104.0	104.0	108.0	1.00		
Nitrate+Nitrite as N	10/05/2005						OK	104.0	107.0	108.0	1.00		
Sulfate	09/29/2005	0.174	1.0000	OK	OK	OK	OK	103.0	108.0	91.0	4.00		
Sulfate	09/29/2005						OK	102.0	111.0	108.0	1.00		
Sulfate	09/29/2005						OK	103.0	100.0	100.0	0		
Total Dissolved Solids	09/27/2005						OK	101.0			2.00		
Total Dissolved Solids	09/27/2005						OK	103.0			2.00		
Total Organic Carbon	10/07/2005	0.242	0.9954	OK	OK	OK	OK	105.0	108.0				
Total Organic Carbon	10/07/2005								101.0	105.0	4.00		
Total Organic Carbon	10/11/2005				OK		OK	103.0	105.0	106.0	1.00		

Comments: _____

**GRAND JUNCTION SITE
Inorganics Data Validation Worksheet**

RIN: 05080225 Lab Code: PAR Date Due: 10/22/2005
 Matrix: Water Site Code: SHP Date Completed: 11/1/2005

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R ²	ICV	CCV	ICB	CCB						
Total Organic Carbon	10/11/2005								102.0	100.0	1.00		

Comments: _____

GRAND JUNCTION SITE
Metals Data Validation Worksheet

RIN: 05080225 Lab Code: PAR Date Due: 10/22/2005
Matrix: Water Site Code: SHP Date Completed: 11/1/2005

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	MS/MSD RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Calcium	10/05/2005			OK	OK	OK	OK		43.0	70.0	2.0	107.0	5.0	99.3	
Calcium	10/05/2005								94.0	97.0	1.0	111.0	4.0	100.0	
Calcium	10/05/2005								56.0	17.0	3.0		6.0		
Iron	10/05/2005			OK	OK	OK	OK		84.0	87.0	3.0	106.0		99.8	
Iron	10/05/2005								86.0	89.0	4.0	106.0		99.9	
Iron	10/05/2005								89.0	91.0	2.0				
Magnesium	10/05/2005			OK	OK	OK	OK		88.0	94.0	2.0	106.0	1.0	101.0	
Magnesium	10/05/2005								98.0	102.0	3.0	106.0	1.0	99.3	
Magnesium	10/05/2005								100.0	91.0	2.0		1.0	110.0	
Manganese	10/05/2005	0.0000	1.0000	OK	OK	OK	OK		-81.0	-54.0	1.0	93.0	4.0	110.0	
Manganese	10/05/2005								97.0	101.0	4.0	94.0	7.0		
Manganese	10/05/2005								106.0	104.0	2.0		2.0		
Potassium	10/05/2005	0.0000	1.0000	OK	OK	OK	OK		102.0	105.0	2.0		10.0	91.8	
Potassium	10/05/2005								104.0	109.0	4.0		15.0	89.2	
Potassium	10/05/2005								113.0	110.0	3.0		58.0		
Selenium	10/18/2005	0.0020	0.9997	OK	OK	OK	OK	OK	101.0	105.0	105.0	0.0	100.0	2.0	211.0
Selenium	10/18/2005							OK	100.0	91.0	96.0	2.0	1.0		
Selenium	10/18/2005							OK	99.0	109.0	106.0	1.0	9.0		

Comments: _____

GRAND JUNCTION SITE

Metals Data Validation Worksheet

RIN: 05080225

Lab Code: PAR

Date Due: 10/22/2005

Matrix: Water

Site Code: SHP

Date Completed: 11/1/2005

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	MS/MSD RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Sodium	10/05/2005	0.0000	1.0000	OK	OK	OK	OK		87.0	91.0	2.0		5.0	92.7	
Sodium	10/05/2005								96.0	101.0	2.0		5.0	92.2	
Sodium	10/05/2005								70.0	84.0	2.0		4.0		
Strontium	10/05/2005	0.0000	1.0000	OK	OK	OK	OK		65.0	74.0	2.0	94.0	3.0	102.0	
Strontium	10/05/2005								81.0	84.0	1.0	96.0	0.0	103.0	
Strontium	10/05/2005								82.0	31.0	4.0		5.0		
Uranium	10/12/2005	-0.0010	1.0000	OK	OK	OK	OK		106.0	106.0	0.0	108.0	6.0	86.6	
Uranium	10/18/2005	-0.0010	0.9999	OK	OK	OK	OK		105.0	106.0	0.0	106.0			
Uranium	10/18/2005								100.0	101.0	0.0		8.0	142.0	

Comments: _____

Sampling Quality Control Assessment

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

Sampling Protocol

Wells 0818, 0839, 1071, 1078, 1087, 1088, 1091, 1092, 1093, and 1094 were sampled as category IV wells. All other monitor well sample results were qualified with an “F” flag in the database indicating the wells were purged and sampled using the low-flow sampling method. Additionally, sample results for well 0797 were qualified with a “Q” flag indicating the data are qualitative because this well is Category II based on water level drawdown.

Equipment Blank Assessment

The results for the equipment blanks collected during this sampling event were all below the method detection limits with the following exceptions. The chloride, potassium, and sodium results for one of the blanks were slightly above the method detection limits, but are acceptable because they are below the required detection limit.

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 0818, 0850, and 1078. The duplicate results met the U.S. Environmental Protection Agency recommended laboratory duplicate criteria of having a relative percent difference (RPD) of less than 20 percent for results that are greater than five times the practical quantitation limit.

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 Donivan 1-17-06
Steve Donivan Date

Data Validation Lead: Steve Donivan 1-17-06
Steve Donivan Date

Attachment 1
Assessment of Anomalous Data

Minimums and Maximums Report

Minimums and Maximums Report

The Minimums and Maximums Report is generated by a data validation application (DataVal) used to query the SEEPro database. The data validation application compares the new data set with historical data and lists all new data that fall outside the historical data range. Values listed in the report are further screened and the results are considered valid if:

- (1) Identified low concentrations are the result of low detection limits.
- (2) The concentration detected is within 50 percent of historical minimum or maximum values.
- (3) There were fewer than five historical samples for comparison.

Results that did not meet these criteria are listed on the Anomalous Data Review Checksheet. At this time, all data from this sampling event may be treated as validated results.

Data that were listed on the Anomalous Data Review Checksheet for further review from the February 2005 sampling event were compared to the data from this event. Analyte concentrations generally remained at the anomalous levels previously observed indicating they are acceptable without further qualification.

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 05080225

Comparison: All Historical Data

Report Date: 12/21/2005

Site Code	Location Code	Sample Date	Analyte	Current Qualifiers			Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count	
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
SHP01	0614	9/20/2005	Chloride	720		F	648			205			27	0
SHP01	0614	9/20/2005	Magnesium	3000		F	2790			962			27	0
SHP01	0614	9/20/2005	Manganese	3.5		F	6.55			3.51			26	0
SHP01	0614	9/20/2005	Sodium	3100		F	2980			1090			27	0
SHP01	0614	9/20/2005	Sulfate	17000		F	14400			6630	H		27	0
SHP01	0614	9/20/2005	Total Dissolved Solids	32000		F	25000		F	11200			24	0
SHP01	0614	9/20/2005	Uranium	3		F	2.56			0.83			27	0
SHP01	0615	9/20/2005	Chloride	980		F	940		F	381		L	25	0
SHP01	0615	9/20/2005	Potassium	300		F	260		JF	102			23	0
SHP01	0615	9/20/2005	Sulfate	24000		F	23100		F	6230	H		25	0
SHP01	0618	9/20/2005	Nitrate + Nitrite as Nitrogen	220		F	200		F	6.1			6	0
SHP01	0618	9/20/2005	Total Dissolved Solids	24000		F	23800		F	5930			9	0
SHP01	0619	9/20/2005	Ammonia Total as N	0.14		FJ	1.7		F	0.67		F	6	0
SHP01	0619	9/20/2005	Iron	4.8		F	2.4		F	0.003	U		21	16
SHP01	0735	9/20/2005	Calcium	510		F	509			46		F	22	0
SHP01	0735	9/20/2005	Chloride	1000		F	480		F	43.7		F	20	0
SHP01	0735	9/20/2005	Magnesium	2000		F	950		F	71.7		F	18	0
SHP01	0735	9/20/2005	Manganese	5.6		F	5.08			0.499		F	24	0

Data Validation Minimums and Maximums Report - No Field Parameters
 Laboratory: PARAGON (Fort Collins, CO)
 RIN: 05080225
 Comparison: All Historical Data
 Report Date: 12/21/2005

Site Code	Location Code	Sample Date	Analyte	Current Qualifiers			Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count	
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
SHP01	0735	9/20/2005	Potassium	99		F	43		F	11.5		F	18	0
SHP01	0735	9/20/2005	Selenium	0.27		F	0.176	S		0.0264		F	25	1
SHP01	0735	9/20/2005	Sodium	3800		F	2600		F	313		F	22	0
SHP01	0735	9/20/2005	Strontium	14		F	9.98			0.908		F	22	0
SHP01	0735	9/20/2005	Sulfate	15000		F	7610			707		F	22	0
SHP01	0735	9/20/2005	Total Dissolved Solids	30000		F	15000		JF	2900		F	16	0
SHP01	0736	9/20/2005	Calcium	540		F	468			310		F	17	0
SHP01	0736	9/20/2005	Manganese	4.7		F	4.68			0.18		F	18	0
SHP01	0736	9/20/2005	Potassium	69		F	55.6		F	33.5		F	14	0
SHP01	0797	9/21/2005	Calcium	320		FQ	150		F	42		F	9	0
SHP01	0797	9/21/2005	Chloride	130		FQ	83		F	16.7		F	9	0
SHP01	0797	9/21/2005	Magnesium	72		FQ	36		F	10.9		F	9	0
SHP01	0797	9/21/2005	Manganese	3.6		FQ	3.1		F	0.0011	B	UF	9	1
SHP01	0797	9/21/2005	Potassium	9.1		FQ	7.2		JF	1.84		F	9	0
SHP01	0797	9/21/2005	Sodium	900		FQ	710		F	240		QF	9	0
SHP01	0797	9/21/2005	Strontium	5.1		FQ	2.6		F	0.834		F	9	0
SHP01	0797	9/21/2005	Sulfate	2800		FQ	1700		F	427		L	9	0
SHP01	0797	9/21/2005	Total Dissolved Solids	4700		FQ	3400		F	1100		QF	5	0

Data Validation Minimums and Maximums Report - No Field Parameters
 Laboratory: PARAGON (Fort Collins, CO)
 RIN: 05080225
 Comparison: All Historical Data
 Report Date: 12/21/2005

Site Code	Location Code	Sample Date	Analyte	Current Qualifiers			Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count	
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
SHP01	0965	9/22/2005	Strontium	0.85			1.23			0.86			6	0
SHP01	0965	9/22/2005	Sulfate	150			357			160			6	0
SHP01	1008	9/19/2005	Strontium	8.4		F	13.7			8.7		F	6	0
SHP01	1008	9/19/2005	Uranium	1.3		F	3.32			1.5		F	7	0
SHP01	1077	9/20/2005	Ammonia Total as N	1.2		FJ	14			9			5	0
SHP01	1077	9/20/2005	Chloride	1200		F	861			646			9	0
SHP01	1077	9/20/2005	Sulfate	22000		F	17849			13000			11	0
SHP01	1089	9/20/2005	Chloride	690		F	640			502			8	0
SHP02	0730	9/21/2005	Calcium	600		F	590		F	477		L	8	0
SHP02	0730	9/21/2005	Magnesium	120		F	174		L	130		F	8	0
SHP02	0730	9/21/2005	Manganese	18		F	22.6		L	20		F	9	0
SHP02	0730	9/21/2005	Potassium	20		F	28.9	E	JL	21		F	8	0
SHP02	0730	9/21/2005	Selenium	0.0097		F	0.0175		L	0.012		F	9	0
SHP02	0730	9/21/2005	Sodium	66		F	131		L	74		F	8	0
SHP02	0786	9/20/2005	Manganese	0.021			0.0045	B		0.001	B	U	10	3
SHP02	0786	9/20/2005	Strontium	6			7.46			6.1			10	0
SHP02	0786	9/20/2005	Uranium	0.03			0.0442			0.031			10	0
SHP02	0817	9/22/2005	Selenium	0.0047		F	0.0031		F	0.002	B	F	9	0

Data Validation Minimums and Maximums Report - No Field Parameters
 Laboratory: PARAGON (Fort Collins, CO)
 RIN: 05080225
 Comparison: All Historical Data
 Report Date: 12/21/2005

Site Code	Location Code	Sample Date	Analyte	Current Qualifiers			Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count	
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
SHP02	0818	9/21/2005	Chloride	1300			1216			776			11	0
SHP02	0818	9/21/2005	Sulfate	14000			13309			7375			16	0
SHP02	0830	9/22/2005	Calcium	620		F	550		F	480		F	7	0
SHP02	0830	9/22/2005	Chloride	41		F	57		F	43		L	7	0
SHP02	0830	9/22/2005	Potassium	6.7		F	4		JF	2.47		L	7	0
SHP02	0830	9/22/2005	Selenium	0.019		F	0.0259			0.0216		L	8	0
SHP02	0830	9/22/2005	Sodium	120		F	166			128		L	7	0
SHP02	0830	9/22/2005	Uranium	0.012		F	0.0094		L	0.0021			9	0
SHP02	0832	9/21/2005	Chloride	1100		F	960		F	114			14	0
SHP02	0832	9/21/2005	Potassium	61		F	59		JF	11	E	J	14	0
SHP02	0832	9/21/2005	Sulfate	14000		F	13000		F	2760			16	0
SHP02	0832	9/21/2005	Total Dissolved Solids	26000		F	23500		JF	5280			11	0
SHP02	0832	9/21/2005	Uranium	0.2		F	0.17		F	0.023			16	0
SHP02	0836	9/22/2005	Selenium	0.041		F	0.231		F	0.052		F	15	0
SHP02	0836	9/22/2005	Uranium	0.069		F	0.064		F	0.036			16	0
SHP02	0838	9/21/2005	Calcium	580		F	552			399			14	0
SHP02	0838	9/21/2005	Chloride	93		F	66		F	12.8			14	0
SHP02	0838	9/21/2005	Potassium	11		F	9.7		F	4			14	0

Data Validation Minimums and Maximums Report - No Field Parameters
 Laboratory: PARAGON (Fort Collins, CO)
 RIN: 05080225
 Comparison: All Historical Data
 Report Date: 12/21/2005

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count	
				Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect
SHP02	0838	9/21/2005	Sodium	290		F	270		F	91.9			14	0
SHP02	0838	9/21/2005	Sulfate	2200		F	1980		F	1180			17	0
SHP02	0838	9/21/2005	Total Dissolved Solids	3800		F	3340		F	2240			12	0
SHP02	0838	9/21/2005	Uranium	0.035		F	0.0339			0.023			17	0
SHP02	0841	9/21/2005	Strontium	7.2		F	9.73		F	7.6		F	16	0
SHP02	0846	9/21/2005	Chloride	28		F	135			31.8		F	14	0
SHP02	0846	9/21/2005	Magnesium	160		F	252		F	163		F	14	0
SHP02	0846	9/21/2005	Selenium	0.11		F	0.931			0.2		F	15	0
SHP02	0846	9/21/2005	Sodium	210		F	660			240		F	14	0
SHP02	0846	9/21/2005	Strontium	4		F	6.48			4.1		F	14	0
SHP02	0933	9/22/2005	Calcium	410			530			411			13	0
SHP02	0933	9/22/2005	Magnesium	140			682			300			13	0
SHP02	0933	9/22/2005	Potassium	8.4			32.1			12.9			13	0
SHP02	0933	9/22/2005	Selenium	0.0033			0.307			0.014			13	0
SHP02	0933	9/22/2005	Sodium	100			959			200			13	0
SHP02	0933	9/22/2005	Strontium	3.1			7.91			5.5			13	0
SHP02	0933	9/22/2005	Sulfate	1400			5380			2500			15	0
SHP02	0933	9/22/2005	Uranium	0.0093			0.0978			0.028			15	0

Data Validation Minimums and Maximums Report - No Field Parameters
 Laboratory: PARAGON (Fort Collins, CO)
 RIN: 05080225
 Comparison: All Historical Data
 Report Date: 12/21/2005

Site Code	Location Code	Sample Date	Analyte	Current Qualifiers			Historical Maximum Qualifiers			Historical Minimum Qualifiers			Count	
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
SHP02	0934	9/22/2005	Calcium	120			667			130			13	0
SHP02	0934	9/22/2005	Chloride	19			233			27.6			13	0
SHP02	0934	9/22/2005	Magnesium	38			440			48			13	0
SHP02	0934	9/22/2005	Potassium	3.6			26			3.9		J	13	0
SHP02	0934	9/22/2005	Selenium	0.0038			0.363			0.02			13	0
SHP02	0934	9/22/2005	Sodium	46			820			87			13	0
SHP02	0934	9/22/2005	Strontium	1			7.07			1.2			13	0
SHP02	0934	9/22/2005	Sulfate	310			3800			470			14	0
SHP02	0934	9/22/2005	Uranium	0.0064			0.14			0.011		E	14	0
SHP02	0935	9/22/2005	Chloride	39			252			67			9	0
SHP02	0935	9/22/2005	Manganese	0.0009	B	U	0.065			0.0016		B	9	1
SHP02	0935	9/22/2005	Sodium	410			1030			530			9	0
SHP02	0935	9/22/2005	Strontium	5.9			9.78			6.3			9	0
SHP02	0935	9/22/2005	Uranium	0.048			0.102			0.054			10	0
SHP02	0936	9/22/2005	Calcium	620			566			422			12	0
SHP02	0936	9/22/2005	Chloride	48			694			55.6			12	0
SHP02	0936	9/22/2005	Selenium	0.057			0.613			0.062			12	0
SHP02	0936	9/22/2005	Sodium	290			1880			300			12	0

Data Validation Minimums and Maximums Report - No Field Parameters
 Laboratory: PARAGON (Fort Collins, CO)
 RIN: 05080225
 Comparison: All Historical Data
 Report Date: 12/21/2005

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count	
				Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect
SHP02	0942	9/22/2005	Calcium	590			560			139			15	0
SHP02	1060	9/21/2005	Calcium	58		F	492		L	58.7		Q	9	0
SHP02	1060	9/21/2005	Manganese	0.00019	U	F	64.6		L	0.0022	B	Q	10	0
SHP02	1060	9/21/2005	Sodium	940		F	4000		L	971		Q	9	0
SHP02	1078	9/21/2005	Chloride	1200			1189			968			9	0
SHP02	1078	9/21/2005	Chloride	1200			1189			968			9	0
SHP02	1079	9/21/2005	Sodium	420		F	400		F	115		F	7	0
SHP02	1088	9/22/2005	Chloride	1700			1517			1242			10	0
SHP02	1088	9/22/2005	Sulfate	20000			19109			14800			11	0

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. | | |

Anomalous Data Review Checksheet

Anomalous Data Review Checksheet

Site: Shiprock, New Mexico

Sampling Data: Ground water, surface water

Reviewer: Steve Donovan
Name (print)

Steve Donovan
Signature

1-17-06
Date

Site Hydrologist: Dave Miller
Name (print)

D Miller
Signature

1/26/06
Date

Date of Review: December 20, 2005

Loc. No.	Analyte	Type of Anomaly	Disposition
0619	Ammonia	Low	Compare to future results
0619	Iron	High	Compare to future results
0735	Chloride	High	Compare to future results
0735	Magnesium	High	Compare to future results
0735	Potassium	High	Compare to future results
0735	Selenium	High	Compare to future results
0735	Sulfate	High	Compare to future results
0735	TDS	High	Compare to future results
0797	Chloride	High	Compare to future results
0797	Magnesium	High	Compare to future results
0797	Strontium	High	Compare to future results
0797	Sulfate	High	Compare to future results
1077	Ammonia	Low	Compare to future results
0786	Manganese	High	Compare to future results
0786	Selenium	High	Compare to future results
0830	Potassium	High	Compare to future results
0933	Selenium	Low	Compare to future results
0933	Uranium	Low	Compare to future results
0934	Selenium	Low	Compare to future results

Attachment 2
Data Presentation

**Ground Water Quality Data
Terrace Locations**

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

REPORT DATE: 12/21/2005

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		
Alkalinity, Total (As CaCO3)	mg/L	9/21/2005	0001	26.93	- 36.93	0		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	26.93	- 36.93	77		F	#	5	
Calcium	mg/L	9/21/2005	0001	26.93	- 36.93	600		F	#	0.0041	
Chloride	mg/L	9/21/2005	0001	26.93	- 36.93	12		F	#	1	
Dissolved Oxygen	mg/L	9/21/2005	N001	26.93	- 36.93	3.86		F	#		
Iron	mg/L	9/21/2005	0001	26.93	- 36.93	0.034	B	UF	#	0.022	
Magnesium	mg/L	9/21/2005	0001	26.93	- 36.93	120		F	#	0.012	
Manganese	mg/L	9/21/2005	0001	26.93	- 36.93	18		F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	26.93	- 36.93	110		F	#	1	
Oxidation Reduction Potential	mV	9/21/2005	N001	26.93	- 36.93	427		F	#		
pH	s.u.	9/21/2005	N001	26.93	- 36.93	4.19		F	#		
Potassium	mg/L	9/21/2005	0001	26.93	- 36.93	20		F	#	0.064	
Selenium	mg/L	9/21/2005	0001	26.93	- 36.93	0.0097		F	#	0.00004	
Sodium	mg/L	9/21/2005	0001	26.93	- 36.93	66		F	#	0.0031	
Specific Conductance	umhos/cm	9/21/2005	N001	26.93	- 36.93	3711		F	#		
Strontium	mg/L	9/21/2005	0001	26.93	- 36.93	2.5		F	#	0.000098	
Sulfate	mg/L	9/21/2005	0001	26.93	- 36.93	2100		F	#	25	
Temperature	C	9/21/2005	N001	26.93	- 36.93	19.2		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	26.93	- 36.93	3300		F	#	80	

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

REPORT DATE: 12/21/2005

Location: 0730 (WELL) Just SW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	26.93	- 36.93	1.3		F	#	1	
Turbidity	NTU	9/21/2005	N001	26.93	- 36.93	3.13		F	#		
Uranium	mg/L	9/21/2005	0001	26.93	- 36.93	0.0045		F	#	0.0000038	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	21.6	-	31.62	1542		F	#	
Ammonia Total as N	mg/L	9/22/2005	0001	21.6	-	31.62	910		F	#	20
Calcium	mg/L	9/22/2005	0001	21.6	-	31.62	460		F	#	0.021
Chloride	mg/L	9/22/2005	0001	21.6	-	31.62	550		F	#	100
Dissolved Oxygen	mg/L	9/22/2005	N001	21.6	-	31.62	2.53		F	#	
Iron	mg/L	9/22/2005	0001	21.6	-	31.62	0.11	U	F	#	0.11
Magnesium	mg/L	9/22/2005	0001	21.6	-	31.62	1900		F	#	0.059
Manganese	mg/L	9/22/2005	0001	21.6	-	31.62	2.1		F	#	0.00095
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	21.6	-	31.62	1400		F	#	10
Oxidation Reduction Potential	mV	9/22/2005	N001	21.6	-	31.62	272		F	#	
pH	s.u.	9/22/2005	N001	21.6	-	31.62	6.42		F	#	
Potassium	mg/L	9/22/2005	0001	21.6	-	31.62	250		F	#	0.32
Selenium	mg/L	9/22/2005	0001	21.6	-	31.62	0.0047		F	#	0.0002
Sodium	mg/L	9/22/2005	0001	21.6	-	31.62	1400		F	#	0.16
Specific Conductance	umhos/cm	9/22/2005	N001	21.6	-	31.62	20351		F	#	
Strontium	mg/L	9/22/2005	0001	21.6	-	31.62	11		F	#	0.00049
Sulfate	mg/L	9/22/2005	0001	21.6	-	31.62	12000		F	#	250
Temperature	C	9/22/2005	N001	21.6	-	31.62	20.1		F	#	
Total Dissolved Solids	mg/L	9/22/2005	0001	21.6	-	31.62	24000		F	#	1000

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/22/2005	N001	21.6	- 31.62	26		F	#	1	
Turbidity	NTU	9/22/2005	N001	21.6	- 31.62	3.05		F	#		
Uranium	mg/L	9/22/2005	0001	21.6	- 31.62	8.1		F	#	0.00075	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 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	9/21/2005	0001	52	-	61.5	618			#		
Ammonia Total as N	mg/L	9/21/2005	0001	52	-	61.5	120			#	20	
Ammonia Total as N	mg/L	9/21/2005	0002	52	-	61.5	120			#	20	
Calcium	mg/L	9/21/2005	0001	52	-	61.5	530			#	0.01	
Calcium	mg/L	9/21/2005	0002	52	-	61.5	520			#	0.01	
Chloride	mg/L	9/21/2005	0001	52	-	61.5	1300			#	100	
Chloride	mg/L	9/21/2005	0002	52	-	61.5	1200			#	40	
Dissolved Oxygen	mg/L	9/21/2005	N001	52	-	61.5	3.3			#		
Iron	mg/L	9/21/2005	0001	52	-	61.5	0.069	B	U	#	0.054	
Iron	mg/L	9/21/2005	0002	52	-	61.5	0.096	B	U	#	0.054	
Magnesium	mg/L	9/21/2005	0001	52	-	61.5	2500			#	0.029	
Magnesium	mg/L	9/21/2005	0002	52	-	61.5	2400			#	0.029	
Manganese	mg/L	9/21/2005	0001	52	-	61.5	0.45			#	0.00048	
Manganese	mg/L	9/21/2005	0002	52	-	61.5	0.52			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	52	-	61.5	1600			#	10	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0002	52	-	61.5	1600			#	10	
Oxidation Reduction Potential	mV	9/21/2005	N001	52	-	61.5	242			#		
pH	s.u.	9/21/2005	N001	52	-	61.5	6.72			#		
Potassium	mg/L	9/21/2005	0001	52	-	61.5	150			#	0.16	

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

REPORT DATE: 12/21/2005

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		
Potassium	mg/L	9/21/2005	0002	52	-	61.5	140		#		0.16	
Selenium	mg/L	9/21/2005	0001	52	-	61.5	2.3		#		0.02	
Selenium	mg/L	9/21/2005	0002	52	-	61.5	2.3		#		0.02	
Sodium	mg/L	9/21/2005	0001	52	-	61.5	3300		#		0.16	
Sodium	mg/L	9/21/2005	0002	52	-	61.5	3300		#		0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	52	-	61.5	25528		#			
Strontium	mg/L	9/21/2005	0001	52	-	61.5	13		#		0.00024	
Strontium	mg/L	9/21/2005	0002	52	-	61.5	12		#		0.00024	
Sulfate	mg/L	9/21/2005	0001	52	-	61.5	14000		#		250	
Sulfate	mg/L	9/21/2005	0002	52	-	61.5	12000		#		100	
Temperature	C	9/21/2005	N001	52	-	61.5	17.8		#			
Total Dissolved Solids	mg/L	9/21/2005	0001	52	-	61.5	28000		#		400	
Total Dissolved Solids	mg/L	9/21/2005	0002	52	-	61.5	30000		#		400	
Total Organic Carbon	mg/L	9/21/2005	N001	52	-	61.5	21		#		1	
Total Organic Carbon	mg/L	9/21/2005	N002	52	-	61.5	22		#		1	
Turbidity	NTU	9/21/2005	N001	52	-	61.5	8.05		#			
Uranium	mg/L	9/21/2005	0001	52	-	61.5	0.13		#		0.000019	
Uranium	mg/L	9/21/2005	0002	52	-	61.5	0.13		#		0.000019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 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	9/22/2005	0001	7.7	-	17.7	0		F	#		
Ammonia Total as N	mg/L	9/22/2005	0001	7.7	-	17.7	4		FJ	#	0.1	
Calcium	mg/L	9/22/2005	0001	7.7	-	17.7	620		F	#	0.01	
Chloride	mg/L	9/22/2005	0001	7.7	-	17.7	41		F	#	10	
Dissolved Oxygen	mg/L	9/22/2005	N001	7.7	-	17.7	3.19		F	#		
Iron	mg/L	9/22/2005	0001	7.7	-	17.7	0.032	B	UF	#	0.011	
Magnesium	mg/L	9/22/2005	0001	7.7	-	17.7	38		F	#	0.0059	
Manganese	mg/L	9/22/2005	0001	7.7	-	17.7	2.7		F	#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	7.7	-	17.7	65		F	#	0.5	
Oxidation Reduction Potential	mV	9/22/2005	N001	7.7	-	17.7	453		F	#		
pH	s.u.	9/22/2005	N001	7.7	-	17.7	3.68		F	#		
Potassium	mg/L	9/22/2005	0001	7.7	-	17.7	6.7		F	#	0.032	
Selenium	mg/L	9/22/2005	0001	7.7	-	17.7	0.019		F	#	0.0002	
Sodium	mg/L	9/22/2005	0001	7.7	-	17.7	120		F	#	0.0078	
Specific Conductance	umhos/cm	9/22/2005	N001	7.7	-	17.7	2974		F	#		
Strontium	mg/L	9/22/2005	0001	7.7	-	17.7	0.24		F	#	0.000049	
Sulfate	mg/L	9/22/2005	0001	7.7	-	17.7	1800		F	#	25	
Temperature	C	9/22/2005	N001	7.7	-	17.7	25.8		F	#		
Total Dissolved Solids	mg/L	9/22/2005	0001	7.7	-	17.7	2800		F	#	80	

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

REPORT DATE: 12/21/2005

Location: 0830 (WELL) Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/22/2005	N001	7.7	-	17.7	2.3		F	#	1	
Turbidity	NTU	9/22/2005	N001	7.7	-	17.7	1.38		F	#		
Uranium	mg/L	9/22/2005	0001	7.7	-	17.7	0.012		F	#	0.000019	

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

REPORT DATE: 12/21/2005

Location: 0832 (WELL) SW corner 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	9/21/2005	0001	21.1	-	31.1	422		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	21.1	-	31.1	0.1	U	F	#	0.1	
Calcium	mg/L	9/21/2005	0001	21.1	-	31.1	420		F	#	0.01	
Chloride	mg/L	9/21/2005	0001	21.1	-	31.1	1100		F	#	40	
Dissolved Oxygen	mg/L	9/21/2005	N001	21.1	-	31.1	7.5		F	#		
Iron	mg/L	9/21/2005	0001	21.1	-	31.1	0.054	U	F	#	0.054	
Magnesium	mg/L	9/21/2005	0001	21.1	-	31.1	1600		F	#	0.029	
Manganese	mg/L	9/21/2005	0001	21.1	-	31.1	0.0034	B	UF	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	21.1	-	31.1	800		F	#	5	
Oxidation Reduction Potential	mV	9/21/2005	N001	21.1	-	31.1	172		F	#		
pH	s.u.	9/21/2005	N001	21.1	-	31.1	7.58		F	#		
Potassium	mg/L	9/21/2005	0001	21.1	-	31.1	61		F	#	0.16	
Selenium	mg/L	9/21/2005	0001	21.1	-	31.1	3.8		F	#	0.04	
Sodium	mg/L	9/21/2005	0001	21.1	-	31.1	3800		F	#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	21.1	-	31.1	22493		F	#		
Strontium	mg/L	9/21/2005	0001	21.1	-	31.1	8.6		F	#	0.00024	
Sulfate	mg/L	9/21/2005	0001	21.1	-	31.1	14000		F	#	100	
Temperature	C	9/21/2005	N001	21.1	-	31.1	17.8		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	21.1	-	31.1	26000		F	#	400	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	21.1	- 31.1	25		F	#	1	
Turbidity	NTU	9/21/2005	N001	21.1	- 31.1	9.82		F	#		
Uranium	mg/L	9/21/2005	0001	21.1	- 31.1	0.2		F	#	0.000019	

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

REPORT DATE: 12/21/2005

Location: 0835 (WELL) Housing area between 2nd Wash and 3rd 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	9/22/2005	0001	21.9	-	31.9	314		F	#		
Ammonia Total as N	mg/L	9/22/2005	0001	21.9	-	31.9	0.1	U	F	#	0.1	
Calcium	mg/L	9/22/2005	0001	21.9	-	31.9	440		F	#	0.0062	
Chloride	mg/L	9/22/2005	0001	21.9	-	31.9	120		F	#	20	
Dissolved Oxygen	mg/L	9/22/2005	N001	21.9	-	31.9	2.22		F	#		
Iron	mg/L	9/22/2005	0001	21.9	-	31.9	0.032	U	F	#	0.032	
Magnesium	mg/L	9/22/2005	0001	21.9	-	31.9	390		F	#	0.018	
Manganese	mg/L	9/22/2005	0001	21.9	-	31.9	0.0016	B	F	#	0.00028	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	21.9	-	31.9	55		F	#	0.5	
Oxidation Reduction Potential	mV	9/22/2005	N001	21.9	-	31.9	264		F	#		
pH	s.u.	9/22/2005	N001	21.9	-	31.9	6.95		F	#		
Potassium	mg/L	9/22/2005	0001	21.9	-	31.9	15		F	#	0.096	
Selenium	mg/L	9/22/2005	0001	21.9	-	31.9	0.11		F	#	0.002	
Sodium	mg/L	9/22/2005	0001	21.9	-	31.9	650		F	#	0.16	
Specific Conductance	umhos/cm	9/22/2005	N001	21.9	-	31.9	6230		F	#		
Strontium	mg/L	9/22/2005	0001	21.9	-	31.9	5.1		F	#	0.00015	
Sulfate	mg/L	9/22/2005	0001	21.9	-	31.9	3900		F	#	50	
Temperature	C	9/22/2005	N001	21.9	-	31.9	19.4		F	#		
Total Dissolved Solids	mg/L	9/22/2005	0001	21.9	-	31.9	6400		F	#	200	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/22/2005	N001	21.9	- 31.9	5.1		F	#	1	
Turbidity	NTU	9/22/2005	N001	21.9	- 31.9	6.84		F	#		
Uranium	mg/L	9/22/2005	0001	21.9	- 31.9	0.051		F	#	0.0000038	

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

REPORT DATE: 12/21/2005

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	9/22/2005	0001	26.8	-	36.8		F	#		
Ammonia Total as N	mg/L	9/22/2005	0001	26.8	-	36.8	0.1	U	F	#	0.1
Calcium	mg/L	9/22/2005	0001	26.8	-	36.8	540		F	#	0.0041
Chloride	mg/L	9/22/2005	0001	26.8	-	36.8	34		F	#	10
Dissolved Oxygen	mg/L	9/22/2005	N001	26.8	-	36.8	1.78		F	#	
Iron	mg/L	9/22/2005	0001	26.8	-	36.8	0.022	U	F	#	0.022
Magnesium	mg/L	9/22/2005	0001	26.8	-	36.8	280		F	#	0.012
Manganese	mg/L	9/22/2005	0001	26.8	-	36.8	2.1		F	#	0.00019
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	26.8	-	36.8	7.2		F	#	0.05
Oxidation Reduction Potential	mV	9/22/2005	N001	26.8	-	36.8	150		F	#	
pH	s.u.	9/22/2005	N001	26.8	-	36.8	6.92		F	#	
Potassium	mg/L	9/22/2005	0001	26.8	-	36.8	7.7		F	#	0.064
Selenium	mg/L	9/22/2005	0001	26.8	-	36.8	0.041		F	#	0.0004
Sodium	mg/L	9/22/2005	0001	26.8	-	36.8	330		F	#	0.16
Specific Conductance	umhos/cm	9/22/2005	N001	26.8	-	36.8	4658		F	#	
Strontium	mg/L	9/22/2005	0001	26.8	-	36.8	5.9		F	#	0.000098
Sulfate	mg/L	9/22/2005	0001	26.8	-	36.8	3000		F	#	25
Temperature	C	9/22/2005	N001	26.8	-	36.8	19.2		F	#	
Total Dissolved Solids	mg/L	9/22/2005	0001	26.8	-	36.8	4900		F	#	80

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/22/2005	N001	26.8	- 36.8	8		F	#	1	
Turbidity	NTU	9/22/2005	N001	26.8	- 36.8	8.2		F	#		
Uranium	mg/L	9/22/2005	0001	26.8	- 36.8	0.069		F	#	0.000019	

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

REPORT DATE: 12/21/2005

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	9/21/2005	0001	21.9	-	31.9	274		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	21.9	-	31.9	0.1	U	F	#	0.1	
Calcium	mg/L	9/21/2005	0001	21.9	-	31.9	580		F	#	0.0041	
Chloride	mg/L	9/21/2005	0001	21.9	-	31.9	93		F	#	10	
Dissolved Oxygen	mg/L	9/21/2005	N001	21.9	-	31.9	1.91		F	#		
Iron	mg/L	9/21/2005	0001	21.9	-	31.9	0.032	B	UF	#	0.022	
Magnesium	mg/L	9/21/2005	0001	21.9	-	31.9	130		F	#	0.012	
Manganese	mg/L	9/21/2005	0001	21.9	-	31.9	0.002	B	F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	21.9	-	31.9	50		F	#	0.5	
Oxidation Reduction Potential	mV	9/21/2005	N001	21.9	-	31.9	158		F	#		
pH	s.u.	9/21/2005	N001	21.9	-	31.9	6.91		F	#		
Potassium	mg/L	9/21/2005	0001	21.9	-	31.9	11		F	#	0.064	
Selenium	mg/L	9/21/2005	0001	21.9	-	31.9	0.18		F	#	0.002	
Sodium	mg/L	9/21/2005	0001	21.9	-	31.9	290		F	#	0.0078	
Specific Conductance	umhos/cm	9/21/2005	N001	21.9	-	31.9	3933		F	#		
Strontium	mg/L	9/21/2005	0001	21.9	-	31.9	5		F	#	0.000098	
Sulfate	mg/L	9/21/2005	0001	21.9	-	31.9	2200		F	#	25	
Temperature	C	9/21/2005	N001	21.9	-	31.9	17		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	21.9	-	31.9	3800		F	#	80	

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

REPORT DATE: 12/21/2005

Location: 0838 (WELL) W part of Dine College tract

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	21.9	-	31.9	6.2		F	#	1	
Turbidity	NTU	9/21/2005	N001	21.9	-	31.9	1.94		F	#		
Uranium	mg/L	9/21/2005	0001	21.9	-	31.9	0.035		F	#	0.000019	

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

REPORT DATE: 12/21/2005

Location: 0839 (WELL) West part 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	9/22/2005	0001	18.1	-	28.1	973			#		
Ammonia Total as N	mg/L	9/22/2005	0001	18.1	-	28.1	69			#	5	
Calcium	mg/L	9/22/2005	0001	18.1	-	28.1	440			#	0.01	
Chloride	mg/L	9/22/2005	0001	18.1	-	28.1	480			#	40	
Dissolved Oxygen	mg/L	9/22/2005	N001	18.1	-	28.1	5.59			#		
Iron	mg/L	9/22/2005	0001	18.1	-	28.1	0.054	U		#	0.054	
Magnesium	mg/L	9/22/2005	0001	18.1	-	28.1	2200			#	0.029	
Manganese	mg/L	9/22/2005	0001	18.1	-	28.1	1			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	18.1	-	28.1	600			#	5	
Oxidation Reduction Potential	mV	9/22/2005	N001	18.1	-	28.1	238			#		
pH	s.u.	9/22/2005	N001	18.1	-	28.1	6.67			#		
Potassium	mg/L	9/22/2005	0001	18.1	-	28.1	140			#	0.16	
Selenium	mg/L	9/22/2005	0001	18.1	-	28.1	0.0035			#	0.00008	
Sodium	mg/L	9/22/2005	0001	18.1	-	28.1	1900			#	0.16	
Specific Conductance	umhos/cm	9/22/2005	N001	18.1	-	28.1	17350			#		
Strontium	mg/L	9/22/2005	0001	18.1	-	28.1	10			#	0.00024	
Sulfate	mg/L	9/22/2005	0001	18.1	-	28.1	12000			#	100	
Temperature	C	9/22/2005	N001	18.1	-	28.1	17.1			#		
Total Dissolved Solids	mg/L	9/22/2005	0001	18.1	-	28.1	20000			#	400	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/22/2005	N001	18.1	-	28.1	26			#	1	
Turbidity	NTU	9/22/2005	N001	18.1	-	28.1	12.3			#		
Uranium	mg/L	9/22/2005	0001	18.1	-	28.1	0.6			#	0.000038	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 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	9/21/2005	0001	42	-	52	790		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	42	-	52	0.1	U	F	#	0.1	
Calcium	mg/L	9/21/2005	0001	42	-	52	380		F	#	0.01	
Chloride	mg/L	9/21/2005	0001	42	-	52	920		F	#	40	
Dissolved Oxygen	mg/L	9/21/2005	N001	42	-	52	2.49		F	#		
Iron	mg/L	9/21/2005	0001	42	-	52	0.054	U	F	#	0.054	
Magnesium	mg/L	9/21/2005	0001	42	-	52	680		F	#	0.029	
Manganese	mg/L	9/21/2005	0001	42	-	52	0.025		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	42	-	52	740		F	#	5	
Oxidation Reduction Potential	mV	9/21/2005	N001	42	-	52	188		F	#		
pH	s.u.	9/21/2005	N001	42	-	52	7.19		F	#		
Potassium	mg/L	9/21/2005	0001	42	-	52	84		F	#	0.16	
Selenium	mg/L	9/21/2005	0001	42	-	52	3		F	#	0.04	
Sodium	mg/L	9/21/2005	0001	42	-	52	4800		F	#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	42	-	52	24588		F	#		
Strontium	mg/L	9/21/2005	0001	42	-	52	7.2		F	#	0.00024	
Sulfate	mg/L	9/21/2005	0001	42	-	52	14000		F	#	100	
Temperature	C	9/21/2005	N001	42	-	52	16.9		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	42	-	52	26000		F	#	400	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	42	-	52	29		F	#	1	
Turbidity	NTU	9/21/2005	N001	42	-	52	2		F	#		
Uranium	mg/L	9/21/2005	0001	42	-	52	0.12		F	#	0.000019	

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

REPORT DATE: 12/21/2005

Location: 0846 (WELL) Just W of elementary school, 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	9/21/2005	0001	17.9	-	27.9	213		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	17.9	-	27.9	0.1	U	F	#	0.1	
Calcium	mg/L	9/21/2005	0001	17.9	-	27.9	470		F	#	0.0041	
Chloride	mg/L	9/21/2005	0001	17.9	-	27.9	28		F	#	2	
Dissolved Oxygen	mg/L	9/21/2005	N001	17.9	-	27.9	2.63		F	#		
Iron	mg/L	9/21/2005	0001	17.9	-	27.9	0.022	U	F	#	0.022	
Magnesium	mg/L	9/21/2005	0001	17.9	-	27.9	160		F	#	0.012	
Manganese	mg/L	9/21/2005	0001	17.9	-	27.9	0.00019	U	F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	17.9	-	27.9	17		F	#	0.1	
Oxidation Reduction Potential	mV	9/21/2005	N001	17.9	-	27.9	118		F	#		
pH	s.u.	9/21/2005	N001	17.9	-	27.9	7.06		F	#		
Potassium	mg/L	9/21/2005	0001	17.9	-	27.9	8.2		F	#	0.064	
Selenium	mg/L	9/21/2005	0001	17.9	-	27.9	0.11		F	#	0.002	
Sodium	mg/L	9/21/2005	0001	17.9	-	27.9	210		F	#	0.0078	
Specific Conductance	umhos/cm	9/21/2005	N001	17.9	-	27.9	3333		F	#		
Strontium	mg/L	9/21/2005	0001	17.9	-	27.9	4		F	#	0.000098	
Sulfate	mg/L	9/21/2005	0001	17.9	-	27.9	2000		F	#	25	
Temperature	C	9/21/2005	N001	17.9	-	27.9	18.8		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	17.9	-	27.9	3300		F	#	80	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	17.9	-	27.9	3.2		F	#	1	
Turbidity	NTU	9/21/2005	N001	17.9	-	27.9	5.78		F	#		
Uranium	mg/L	9/21/2005	0001	17.9	-	27.9	0.033		F	#	0.0000038	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 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	9/21/2005	0001	27.2	- 36.7	379		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	27.2	- 36.7	0.1	U	F	#	0.1	
Calcium	mg/L	9/21/2005	0001	27.2	- 36.7	58		F	#	0.0041	
Chloride	mg/L	9/21/2005	0001	27.2	- 36.7	110		F	#	20	
Dissolved Oxygen	mg/L	9/21/2005	N001	27.2	- 36.7	6.21		F	#		
Iron	mg/L	9/21/2005	0001	27.2	- 36.7	0.022	U	F	#	0.022	
Magnesium	mg/L	9/21/2005	0001	27.2	- 36.7	110		F	#	0.012	
Manganese	mg/L	9/21/2005	0001	27.2	- 36.7	0.00019	U	F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	27.2	- 36.7	83		F	#	0.5	
Oxidation Reduction Potential	mV	9/21/2005	N001	27.2	- 36.7	165		F	#		
pH	s.u.	9/21/2005	N001	27.2	- 36.7	7.68		F	#		
Potassium	mg/L	9/21/2005	0001	27.2	- 36.7	16		F	#	0.064	
Selenium	mg/L	9/21/2005	0001	27.2	- 36.7	0.36		F	#	0.004	
Sodium	mg/L	9/21/2005	0001	27.2	- 36.7	940		F	#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	27.2	- 36.7	5745		F	#		
Strontium	mg/L	9/21/2005	0001	27.2	- 36.7	1.1		F	#	0.000098	
Sulfate	mg/L	9/21/2005	0001	27.2	- 36.7	2400		F	#	50	
Temperature	C	9/21/2005	N001	27.2	- 36.7	17.1		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	27.2	- 36.7	4400		F	#	200	

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

REPORT DATE: 12/21/2005

Location: 1060 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	27.2	- 36.7	10		F	#	1	
Turbidity	NTU	9/21/2005	N001	27.2	- 36.7	4.59		F	#		
Uranium	mg/L	9/21/2005	0001	27.2	- 36.7	0.027		F	#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 1071 (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	9/21/2005	0001	36.5	-	46	162			#		
Ammonia Total as N	mg/L	9/21/2005	0001	36.5	-	46	150			#	20	
Calcium	mg/L	9/21/2005	0001	36.5	-	46	1700			#	0.01	
Chloride	mg/L	9/21/2005	0001	36.5	-	46	360			#	40	
Dissolved Oxygen	mg/L	9/21/2005	N001	36.5	-	46	1.47			#		
Iron	mg/L	9/21/2005	0001	36.5	-	46	0.081	B	U	#	0.054	
Magnesium	mg/L	9/21/2005	0001	36.5	-	46	1200			#	0.029	
Manganese	mg/L	9/21/2005	0001	36.5	-	46	1.1			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	36.5	-	46	2800			#	20	
Oxidation Reduction Potential	mV	9/21/2005	N001	36.5	-	46	209			#		
pH	s.u.	9/21/2005	N001	36.5	-	46	6.27			#		
Potassium	mg/L	9/21/2005	0001	36.5	-	46	200			#	0.16	
Selenium	mg/L	9/21/2005	0001	36.5	-	46	0.16			#	0.002	
Sodium	mg/L	9/21/2005	0001	36.5	-	46	1100			#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	36.5	-	46	19062			#		
Strontium	mg/L	9/21/2005	0001	36.5	-	46	9.1			#	0.00024	
Sulfate	mg/L	9/21/2005	0001	36.5	-	46	2800			#	100	
Temperature	C	9/21/2005	N001	36.5	-	46	19.7			#		
Total Dissolved Solids	mg/L	9/21/2005	0001	36.5	-	46	21000			#	400	

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

REPORT DATE: 12/21/2005

Location: 1071 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	36.5	-	46	5.8			#	1	
Turbidity	NTU	9/21/2005	N001	36.5	-	46	23.8			#		
Uranium	mg/L	9/21/2005	0001	36.5	-	46	0.088			#	0.000019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 Location: 1078 (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	9/21/2005	0001	35.5	-	45	502			#		
Ammonia Total as N	mg/L	9/21/2005	0001	35.5	-	45	4.3		J	#	0.1	
Ammonia Total as N	mg/L	9/21/2005	0002	35.5	-	45	4.6		J	#	0.1	
Calcium	mg/L	9/21/2005	0001	35.5	-	45	400			#	0.01	
Calcium	mg/L	9/21/2005	0002	35.5	-	45	400			#	0.01	
Chloride	mg/L	9/21/2005	0001	35.5	-	45	1200			#	40	
Chloride	mg/L	9/21/2005	0002	35.5	-	45	1200			#	40	
Dissolved Oxygen	mg/L	9/21/2005	N001	35.5	-	45	2.7			#		
Iron	mg/L	9/21/2005	0001	35.5	-	45	0.056	B	U	#	0.054	
Iron	mg/L	9/21/2005	0002	35.5	-	45	0.054	U		#	0.054	
Magnesium	mg/L	9/21/2005	0001	35.5	-	45	1100			#	0.029	
Magnesium	mg/L	9/21/2005	0002	35.5	-	45	1100			#	0.029	
Manganese	mg/L	9/21/2005	0001	35.5	-	45	0.13			#	0.00048	
Manganese	mg/L	9/21/2005	0002	35.5	-	45	0.099			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	35.5	-	45	810			#	5	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0002	35.5	-	45	710			#	5	
Oxidation Reduction Potential	mV	9/21/2005	N001	35.5	-	45	246			#		
pH	s.u.	9/21/2005	N001	35.5	-	45	6.96			#		
Potassium	mg/L	9/21/2005	0001	35.5	-	45	86			#	0.16	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 Location: 1078 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Potassium	mg/L	9/21/2005	0002	35.5	-	45	86			#	0.16	
Selenium	mg/L	9/21/2005	0001	35.5	-	45	2.6			#	0.02	
Selenium	mg/L	9/21/2005	0002	35.5	-	45	2.6			#	0.02	
Sodium	mg/L	9/21/2005	0001	35.5	-	45	4500			#	0.16	
Sodium	mg/L	9/21/2005	0002	35.5	-	45	4200			#	0.16	
Specific Conductance	umhos /cm	9/21/2005	N001	35.5	-	45	22330			#		
Strontium	mg/L	9/21/2005	0001	35.5	-	45	9.1			#	0.00024	
Strontium	mg/L	9/21/2005	0002	35.5	-	45	9.3			#	0.00024	
Sulfate	mg/L	9/21/2005	0001	35.5	-	45	14000			#	100	
Sulfate	mg/L	9/21/2005	0002	35.5	-	45	14000			#	100	
Temperature	C	9/21/2005	N001	35.5	-	45	17.5			#		
Total Dissolved Solids	mg/L	9/21/2005	0001	35.5	-	45	26000			#	400	
Total Dissolved Solids	mg/L	9/21/2005	0002	35.5	-	45	27000			#	400	
Total Organic Carbon	mg/L	9/21/2005	N001	35.5	-	45	22			#	1	
Total Organic Carbon	mg/L	9/21/2005	N002	35.5	-	45	22			#	1	
Turbidity	NTU	9/21/2005	N001	35.5	-	45	7.14			#		
Uranium	mg/L	9/21/2005	0001	35.5	-	45	0.13			#	0.000019	
Uranium	mg/L	9/21/2005	0002	35.5	-	45	0.14			#	0.000019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 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	9/21/2005	0001	10.5	-	20	293		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	10.5	-	20	0.1	U	F	#	0.1	
Calcium	mg/L	9/21/2005	0001	10.5	-	20	620		F	#	0.0041	
Chloride	mg/L	9/21/2005	0001	10.5	-	20	110		F	#	10	
Dissolved Oxygen	mg/L	9/21/2005	N001	10.5	-	20	1.32		F	#		
Iron	mg/L	9/21/2005	0001	10.5	-	20	0.028	B	UF	#	0.022	
Magnesium	mg/L	9/21/2005	0001	10.5	-	20	130		F	#	0.012	
Manganese	mg/L	9/21/2005	0001	10.5	-	20	0.0043	B	F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	10.5	-	20	76		F	#	0.5	
Oxidation Reduction Potential	mV	9/21/2005	N001	10.5	-	20	-93		F	#		
pH	s.u.	9/21/2005	N001	10.5	-	20	6.8		F	#		
Potassium	mg/L	9/21/2005	0001	10.5	-	20	12		F	#	0.064	
Selenium	mg/L	9/21/2005	0001	10.5	-	20	0.31		F	#	0.004	
Sodium	mg/L	9/21/2005	0001	10.5	-	20	420		F	#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	10.5	-	20	4350		F	#		
Strontium	mg/L	9/21/2005	0001	10.5	-	20	5.3		F	#	0.000098	
Sulfate	mg/L	9/21/2005	0001	10.5	-	20	2300		F	#	25	
Temperature	C	9/21/2005	N001	10.5	-	20	19.4		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	10.5	-	20	4200		F	#	80	

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

REPORT DATE: 12/21/2005

Location: 1079 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	10.5	-	20	4.8		F	#	1	
Turbidity	NTU	9/21/2005	N001	10.5	-	20	3.73		F	#		
Uranium	mg/L	9/21/2005	0001	10.5	-	20	0.032		F	#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 1087 (SURFACE LOCATION) Sump from interceptor trenches in Bob Lee Wash

Parameter	Units	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	0	-	0	610			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0	-	0	130			#	20	
Calcium	mg/L	9/22/2005	0001	0	-	0	390			#	0.01	
Chloride	mg/L	9/22/2005	0001	0	-	0	280			#	40	
Dissolved Oxygen	mg/L	9/22/2005	N001	0	-	0	2.33			#		
Iron	mg/L	9/22/2005	0001	0	-	0	0.054	U		#	0.054	
Magnesium	mg/L	9/22/2005	0001	0	-	0	1100			#	0.029	
Manganese	mg/L	9/22/2005	0001	0	-	0	1			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	0	-	0	320			#	2	
Oxidation Reduction Potential	mV	9/22/2005	N001	0	-	0	225			#		
pH	s.u.	9/22/2005	N001	0	-	0	6.68			#		
Potassium	mg/L	9/22/2005	0001	0	-	0	110			#	0.16	
Selenium	mg/L	9/22/2005	0001	0	-	0	0.041			#	0.0004	
Sodium	mg/L	9/22/2005	0001	0	-	0	1000			#	0.16	
Specific Conductance	umhos/cm	9/22/2005	N001	0	-	0	10917			#		
Strontium	mg/L	9/22/2005	0001	0	-	0	7.4			#	0.00024	
Sulfate	mg/L	9/22/2005	0001	0	-	0	6600			#	100	
Temperature	C	9/22/2005	N001	0	-	0	23.8			#		
Total Dissolved Solids	mg/L	9/22/2005	0001	0	-	0	12000			#	400	
Total Organic Carbon	mg/L	9/22/2005	N001	0	-	0	13			#	1	

Location: 1087 (SURFACE LOCATION) Sump from interceptor trenches in Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Turbidity	NTU	9/22/2005	N001	0	-	0	1.29			#		
Uranium	mg/L	9/22/2005	0001	0	-	0	0.49			#	0.000038	

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

REPORT DATE: 12/21/2005

Location: 1088 (SURFACE LOCATION) 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	9/22/2005	0001	0	-	0	661			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0	-	0	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	0	-	0	410			#	0.021	
Chloride	mg/L	9/22/2005	0001	0	-	0	1700			#	100	
Dissolved Oxygen	mg/L	9/22/2005	N001	0	-	0	6.17			#		
Iron	mg/L	9/22/2005	0001	0	-	0	0.11	U		#	0.11	
Magnesium	mg/L	9/22/2005	0001	0	-	0	1100			#	0.059	
Manganese	mg/L	9/22/2005	0001	0	-	0	0.02	B		#	0.00095	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	0	-	0	710			#	5	
Oxidation Reduction Potential	mV	9/22/2005	N001	0	-	0	193			#		
pH	s.u.	9/22/2005	N001	0	-	0	7.37			#		
Potassium	mg/L	9/22/2005	0001	0	-	0	88			#	0.32	
Selenium	mg/L	9/22/2005	0001	0	-	0	1.4			#	0.02	
Sodium	mg/L	9/22/2005	0001	0	-	0	6900			#	0.16	
Specific Conductance	umhos/cm	9/22/2005	N001	0	-	0	29260			#		
Strontium	mg/L	9/22/2005	0001	0	-	0	9.2			#	0.00049	
Sulfate	mg/L	9/22/2005	0001	0	-	0	20000			#	250	
Temperature	C	9/22/2005	N001	0	-	0	20.3			#		
Total Dissolved Solids	mg/L	9/22/2005	0001	0	-	0	35000			#	1000	

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

REPORT DATE: 12/21/2005

Location: 1088 (SURFACE LOCATION) Sump from interceptor trenches in Many Devils Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/22/2005	N001	0	-	0	35			#	1	
Turbidity	NTU	9/22/2005	N001	0	-	0	8.2			#		
Uranium	mg/L	9/22/2005	0001	0	-	0	0.17			#	0.000038	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 Location: 1091 (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	9/21/2005	0001	33	-	43	1093			#		
Ammonia Total as N	mg/L	9/21/2005	0001	33	-	43	0.83		J	#	0.1	
Calcium	mg/L	9/21/2005	0001	33	-	43	460			#	0.01	
Chloride	mg/L	9/21/2005	0001	33	-	43	1300			#	100	
Dissolved Oxygen	mg/L	9/21/2005	N001	33	-	43	5.08			#		
Iron	mg/L	9/21/2005	0001	33	-	43	0.094	B	U	#	0.054	
Magnesium	mg/L	9/21/2005	0001	33	-	43	2300			#	0.029	
Manganese	mg/L	9/21/2005	0001	33	-	43	1.1			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	33	-	43	1700			#	10	
Oxidation Reduction Potential	mV	9/21/2005	N001	33	-	43	192			#		
pH	s.u.	9/21/2005	N001	33	-	43	6.57			#		
Potassium	mg/L	9/21/2005	0001	33	-	43	98			#	0.16	
Selenium	mg/L	9/21/2005	0001	33	-	43	0.31			#	0.004	
Sodium	mg/L	9/21/2005	0001	33	-	43	3700			#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	33	-	43	25844			#		
Strontium	mg/L	9/21/2005	0001	33	-	43	13			#	0.00024	
Sulfate	mg/L	9/21/2005	0001	33	-	43	13000			#	250	
Temperature	C	9/21/2005	N001	33	-	43	22.3			#		
Total Dissolved Solids	mg/L	9/21/2005	0001	33	-	43	32000			#	400	

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

REPORT DATE: 12/21/2005

Location: 1091 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	33	-	43	32			#	1	
Turbidity	NTU	9/21/2005	N001	33	-	43	2.61			#		
Uranium	mg/L	9/21/2005	0001	33	-	43	0.12			#	0.000019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 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	9/21/2005	0001	33	-	43	831			#		
Ammonia Total as N	mg/L	9/21/2005	0001	33	-	43	0.1		J	#	0.1	
Calcium	mg/L	9/21/2005	0001	33	-	43	460			#	0.01	
Chloride	mg/L	9/21/2005	0001	33	-	43	1500			#	100	
Dissolved Oxygen	mg/L	9/21/2005	N001	33	-	43	4.58			#		
Iron	mg/L	9/21/2005	0001	33	-	43	0.27			#	0.054	
Magnesium	mg/L	9/21/2005	0001	33	-	43	2300			#	0.029	
Manganese	mg/L	9/21/2005	0001	33	-	43	0.96			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	33	-	43	1900			#	10	
Oxidation Reduction Potential	mV	9/21/2005	N001	33	-	43	233			#		
pH	s.u.	9/21/2005	N001	33	-	43	6.65			#		
Potassium	mg/L	9/21/2005	0001	33	-	43	99			#	0.16	
Selenium	mg/L	9/21/2005	0001	33	-	43	1.4			#	0.02	
Sodium	mg/L	9/21/2005	0001	33	-	43	3700			#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	33	-	43	25810			#		
Strontium	mg/L	9/21/2005	0001	33	-	43	12			#	0.00024	
Sulfate	mg/L	9/21/2005	0001	33	-	43	13000			#	250	
Temperature	C	9/21/2005	N001	33	-	43	19.5			#		
Total Dissolved Solids	mg/L	9/21/2005	0001	33	-	43	31000			#	400	

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

REPORT DATE: 12/21/2005

Location: 1092 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	33	-	43	32			#	1	
Turbidity	NTU	9/21/2005	N001	33	-	43	4.49			#		
Uranium	mg/L	9/21/2005	0001	33	-	43	0.12			#	0.000038	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 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	9/21/2005	0001	31.17	- 34.5	364			#		
Ammonia Total as N	mg/L	9/21/2005	0001	31.17	- 34.5	110			#	20	
Calcium	mg/L	9/21/2005	0001	31.17	- 34.5	1100			#	0.01	
Chloride	mg/L	9/21/2005	0001	31.17	- 34.5	710			#	100	
Dissolved Oxygen	mg/L	9/21/2005	N001	31.17	- 34.5	1.96			#		
Iron	mg/L	9/21/2005	0001	31.17	- 34.5	0.12	B	U	#	0.054	
Magnesium	mg/L	9/21/2005	0001	31.17	- 34.5	2300			#	0.029	
Manganese	mg/L	9/21/2005	0001	31.17	- 34.5	0.51			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	31.17	- 34.5	3600			#	20	
Oxidation Reduction Potential	mV	9/21/2005	N001	31.17	- 34.5	205			#		
pH	s.u.	9/21/2005	N001	31.17	- 34.5	6.56			#		
Potassium	mg/L	9/21/2005	0001	31.17	- 34.5	180			#	0.16	
Selenium	mg/L	9/21/2005	0001	31.17	- 34.5	1.3			#	0.02	
Sodium	mg/L	9/21/2005	0001	31.17	- 34.5	2200			#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	31.17	- 34.5	26412			#		
Strontium	mg/L	9/21/2005	0001	31.17	- 34.5	17			#	0.00024	
Sulfate	mg/L	9/21/2005	0001	31.17	- 34.5	5600			#	250	
Temperature	C	9/21/2005	N001	31.17	- 34.5	20.9			#		
Total Dissolved Solids	mg/L	9/21/2005	0001	31.17	- 34.5	33000			#	400	

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

REPORT DATE: 12/21/2005

Location: 1093 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/21/2005	N001	31.17	- 34.5	19			#	1	
Turbidity	NTU	9/21/2005	N001	31.17	- 34.5	95.8			#		
Uranium	mg/L	9/21/2005	0001	31.17	- 34.5	0.073			#	0.000019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 Location: 1094 (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	9/21/2005	0001	30.5	- 34.5	104			#		
Ammonia Total as N	mg/L	9/21/2005	0001	30.5	- 34.5	260			#	20	
Calcium	mg/L	9/21/2005	0001	30.5	- 34.5	1700			#	0.01	
Chloride	mg/L	9/21/2005	0001	30.5	- 34.5	570			#	100	
Dissolved Oxygen	mg/L	9/21/2005	N001	30.5	- 34.5	1.03			#		
Iron	mg/L	9/21/2005	0001	30.5	- 34.5	1.9			#	0.054	
Magnesium	mg/L	9/21/2005	0001	30.5	- 34.5	1900			#	0.029	
Manganese	mg/L	9/21/2005	0001	30.5	- 34.5	2.4			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	30.5	- 34.5	3800			#	20	
Oxidation Reduction Potential	mV	9/21/2005	N001	30.5	- 34.5	139			#		
pH	s.u.	9/21/2005	N001	30.5	- 34.5	6.15			#		
Potassium	mg/L	9/21/2005	0001	30.5	- 34.5	250			#	0.16	
Selenium	mg/L	9/21/2005	0001	30.5	- 34.5	0.42			#	0.004	
Sodium	mg/L	9/21/2005	0001	30.5	- 34.5	1700			#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	30.5	- 34.5	25060			#		
Strontium	mg/L	9/21/2005	0001	30.5	- 34.5	13			#	0.00024	
Sulfate	mg/L	9/21/2005	0001	30.5	- 34.5	4800			#	250	
Temperature	C	9/21/2005	N001	30.5	- 34.5	21.8			#		
Total Dissolved Solids	mg/L	9/21/2005	0001	30.5	- 34.5	32000			#	400	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005
 Location: 1094 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
				Lab	Data		QA				
Total Organic Carbon	mg/L	9/21/2005	N001	30.5	- 34.5	16			#	1	
Turbidity	NTU	9/21/2005	N001	30.5	- 34.5	13.7			#		
Uranium	mg/L	9/21/2005	0001	30.5	- 34.5	0.041			#	0.000019	

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.

QA QUALIFIER:

- # Validated according to quality assurance guidelines.

**Ground Water Quality Data
Floodplain Locations**

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

REPORT DATE: 12/21/2005

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	9/20/2005	0001	10	-	15	777		F	#	
Ammonia Total as N	mg/L	9/20/2005	0001	10	-	15	310		F	#	20
Calcium	mg/L	9/20/2005	0001	10	-	15	430		F	#	0.01
Chloride	mg/L	9/20/2005	0001	10	-	15	430		F	#	40
Dissolved Oxygen	mg/L	9/20/2005	N001	10	-	15	0.83		F	#	
Iron	mg/L	9/20/2005	0001	10	-	15	0.062	B	UF	#	0.054
Magnesium	mg/L	9/20/2005	0001	10	-	15	1800		F	#	0.029
Manganese	mg/L	9/20/2005	0001	10	-	15	5.7		F	#	0.00048
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	10	-	15	650		F	#	5
Oxidation Reduction Potential	mV	9/20/2005	N001	10	-	15	230.4		F	#	
pH	s.u.	9/20/2005	N001	10	-	15	6.83		F	#	
Potassium	mg/L	9/20/2005	0001	10	-	15	180		F	#	0.16
Selenium	mg/L	9/20/2005	0001	10	-	15	0.011		F	#	0.00008
Sodium	mg/L	9/20/2005	0001	10	-	15	2000		F	#	0.16
Specific Conductance	umhos/cm	9/20/2005	N001	10	-	15	18360		F	#	
Strontium	mg/L	9/20/2005	0001	10	-	15	11		F	#	0.00024
Sulfate	mg/L	9/20/2005	0001	10	-	15	12000		F	#	100
Temperature	C	9/20/2005	N001	10	-	15	21.03		F	#	
Total Dissolved Solids	mg/L	9/20/2005	0001	10	-	15	20000		F	#	400

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

REPORT DATE: 12/21/2005

Location: 0608 (WELL) SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	10	-	15	17		F	#	1	
Turbidity	NTU	9/20/2005	N001	10	-	15	3.31		F	#		
Uranium	mg/L	9/20/2005	0001	10	-	15	2		F	#	0.00019	

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

REPORT DATE: 12/21/2005

Location: 0614 (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	9/20/2005	0001	10	-	15	698		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	10	-	15	26		F	#	1	
Calcium	mg/L	9/20/2005	0001	10	-	15	460		F	#	0.01	
Chloride	mg/L	9/20/2005	0001	10	-	15	720		F	#	100	
Dissolved Oxygen	mg/L	9/20/2005	N001	10	-	15	1.21		F	#		
Iron	mg/L	9/20/2005	0001	10	-	15	0.054	U	F	#	0.054	
Magnesium	mg/L	9/20/2005	0001	10	-	15	3000		F	#	0.59	
Manganese	mg/L	9/20/2005	0001	10	-	15	3.5		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	10	-	15	1100		F	#	10	
Oxidation Reduction Potential	mV	9/20/2005	N001	10	-	15	251		F	#		
pH	s.u.	9/20/2005	N001	10	-	15	6.86		F	#		
Potassium	mg/L	9/20/2005	0001	10	-	15	230		F	#	0.16	
Selenium	mg/L	9/20/2005	0001	10	-	15	0.11		F	#	0.002	
Sodium	mg/L	9/20/2005	0001	10	-	15	3100		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	10	-	15	25245		F	#		
Strontium	mg/L	9/20/2005	0001	10	-	15	12		F	#	0.00024	
Sulfate	mg/L	9/20/2005	0001	10	-	15	17000		F	#	250	
Temperature	C	9/20/2005	N001	10	-	15	18.2		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	10	-	15	32000		F	#	400	

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

REPORT DATE: 12/21/2005

Location: 0614 (WELL) SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	10	-	15	28		F	#	1	
Turbidity	NTU	9/20/2005	N001	10	-	15	4.64		F	#		
Uranium	mg/L	9/20/2005	0001	10	-	15	3		F	#	0.00019	

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

REPORT DATE: 12/21/2005

Location: 0615 (WELL) S of floodplain fence, 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	9/20/2005	0001	4.5	-	9.5	853		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	4.5	-	9.5	52		F	#	10	
Calcium	mg/L	9/20/2005	0001	4.5	-	9.5	450		F	#	0.021	
Chloride	mg/L	9/20/2005	0001	4.5	-	9.5	980		F	#	100	
Dissolved Oxygen	mg/L	9/20/2005	N001	4.5	-	9.5	2.42		F	#		
Iron	mg/L	9/20/2005	0001	4.5	-	9.5	0.11	U	F	#	0.11	
Magnesium	mg/L	9/20/2005	0001	4.5	-	9.5	3200		F	#	0.059	
Manganese	mg/L	9/20/2005	0001	4.5	-	9.5	6.9		F	#	0.00095	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	4.5	-	9.5	1200		F	#	10	
Oxidation Reduction Potential	mV	9/20/2005	N001	4.5	-	9.5	220.5		F	#		
pH	s.u.	9/20/2005	N001	4.5	-	9.5	6.81		F	#		
Potassium	mg/L	9/20/2005	0001	4.5	-	9.5	300		F	#	0.32	
Selenium	mg/L	9/20/2005	0001	4.5	-	9.5	0.78		F	#	0.004	
Sodium	mg/L	9/20/2005	0001	4.5	-	9.5	5000		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	4.5	-	9.5	32010		F	#		
Strontium	mg/L	9/20/2005	0001	4.5	-	9.5	14		F	#	0.00049	
Sulfate	mg/L	9/20/2005	0001	4.5	-	9.5	24000		F	#	250	
Temperature	C	9/20/2005	N001	4.5	-	9.5	23.85		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	4.5	-	9.5	42000		F	#	1000	

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

REPORT DATE: 12/21/2005

Location: 0615 (WELL) S of floodplain fence, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	4.5	-	9.5	31		F	#	1	
Turbidity	NTU	9/20/2005	N001	4.5	-	9.5	8.25		F	#		
Uranium	mg/L	9/20/2005	0001	4.5	-	9.5	3.4		F	#	0.00038	

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

REPORT DATE: 12/21/2005

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	9/20/2005	0001	11	-	16	1030		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	11	-	16	51		F	#	2	
Calcium	mg/L	9/20/2005	0001	11	-	16	420		F	#	0.01	
Chloride	mg/L	9/20/2005	0001	11	-	16	700		F	#	40	
Dissolved Oxygen	mg/L	9/20/2005	N001	11	-	16	1.14		F	#		
Iron	mg/L	9/20/2005	0001	11	-	16	0.054	U	F	#	0.054	
Magnesium	mg/L	9/20/2005	0001	11	-	16	1800		F	#	0.029	
Manganese	mg/L	9/20/2005	0001	11	-	16	8.6		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	11	-	16	220		F	#	2	
Oxidation Reduction Potential	mV	9/20/2005	N001	11	-	16	256		F	#		
pH	s.u.	9/20/2005	N001	11	-	16	6.76		F	#		
Potassium	mg/L	9/20/2005	0001	11	-	16	130		F	#	0.16	
Selenium	mg/L	9/20/2005	0001	11	-	16	0.22		F	#	0.002	
Sodium	mg/L	9/20/2005	0001	11	-	16	2800		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	11	-	16	19950		F	#		
Strontium	mg/L	9/20/2005	0001	11	-	16	8.6		F	#	0.00024	
Sulfate	mg/L	9/20/2005	0001	11	-	16	14000		F	#	100	
Temperature	C	9/20/2005	N001	11	-	16	19.8		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	11	-	16	24000		F	#	400	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	11	-	16	21		F	#	1	
Turbidity	NTU	9/20/2005	N001	11	-	16	2.42		F	#		
Uranium	mg/L	9/20/2005	0001	11	-	16	2.9		F	#	0.00019	

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

REPORT DATE: 12/21/2005

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	9/20/2005	0001	8	-	13	755		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	8	-	13	0.14		FJ	#	0.1	
Calcium	mg/L	9/20/2005	0001	8	-	13	400		F	#	0.01	
Chloride	mg/L	9/20/2005	0001	8	-	13	530		F	#	40	
Dissolved Oxygen	mg/L	9/20/2005	N001	8	-	13	0.45		F	#		
Iron	mg/L	9/20/2005	0001	8	-	13	4.8		F	#	0.054	
Magnesium	mg/L	9/20/2005	0001	8	-	13	1100		F	#	0.029	
Manganese	mg/L	9/20/2005	0001	8	-	13	6.4		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	8	-	13	0.015		F	#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	8	-	13	-172.2		F	#		
pH	s.u.	9/20/2005	N001	8	-	13	7.21		F	#		
Potassium	mg/L	9/20/2005	0001	8	-	13	130		F	#	0.16	
Selenium	mg/L	9/20/2005	0001	8	-	13	0.0039		F	#	0.00008	
Sodium	mg/L	9/20/2005	0001	8	-	13	3500		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	8	-	13	20920		F	#		
Strontium	mg/L	9/20/2005	0001	8	-	13	9.3		F	#	0.00024	
Sulfate	mg/L	9/20/2005	0001	8	-	13	14000		F	#	100	
Temperature	C	9/20/2005	N001	8	-	13	19.48		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	8	-	13	22000		F	#	400	

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

REPORT DATE: 12/21/2005

Location: 0619 (WELL) Center of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	8	-	13	14		F	#	1	
Turbidity	NTU	9/20/2005	N001	8	-	13	2.44		F	#		
Uranium	mg/L	9/20/2005	0001	8	-	13	1.2		F	#	0.00019	

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

REPORT DATE: 12/21/2005

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	9/20/2005	0001	3	-	8	780		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	3	-	8	22		F	#	1	
Calcium	mg/L	9/20/2005	0001	3	-	8	510		F	#	0.01	
Chloride	mg/L	9/20/2005	0001	3	-	8	1000		F	#	40	
Dissolved Oxygen	mg/L	9/20/2005	N001	3	-	8	0.85		F	#		
Iron	mg/L	9/20/2005	0001	3	-	8	0.054	U	F	#	0.054	
Magnesium	mg/L	9/20/2005	0001	3	-	8	2000		F	#	0.029	
Manganese	mg/L	9/20/2005	0001	3	-	8	5.6		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	3	-	8	1200		F	#	10	
Oxidation Reduction Potential	mV	9/20/2005	N001	3	-	8	261		F	#		
pH	s.u.	9/20/2005	N001	3	-	8	6.8		F	#		
Potassium	mg/L	9/20/2005	0001	3	-	8	99		F	#	0.16	
Selenium	mg/L	9/20/2005	0001	3	-	8	0.27		F	#	0.002	
Sodium	mg/L	9/20/2005	0001	3	-	8	3800		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	3	-	8	24050		F	#		
Strontium	mg/L	9/20/2005	0001	3	-	8	14		F	#	0.00024	
Sulfate	mg/L	9/20/2005	0001	3	-	8	15000		F	#	100	
Temperature	C	9/20/2005	N001	3	-	8	15.9		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	3	-	8	30000		F	#	400	

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

REPORT DATE: 12/21/2005

Location: 0735 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	3	-	8	31		F	#	1	
Turbidity	NTU	9/20/2005	N001	3	-	8	4.1		F	#		
Uranium	mg/L	9/20/2005	0001	3	-	8	0.56		F	#	0.000038	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005
 Location: 0736 (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	9/20/2005	0001	3	-	5	491		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	3	-	5	0.1	U	F	#	0.1	
Calcium	mg/L	9/20/2005	0001	3	-	5	540		F	#	0.01	
Chloride	mg/L	9/20/2005	0001	3	-	5	270		F	#	40	
Dissolved Oxygen	mg/L	9/20/2005	N001	3	-	5	0.96		F	#		
Iron	mg/L	9/20/2005	0001	3	-	5	0.15	B	UF	#	0.054	
Magnesium	mg/L	9/20/2005	0001	3	-	5	370		F	#	0.029	
Manganese	mg/L	9/20/2005	0001	3	-	5	4.7		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	3	-	5	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	3	-	5	50.7		F	#		
pH	s.u.	9/20/2005	N001	3	-	5	7.13		F	#		
Potassium	mg/L	9/20/2005	0001	3	-	5	69		F	#	0.16	
Selenium	mg/L	9/20/2005	0001	3	-	5	0.0017		F	#	0.00008	
Sodium	mg/L	9/20/2005	0001	3	-	5	2200		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	3	-	5	12950		F	#		
Strontium	mg/L	9/20/2005	0001	3	-	5	9.1		F	#	0.00024	
Sulfate	mg/L	9/20/2005	0001	3	-	5	8600		F	#	100	
Temperature	C	9/20/2005	N001	3	-	5	18.13		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	3	-	5	13000		F	#	400	

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

REPORT DATE: 12/21/2005

Location: 0736 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	3	-	5	14		F	#	1	
Turbidity	NTU	9/20/2005	N001	3	-	5	1.53		F	#		
Uranium	mg/L	9/20/2005	0001	3	-	5	0.32		F	#	0.000019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005
 Location: 0797 (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	9/21/2005	0001	7.3	-	9.3	427		FQ	#		
Ammonia Total as N	mg/L	9/21/2005	0001	7.3	-	9.3	0.1	U	FQ	#	0.1	
Calcium	mg/L	9/21/2005	0001	7.3	-	9.3	320		FQ	#	0.0062	
Chloride	mg/L	9/21/2005	0001	7.3	-	9.3	130		FQ	#	20	
Iron	mg/L	9/21/2005	0001	7.3	-	9.3	0.6		FQ	#	0.032	
Magnesium	mg/L	9/21/2005	0001	7.3	-	9.3	72		FQ	#	0.018	
Manganese	mg/L	9/21/2005	0001	7.3	-	9.3	3.6		FQ	#	0.00028	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	7.3	-	9.3	0.027		FQ	#	0.01	
Oxidation Reduction Potential	mV	9/21/2005	N001	7.3	-	9.3	-91.3		FQ	#		
pH	s.u.	9/21/2005	N001	7.3	-	9.3	7.19		FQ	#		
Potassium	mg/L	9/21/2005	0001	7.3	-	9.3	9.1		FQ	#	0.096	
Selenium	mg/L	9/21/2005	0001	7.3	-	9.3	0.00039		FQJ	#	0.00004	
Sodium	mg/L	9/21/2005	0001	7.3	-	9.3	900		FQ	#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	7.3	-	9.3	5285		FQ	#		
Strontium	mg/L	9/21/2005	0001	7.3	-	9.3	5.1		FQ	#	0.00015	
Sulfate	mg/L	9/21/2005	0001	7.3	-	9.3	2800		FQ	#	50	
Temperature	C	9/21/2005	N001	7.3	-	9.3	21.5		FQ	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	7.3	-	9.3	4700		FQ	#	200	
Total Organic Carbon	mg/L	9/21/2005	N001	7.3	-	9.3	8.8		FQ	#	1	

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

REPORT DATE: 12/21/2005

Location: 0797 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Turbidity	NTU	9/21/2005	N001	7.3	-	9.3	2.06		FQ	#		
Uranium	mg/L	9/21/2005	0001	7.3	-	9.3	0.014		FQ	#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0850 (WELL) Background area 1 mi E 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	9/21/2005	0001	5.6	-	15.4	186		F	#		
Ammonia Total as N	mg/L	9/21/2005	0001	5.6	-	15.4	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	9/21/2005	0002	5.6	-	15.4	0.1	U	F	#	0.1	
Calcium	mg/L	9/21/2005	0001	5.6	-	15.4	170		F	#	0.0041	
Calcium	mg/L	9/21/2005	0002	5.6	-	15.4	170		F	#	0.0041	
Chloride	mg/L	9/21/2005	0001	5.6	-	15.4	130		F	#	10	
Chloride	mg/L	9/21/2005	0002	5.6	-	15.4	130		F	#	10	
Dissolved Oxygen	mg/L	9/21/2005	N001	5.6	-	15.4	0.82		F	#		
Iron	mg/L	9/21/2005	0001	5.6	-	15.4	0.52		F	#	0.022	
Iron	mg/L	9/21/2005	0002	5.6	-	15.4	0.54		F	#	0.022	
Magnesium	mg/L	9/21/2005	0001	5.6	-	15.4	30		F	#	0.012	
Magnesium	mg/L	9/21/2005	0002	5.6	-	15.4	30		F	#	0.012	
Manganese	mg/L	9/21/2005	0001	5.6	-	15.4	1.2		F	#	0.00019	
Manganese	mg/L	9/21/2005	0002	5.6	-	15.4	1.2		F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	5.6	-	15.4	0.01	U	F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0002	5.6	-	15.4	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	9/21/2005	N001	5.6	-	15.4	-76.4		F	#		
pH	s.u.	9/21/2005	N001	5.6	-	15.4	7.35		F	#		
Potassium	mg/L	9/21/2005	0001	5.6	-	15.4	6.8		F	#	0.064	

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

REPORT DATE: 12/21/2005

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

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Potassium	mg/L	9/21/2005	0002	5.6	- 15.4	6.8		F	#	0.064	
Selenium	mg/L	9/21/2005	0001	5.6	- 15.4	0.00033		FJ	#	0.00004	
Selenium	mg/L	9/21/2005	0002	5.6	- 15.4	0.00042		FJ	#	0.00004	
Sodium	mg/L	9/21/2005	0001	5.6	- 15.4	640		F	#	0.16	
Sodium	mg/L	9/21/2005	0002	5.6	- 15.4	620		F	#	0.16	
Specific Conductance	umhos /cm	9/21/2005	N001	5.6	- 15.4	3975		F	#		
Strontium	mg/L	9/21/2005	0001	5.6	- 15.4	2.2		F	#	0.000098	
Strontium	mg/L	9/21/2005	0002	5.6	- 15.4	2.3		F	#	0.000098	
Sulfate	mg/L	9/21/2005	0001	5.6	- 15.4	1800		F	#	25	
Sulfate	mg/L	9/21/2005	0002	5.6	- 15.4	1700		F	#	25	
Temperature	C	9/21/2005	N001	5.6	- 15.4	21.05		F	#		
Total Dissolved Solids	mg/L	9/21/2005	0001	5.6	- 15.4	3100		F	#	80	
Total Dissolved Solids	mg/L	9/21/2005	0002	5.6	- 15.4	3100		F	#	80	
Total Organic Carbon	mg/L	9/21/2005	N001	5.6	- 15.4	7.6		F	#	1	
Total Organic Carbon	mg/L	9/21/2005	N002	5.6	- 15.4	7.8		F	#	1	
Turbidity	NTU	9/21/2005	N001	5.6	- 15.4	9.9		F	#		
Uranium	mg/L	9/21/2005	0001	5.6	- 15.4	0.017		F	#	0.0000038	
Uranium	mg/L	9/21/2005	0002	5.6	- 15.4	0.017		F	#	0.0000038	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005
 Location: 1008 (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	9/19/2005	0001	6.9	-	16.9		F	#		
Ammonia Total as N	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.5	
Calcium	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.01	
Chloride	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	40	
Dissolved Oxygen	mg/L	9/19/2005	N001	6.9	-	16.9		F	#		
Iron	mg/L	9/19/2005	0001	6.9	-	16.9	B	F	#	0.054	
Magnesium	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.029	
Manganese	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.5	
Oxidation Reduction Potential	mV	9/19/2005	N001	6.9	-	16.9		F	#		
pH	s.u.	9/19/2005	N001	6.9	-	16.9		F	#		
Potassium	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.16	
Selenium	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.0004	
Sodium	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.16	
Specific Conductance	umhos/cm	9/19/2005	N001	6.9	-	16.9		F	#		
Strontium	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	0.00024	
Sulfate	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	100	
Temperature	C	9/19/2005	N001	6.9	-	16.9		F	#		
Total Dissolved Solids	mg/L	9/19/2005	0001	6.9	-	16.9		F	#	400	

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

REPORT DATE: 12/21/2005

Location: 1008 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/19/2005	N001	6.9	- 16.9	15		F	#	1	
Turbidity	NTU	9/19/2005	N001	6.9	- 16.9	8.94		F	#		
Uranium	mg/L	9/19/2005	0001	6.9	- 16.9	1.3		F	#	0.00019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005
 Location: 1077 (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	9/20/2005	0001	5	-	14.5	1320		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	5	-	14.5	1.2		FJ	#	0.1	
Calcium	mg/L	9/20/2005	0001	5	-	14.5	470		F	#	0.01	
Chloride	mg/L	9/20/2005	0001	5	-	14.5	1200		F	#	100	
Dissolved Oxygen	mg/L	9/20/2005	N001	5	-	14.5	0.88		F	#		
Iron	mg/L	9/20/2005	0001	5	-	14.5	0.054	U	F	#	0.054	
Magnesium	mg/L	9/20/2005	0001	5	-	14.5	2500		F	#	0.59	
Manganese	mg/L	9/20/2005	0001	5	-	14.5	4.3		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	5	-	14.5	270		F	#	2	
Oxidation Reduction Potential	mV	9/20/2005	N001	5	-	14.5	260		F	#		
pH	s.u.	9/20/2005	N001	5	-	14.5	7.09		F	#		
Potassium	mg/L	9/20/2005	0001	5	-	14.5	210		F	#	0.16	
Selenium	mg/L	9/20/2005	0001	5	-	14.5	0.023		F	#	0.0002	
Sodium	mg/L	9/20/2005	0001	5	-	14.5	4200		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	5	-	14.5	26975		F	#		
Strontium	mg/L	9/20/2005	0001	5	-	14.5	12		F	#	0.00024	
Sulfate	mg/L	9/20/2005	0001	5	-	14.5	22000		F	#	250	
Temperature	C	9/20/2005	N001	5	-	14.5	18.4		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	5	-	14.5	35000		F	#	400	

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

REPORT DATE: 12/21/2005

Location: 1077 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Total Organic Carbon	mg/L	9/20/2005	N001	5	-	14.5	46		F	#	1	
Turbidity	NTU	9/20/2005	N001	5	-	14.5	3.28		F	#		
Uranium	mg/L	9/20/2005	0001	5	-	14.5	2.9		F	#	0.00019	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005
 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	9/20/2005	0001	4.8	-	14.8	748		F	#		
Ammonia Total as N	mg/L	9/20/2005	0001	4.8	-	14.8	0.72		FJ	#	0.1	
Calcium	mg/L	9/20/2005	0001	4.8	-	14.8	500		F	#	0.01	
Chloride	mg/L	9/20/2005	0001	4.8	-	14.8	690		F	#	40	
Dissolved Oxygen	mg/L	9/20/2005	N001	4.8	-	14.8	0.96		F	#		
Iron	mg/L	9/20/2005	0001	4.8	-	14.8	0.054	U	F	#	0.054	
Magnesium	mg/L	9/20/2005	0001	4.8	-	14.8	1400		F	#	0.029	
Manganese	mg/L	9/20/2005	0001	4.8	-	14.8	2		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	4.8	-	14.8	71		F	#	0.5	
Oxidation Reduction Potential	mV	9/20/2005	N001	4.8	-	14.8	235		F	#		
pH	s.u.	9/20/2005	N001	4.8	-	14.8	7.12		F	#		
Potassium	mg/L	9/20/2005	0001	4.8	-	14.8	140		F	#	0.16	
Selenium	mg/L	9/20/2005	0001	4.8	-	14.8	0.094		F	#	0.0004	
Sodium	mg/L	9/20/2005	0001	4.8	-	14.8	3500		F	#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	4.8	-	14.8	19700		F	#		
Strontium	mg/L	9/20/2005	0001	4.8	-	14.8	9.9		F	#	0.00024	
Sulfate	mg/L	9/20/2005	0001	4.8	-	14.8	15000		F	#	100	
Temperature	C	9/20/2005	N001	4.8	-	14.8	21.4		F	#		
Total Dissolved Solids	mg/L	9/20/2005	0001	4.8	-	14.8	24000		F	#	400	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005
 Location: 1089 (WELL)

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Total Organic Carbon	mg/L	9/20/2005	N001	4.8	-	14.8		F	#	1	
Turbidity	NTU	9/20/2005	N001	4.8	-	14.8		F	#		
Uranium	mg/L	9/20/2005	0001	4.8	-	14.8		F	#	0.00019	

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.

QA QUALIFIER:

- # Validated according to quality assurance guidelines.

**Surface Water Quality Data
Terrace Locations**

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

REPORT DATE: 12/21/2005

Location: 0425 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	989			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.17	N	J	#	0.1	
Calcium	mg/L	9/20/2005	0001	470			#	0.0062	
Chloride	mg/L	9/20/2005	0001	350			#	20	
Magnesium	mg/L	9/20/2005	0001	940			#	0.018	
Manganese	mg/L	9/20/2005	0001	0.14			#	0.00028	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	48			#	0.5	
Oxidation Reduction Potential	mV	9/20/2005	N001	257			#		
pH	s.u.	9/20/2005	N001	6.76			#		
Potassium	mg/L	9/20/2005	0001	61			#	0.096	
Selenium	mg/L	9/20/2005	0001	0.032			#	0.0002	
Sodium	mg/L	9/20/2005	0001	1200			#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	10350			#		
Strontium	mg/L	9/20/2005	0001	8.2			#	0.00015	
Sulfate	mg/L	9/20/2005	0001	6600			#	50	
Temperature	C	9/20/2005	N001	17.1			#		
Turbidity	NTU	9/20/2005	N001	6.79			#		
Uranium	mg/L	9/20/2005	0001	0.72			#	0.000038	

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

REPORT DATE: 12/21/2005

Location: 0426 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	386			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	440			#	0.0062	
Chloride	mg/L	9/20/2005	0001	200			#	20	
Magnesium	mg/L	9/20/2005	0001	210			#	0.018	
Manganese	mg/L	9/20/2005	0001	0.03			#	0.00028	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	57			#	0.5	
Oxidation Reduction Potential	mV	9/20/2005	N001	249			#		
pH	s.u.	9/20/2005	N001	6.99			#		
Potassium	mg/L	9/20/2005	0001	25			#	0.096	
Selenium	mg/L	9/20/2005	0001	0.23			#	0.002	
Sodium	mg/L	9/20/2005	0001	1100			#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	7421			#		
Strontium	mg/L	9/20/2005	0001	9			#	0.00015	
Sulfate	mg/L	9/20/2005	0001	4100			#	50	
Temperature	C	9/20/2005	N001	17.1			#		
Turbidity	NTU	9/20/2005	N001	1.96			#		
Uranium	mg/L	9/20/2005	0001	0.28			#	0.000019	

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

REPORT DATE: 12/21/2005

Location: 0662 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	56			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	110			#	0.0041	
Chloride	mg/L	9/20/2005	0001	56			#	10	
Dissolved Oxygen	mg/L	9/20/2005	N001	6.88			#		
Magnesium	mg/L	9/20/2005	0001	13			#	0.012	
Manganese	mg/L	9/20/2005	0001	0.0052	B		#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	0.18			#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	158			#		
pH	s.u.	9/20/2005	N001	7.91			#		
Potassium	mg/L	9/20/2005	0001	13			#	0.064	
Selenium	mg/L	9/20/2005	0001	0.00004	U		#	0.00004	
Sodium	mg/L	9/20/2005	0001	740			#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	4200			#		
Strontium	mg/L	9/20/2005	0001	11			#	0.000098	
Sulfate	mg/L	9/20/2005	0001	2000			#	25	
Temperature	C	9/20/2005	N001	23.87			#		
Uranium	mg/L	9/20/2005	0001	0.00021		J	#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0786 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	271			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	450			#	0.0041	
Chloride	mg/L	9/20/2005	0001	52			#	10	
Magnesium	mg/L	9/20/2005	0001	380			#	0.012	
Manganese	mg/L	9/20/2005	0001	0.021			#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	17			#	0.1	
Oxidation Reduction Potential	mV	9/20/2005	N001	221			#		
pH	s.u.	9/20/2005	N001	7.94			#		
Potassium	mg/L	9/20/2005	0001	28			#	0.064	
Selenium	mg/L	9/20/2005	0001	0.051			#	0.0004	
Sodium	mg/L	9/20/2005	0001	620			#	0.16	
Specific Conductance	umhos/cm	9/20/2005	N001	5600			#		
Strontium	mg/L	9/20/2005	0001	6			#	0.000098	
Sulfate	mg/L	9/20/2005	0001	3800			#	25	
Temperature	C	9/20/2005	N001	19.1			#		
Turbidity	NTU	9/20/2005	N001	80.1			#		
Uranium	mg/L	9/20/2005	0001	0.03			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0889 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/21/2005	0001	622			#		
Ammonia Total as N	mg/L	9/21/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/21/2005	0001	400			#	0.021	
Chloride	mg/L	9/21/2005	0001	1800			#	100	
Magnesium	mg/L	9/21/2005	0001	1100			#	0.059	
Manganese	mg/L	9/21/2005	0001	0.00095	U		#	0.00095	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	730			#	5	
Oxidation Reduction Potential	mV	9/21/2005	N001	222			#		
pH	s.u.	9/21/2005	N001	7.83			#		
Potassium	mg/L	9/21/2005	0001	79			#	0.32	
Selenium	mg/L	9/21/2005	0001	1.4			#	0.02	
Sodium	mg/L	9/21/2005	0001	6500			#	0.16	
Specific Conductance	umhos/cm	9/21/2005	N001	31480			#		
Strontium	mg/L	9/21/2005	0001	9.2			#	0.00049	
Sulfate	mg/L	9/21/2005	0001	20000			#	250	
Temperature	C	9/21/2005	N001	19.39			#		
Uranium	mg/L	9/21/2005	0001	0.19			#	0.000019	

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

REPORT DATE: 12/21/2005

Location: 0933 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	91			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	410			#	0.0021	
Chloride	mg/L	9/22/2005	0001	35			#	10	
Magnesium	mg/L	9/22/2005	0001	140			#	0.0059	
Manganese	mg/L	9/22/2005	0001	0.28			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	0.12			#	0.01	
Oxidation Reduction Potential	mV	9/22/2005	N001	177.4			#		
pH	s.u.	9/22/2005	N001	7.58			#		
Potassium	mg/L	9/22/2005	0001	8.4			#	0.032	
Selenium	mg/L	9/22/2005	0001	0.0033			#	0.00004	
Sodium	mg/L	9/22/2005	0001	100			#	0.0078	
Specific Conductance	umhos/cm	9/22/2005	N001	2462			#		
Strontium	mg/L	9/22/2005	0001	3.1			#	0.000049	
Sulfate	mg/L	9/22/2005	0001	1400			#	25	
Temperature	C	9/22/2005	N001	17.77			#		
Uranium	mg/L	9/22/2005	0001	0.0093			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0934 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	162			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	120			#	0.0021	
Chloride	mg/L	9/22/2005	0001	19			#	2	
Magnesium	mg/L	9/22/2005	0001	38			#	0.0059	
Manganese	mg/L	9/22/2005	0001	0.00086	B	U	#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	0.78			#	0.01	
Oxidation Reduction Potential	mV	9/22/2005	N001	176.7			#		
pH	s.u.	9/22/2005	N001	7.45			#		
Potassium	mg/L	9/22/2005	0001	3.6			#	0.032	
Selenium	mg/L	9/22/2005	0001	0.0038			#	0.00004	
Sodium	mg/L	9/22/2005	0001	46			#	0.0016	
Specific Conductance	umhos/cm	9/22/2005	N001	916			#		
Strontium	mg/L	9/22/2005	0001	1			#	0.000049	
Sulfate	mg/L	9/22/2005	0001	310			#	5	
Temperature	C	9/22/2005	N001	20.76			#		
Uranium	mg/L	9/22/2005	0001	0.0064			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0935 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	274			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	550			#	0.0041	
Chloride	mg/L	9/22/2005	0001	39			#	10	
Magnesium	mg/L	9/22/2005	0001	500			#	0.012	
Manganese	mg/L	9/22/2005	0001	0.0009	B	U	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	16			#	0.1	
Oxidation Reduction Potential	mV	9/22/2005	N001	236.6			#		
pH	s.u.	9/22/2005	N001	7.6			#		
Potassium	mg/L	9/22/2005	0001	21			#	0.064	
Selenium	mg/L	9/22/2005	0001	0.13			#	0.002	
Sodium	mg/L	9/22/2005	0001	410			#	0.16	
Specific Conductance	umhos/cm	9/22/2005	N001	5148			#		
Strontium	mg/L	9/22/2005	0001	5.9			#	0.000098	
Sulfate	mg/L	9/22/2005	0001	3600			#	25	
Temperature	C	9/22/2005	N001	15.11			#		
Uranium	mg/L	9/22/2005	0001	0.048			#	0.000019	

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

REPORT DATE: 12/21/2005

Location: 0936 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	304			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	620			#	0.0041	
Chloride	mg/L	9/22/2005	0001	48			#	10	
Magnesium	mg/L	9/22/2005	0001	280			#	0.012	
Manganese	mg/L	9/22/2005	0001	0.01			#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	13			#	0.1	
Oxidation Reduction Potential	mV	9/22/2005	N001	215.2			#		
pH	s.u.	9/22/2005	N001	7.02			#		
Potassium	mg/L	9/22/2005	0001	14			#	0.064	
Selenium	mg/L	9/22/2005	0001	0.057			#	0.0004	
Sodium	mg/L	9/22/2005	0001	290			#	0.16	
Specific Conductance	umhos/cm	9/22/2005	N001	4381			#		
Strontium	mg/L	9/22/2005	0001	5.8			#	0.000098	
Sulfate	mg/L	9/22/2005	0001	2700			#	25	
Temperature	C	9/22/2005	N001	16.05			#		
Uranium	mg/L	9/22/2005	0001	0.041			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0942 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	74			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	590			#	0.0041	
Chloride	mg/L	9/22/2005	0001	31			#	10	
Magnesium	mg/L	9/22/2005	0001	120			#	0.012	
Manganese	mg/L	9/22/2005	0001	0.043			#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	6			#	0.05	
Oxidation Reduction Potential	mV	9/22/2005	N001	178.7			#		
pH	s.u.	9/22/2005	N001	8.36			#		
Potassium	mg/L	9/22/2005	0001	7.4	E		#	0.064	
Selenium	mg/L	9/22/2005	0001	0.089			#	0.0004	
Sodium	mg/L	9/22/2005	0001	190			#	0.0078	
Specific Conductance	umhos/cm	9/22/2005	N001	3129			#		
Strontium	mg/L	9/22/2005	0001	3.7			#	0.000098	
Sulfate	mg/L	9/22/2005	0001	1900			#	25	
Temperature	C	9/22/2005	N001	29.38			#		
Uranium	mg/L	9/22/2005	0001	0.024			#	0.0000038	

QA QUALIFIER:

Validated according to quality assurance guidelines.

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.
J Estimated value.
Q Qualitative result due to sampling technique.
U Parameter analyzed for but was not detected.

G Possible grout contamination, pH > 9.
L Less than 3 bore volumes purged prior to sampling.
R Unusable result.
X Location is undefined.

**Surface Water Quality Data
Floodplain Locations**

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

REPORT DATE: 12/21/2005

Location: 0501 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	120			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	73			#	0.0021	
Chloride	mg/L	9/20/2005	0001	16			#	1	
Magnesium	mg/L	9/20/2005	0001	13			#	0.0059	
Manganese	mg/L	9/20/2005	0001	0.014			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	0.027			#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	198			#		
pH	s.u.	9/20/2005	N001	8.64			#		
Potassium	mg/L	9/20/2005	0001	3.5			#	0.032	
Selenium	mg/L	9/20/2005	0001	0.00068			#	0.00004	
Sodium	mg/L	9/20/2005	0001	38			#	0.0016	
Specific Conductance	umhos/cm	9/20/2005	N001	1065			#		
Strontium	mg/L	9/20/2005	0001	0.86			#	0.000049	
Sulfate	mg/L	9/20/2005	0001	160			#	2.5	
Temperature	C	9/20/2005	N001	17.9			#		
Turbidity	NTU	9/20/2005	N001	13.6			#		
Uranium	mg/L	9/20/2005	0001	0.0018			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0887 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	199			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	450			#	0.0041	
Chloride	mg/L	9/22/2005	0001	49			#	10	
Magnesium	mg/L	9/22/2005	0001	270			#	0.012	
Manganese	mg/L	9/22/2005	0001	0.011			#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	11			#	0.1	
Oxidation Reduction Potential	mV	9/22/2005	N001	166.3			#		
pH	s.u.	9/22/2005	N001	8.14			#		
Potassium	mg/L	9/22/2005	0001	14			#	0.064	
Selenium	mg/L	9/22/2005	0001	0.021			#	0.0004	
Sodium	mg/L	9/22/2005	0001	260			#	0.16	
Specific Conductance	umhos/cm	9/22/2005	N001	4100			#		
Strontium	mg/L	9/22/2005	0001	4.8			#	0.000098	
Sulfate	mg/L	9/22/2005	0001	2700			#	25	
Temperature	C	9/22/2005	N001	19.67			#		
Uranium	mg/L	9/22/2005	0001	0.032			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0897 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/21/2005	0001	39			#		
Ammonia Total as N	mg/L	9/21/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/21/2005	0001	73			#	0.0021	
Chloride	mg/L	9/21/2005	0001	17			#	1	
Dissolved Oxygen	mg/L	9/21/2005	N001	9.33			#		
Magnesium	mg/L	9/21/2005	0001	13			#	0.0059	
Manganese	mg/L	9/21/2005	0001	0.016			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	0.16			#	0.01	
Oxidation Reduction Potential	mV	9/21/2005	N001	217.7			#		
pH	s.u.	9/21/2005	N001	8.46			#		
Potassium	mg/L	9/21/2005	0001	3.4			#	0.032	
Selenium	mg/L	9/21/2005	0001	0.00084			#	0.00004	
Sodium	mg/L	9/21/2005	0001	40			#	0.0016	
Specific Conductance	umhos/cm	9/21/2005	N001	613			#		
Strontium	mg/L	9/21/2005	0001	0.88			#	0.000049	
Sulfate	mg/L	9/21/2005	0001	170			#	2.5	
Temperature	C	9/21/2005	N001	16.56			#		
Uranium	mg/L	9/21/2005	0001	0.0023			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0898 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/21/2005	0001	39			#		
Ammonia Total as N	mg/L	9/21/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/21/2005	0001	74			#	0.0021	
Chloride	mg/L	9/21/2005	0001	18			#	1	
Magnesium	mg/L	9/21/2005	0001	13			#	0.0059	
Manganese	mg/L	9/21/2005	0001	0.012			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	0.01			#	0.01	
Oxidation Reduction Potential	mV	9/21/2005	N001	150.6			#		
pH	s.u.	9/21/2005	N001	8.69			#		
Potassium	mg/L	9/21/2005	0001	3.4			#	0.032	
Selenium	mg/L	9/21/2005	0001	0.00057			#	0.00004	
Sodium	mg/L	9/21/2005	0001	40			#	0.0016	
Specific Conductance	umhos/cm	9/21/2005	N001	612			#		
Strontium	mg/L	9/21/2005	0001	0.89			#	0.000049	
Sulfate	mg/L	9/21/2005	0001	170			#	2.5	
Temperature	C	9/21/2005	N001	20.58			#		
Uranium	mg/L	9/21/2005	0001	0.0019			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0940 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	116			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	72			#	0.0021	
Chloride	mg/L	9/20/2005	0001	18			#	1	
Magnesium	mg/L	9/20/2005	0001	14			#	0.0059	
Manganese	mg/L	9/20/2005	0001	0.015			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	0.034			#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	173			#		
pH	s.u.	9/20/2005	N001	8.76			#		
Potassium	mg/L	9/20/2005	0001	3.5			#	0.032	
Selenium	mg/L	9/20/2005	0001	0.00051		J	#	0.00004	
Sodium	mg/L	9/20/2005	0001	40			#	0.0016	
Specific Conductance	umhos/cm	9/20/2005	N001	811			#		
Strontium	mg/L	9/20/2005	0001	0.89			#	0.000049	
Sulfate	mg/L	9/20/2005	0001	170			#	2.5	
Temperature	C	9/20/2005	N001	21			#		
Turbidity	NTU	9/20/2005	N001	10.1			#		
Uranium	mg/L	9/20/2005	0001	0.0022			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0956 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	136			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	75			#	0.0021	
Chloride	mg/L	9/20/2005	0001	19			#	1	
Dissolved Oxygen	mg/L	9/20/2005	N001	9.89			#		
Magnesium	mg/L	9/20/2005	0001	14			#	0.0059	
Manganese	mg/L	9/20/2005	0001	0.023			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	0.02			#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	169			#		
pH	s.u.	9/20/2005	N001	8.67			#		
Potassium	mg/L	9/20/2005	0001	3.4			#	0.032	
Selenium	mg/L	9/20/2005	0001	0.00063			#	0.00004	
Sodium	mg/L	9/20/2005	0001	42			#	0.0016	
Specific Conductance	umhos/cm	9/20/2005	N001	629			#		
Strontium	mg/L	9/20/2005	0001	0.92			#	0.000049	
Sulfate	mg/L	9/20/2005	0001	180			#	2.5	
Temperature	C	9/20/2005	N001	19.91			#		
Uranium	mg/L	9/20/2005	0001	0.002			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0957 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/21/2005	0001	118			#		
Ammonia Total as N	mg/L	9/21/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/21/2005	0001	72			#	0.0021	
Chloride	mg/L	9/21/2005	0001	19			#	1	
Magnesium	mg/L	9/21/2005	0001	13			#	0.0059	
Manganese	mg/L	9/21/2005	0001	0.0098			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/21/2005	0001	0.01	U		#	0.01	
Oxidation Reduction Potential	mV	9/21/2005	N001	153			#		
pH	s.u.	9/21/2005	N001	8.83			#		
Potassium	mg/L	9/21/2005	0001	3.4			#	0.032	
Selenium	mg/L	9/21/2005	0001	0.00063			#	0.00004	
Sodium	mg/L	9/21/2005	0001	41			#	0.0016	
Specific Conductance	umhos/cm	9/21/2005	N001	520			#		
Strontium	mg/L	9/21/2005	0001	0.9			#	0.000049	
Sulfate	mg/L	9/21/2005	0001	170			#	2.5	
Temperature	C	9/21/2005	N001	21.78			#		
Uranium	mg/L	9/21/2005	0001	0.0019			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 0965 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/22/2005	0001	129			#		
Ammonia Total as N	mg/L	9/22/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/22/2005	0001	70			#	0.0021	
Chloride	mg/L	9/22/2005	0001	16			#	1	
Magnesium	mg/L	9/22/2005	0001	12			#	0.0059	
Manganese	mg/L	9/22/2005	0001	0.012			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/22/2005	0001	0.01	U		#	0.01	
Oxidation Reduction Potential	mV	9/22/2005	N001	194.5			#		
pH	s.u.	9/22/2005	N001	8.25			#		
Potassium	mg/L	9/22/2005	0001	3.3			#	0.032	
Selenium	mg/L	9/22/2005	0001	0.00063			#	0.00004	
Sodium	mg/L	9/22/2005	0001	38			#	0.0016	
Specific Conductance	umhos/cm	9/22/2005	N001	584			#		
Strontium	mg/L	9/22/2005	0001	0.85			#	0.000049	
Sulfate	mg/L	9/22/2005	0001	150			#	2.5	
Temperature	C	9/22/2005	N001	16.94			#		
Uranium	mg/L	9/22/2005	0001	0.0017			#	0.0000038	

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

REPORT DATE: 12/21/2005

Location: 1203 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	117			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	67			#	0.0021	
Chloride	mg/L	9/20/2005	0001	17			#	1	
Magnesium	mg/L	9/20/2005	0001	13			#	0.0059	
Manganese	mg/L	9/20/2005	0001	0.01			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	0.01	U		#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	190			#		
pH	s.u.	9/20/2005	N001	8.88			#		
Potassium	mg/L	9/20/2005	0001	3.3	E		#	0.032	
Selenium	mg/L	9/20/2005	0001	0.00052		J	#	0.00004	
Sodium	mg/L	9/20/2005	0001	39			#	0.0016	
Specific Conductance	umhos/cm	9/20/2005	N001	389			#		
Strontium	mg/L	9/20/2005	0001	0.85			#	0.000049	
Sulfate	mg/L	9/20/2005	0001	160			#	2.5	
Temperature	C	9/20/2005	N001	21.4			#		
Turbidity	NTU	9/20/2005	N001	10.5			#		
Uranium	mg/L	9/20/2005	0001	0.0018			#	0.0000038	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005
 Location: 1205 (surface location)

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	9/20/2005	0001	133			#		
Ammonia Total as N	mg/L	9/20/2005	0001	0.1	U		#	0.1	
Calcium	mg/L	9/20/2005	0001	72			#	0.0021	
Chloride	mg/L	9/20/2005	0001	18			#	1	
Magnesium	mg/L	9/20/2005	0001	13			#	0.0059	
Manganese	mg/L	9/20/2005	0001	0.015			#	0.000095	
Nitrate + Nitrite as Nitrogen	mg/L	9/20/2005	0001	0.025			#	0.01	
Oxidation Reduction Potential	mV	9/20/2005	N001	177			#		
pH	s.u.	9/20/2005	N001	8.72			#		
Potassium	mg/L	9/20/2005	0001	3.3			#	0.032	
Selenium	mg/L	9/20/2005	0001	0.00044		J	#	0.00004	
Sodium	mg/L	9/20/2005	0001	39			#	0.0016	
Specific Conductance	umhos/cm	9/20/2005	N001	604			#		
Strontium	mg/L	9/20/2005	0001	0.89			#	0.000049	
Sulfate	mg/L	9/20/2005	0001	170			#	2.5	
Temperature	C	9/20/2005	N001	20			#		
Turbidity	NTU	9/20/2005	N001	23.8			#		
Uranium	mg/L	9/20/2005	0001	0.0018			#	0.0000038	

QA QUALIFIER:

Validated according to quality assurance guidelines.

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. |

Equipment Blank Data

BLANKS REPORT

LAB CODE: PAR, PARAGON (Fort Collins, CO)

RIN: 05080225

Report Date: 12/21/2005

Parameter	Site Code	Location ID	Sample Date	ID	Units	Result	Qualifiers Lab	Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	SHP02	0999	9/22/2005	0001	mg/L	0.1	U		0.1		E
Ammonia Total as N	SHP02	0999	9/22/2005	0002	mg/L	0.1	U		0.1		E
Calcium	SHP02	0999	9/22/2005	0001	mg/L	0.084	B	U	0.0021		E
Calcium	SHP02	0999	9/22/2005	0002	mg/L	0.09	B	U	0.0021		E
Chloride	SHP02	0999	9/22/2005	0001	mg/L	0.21			0.2		E
Chloride	SHP02	0999	9/22/2005	0002	mg/L	0.2	U		0.2		E
Iron	SHP02	0999	9/22/2005	0002	mg/L	0.011	U		0.011		E
Magnesium	SHP02	0999	9/22/2005	0001	mg/L	0.038	B	U	0.0059		E
Magnesium	SHP02	0999	9/22/2005	0002	mg/L	0.056	B	U	0.0059		E
Manganese	SHP02	0999	9/22/2005	0001	mg/L	0.000095	U		0.000095		E
Manganese	SHP02	0999	9/22/2005	0002	mg/L	0.000095	U		0.000095		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	9/22/2005	0001	mg/L	0.01	U		0.01		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	9/22/2005	0002	mg/L	0.01	U		0.01		E
Potassium	SHP02	0999	9/22/2005	0001	mg/L	0.056	B		0.032		E
Potassium	SHP02	0999	9/22/2005	0002	mg/L	0.079	B		0.032		E
Selenium	SHP02	0999	9/22/2005	0001	mg/L	0.00004	U		0.00004		E
Selenium	SHP02	0999	9/22/2005	0002	mg/L	0.00004	U		0.00004		E
Sodium	SHP02	0999	9/22/2005	0001	mg/L	0.12	B	U	0.0016		E
Sodium	SHP02	0999	9/22/2005	0002	mg/L	0.12	B		0.0016		E

BLANKS REPORT

LAB CODE: PAR, PARAGON (Fort Collins, CO)

RIN: 05080225

Report Date: 12/21/2005

Parameter	Site Code	Location ID	Sample Date	ID	Units	Result	Qualifiers Lab	Data	Detection Limit	Uncertainty	Sample Type
Strontium	SHP02	0999	9/22/2005	0001	mg/L	0.000049	U		0.000049		E
Strontium	SHP02	0999	9/22/2005	0002	mg/L	0.000049	U		0.000049		E
Sulfate	SHP02	0999	9/22/2005	0001	mg/L	0.5	U		0.5		E
Sulfate	SHP02	0999	9/22/2005	0002	mg/L	0.5	U		0.5		E
Total Dissolved Solids	SHP02	0999	9/22/2005	0002	mg/L	20	U		20		E
Total Organic Carbon	SHP02	0999	9/22/2005	N002	mg/L	1	U		1		E
Uranium	SHP02	0999	9/22/2005	0001	mg/L	0.000061	B	U	0.0000038		E
Uranium	SHP02	0999	9/22/2005	0002	mg/L	0.000061	B	U	0.0000038		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. J Estimated value.
Q Qualitative result due to sampling technique. R Unusable result.
X Location is undefined.

SAMPLE TYPES:

E Equipment Blank.

Static Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
 REPORT DATE: 12/21/2005

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0730		4977.75	9/21/2005	12:22:00	34.87	4942.88	
0817		4957.34	9/22/2005	09:20:00	18.78	4938.56	
0830		4960.77	9/22/2005	10:16:00	15.74	4945.03	
0835		4930.48	9/22/2005	11:13:00	18.35	4912.13	
0836		4901.74	9/22/2005	12:25:00	22.85	4878.89	
0838		4937.7	9/21/2005	15:28:00	26.26	4911.44	
0839		4943.21	9/22/2005	08:00:00	26.82	4916.39	
0841		4984.05	9/21/2005	17:26:00	44.87	4939.18	
0846		4934.57	9/21/2005	14:57:00	23.23	4911.34	
1060		4970.62	9/21/2005	16:30:00	35.29	4935.33	
1079		4925.22	9/21/2005	13:53:00	15.57	4909.65	

STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
 REPORT DATE: 12/21/2005

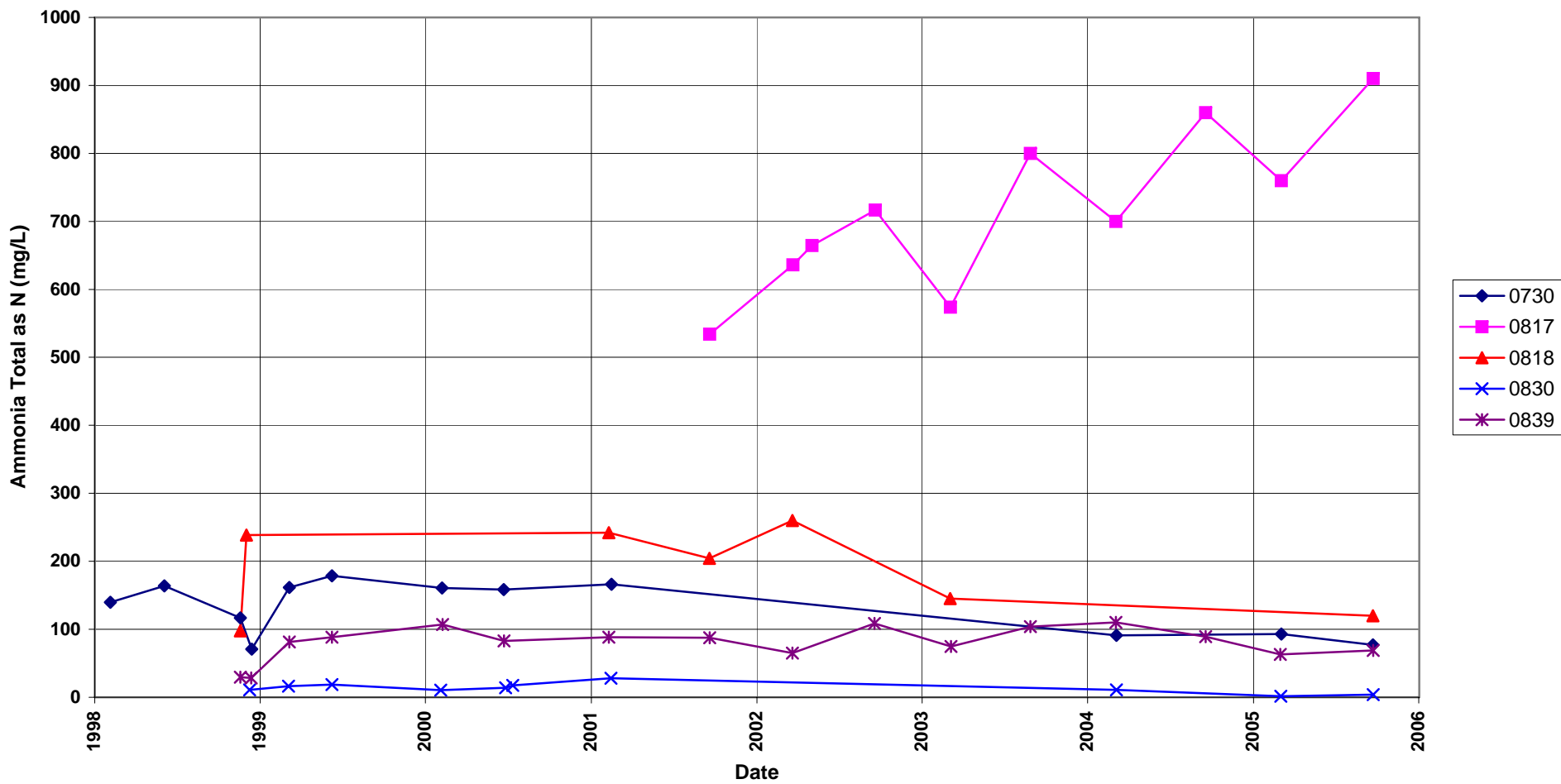
Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0608		4893.35	9/20/2005	13:03:00	7	4886.35	
0614		4892.79	9/20/2005	11:05:00	7.88	4884.91	
0615		4892.23	9/20/2005	14:38:00	8.11	4884.12	
0618		4891.51	9/20/2005	10:17:00	7.74	4883.77	
0619		4892.19	9/20/2005	10:21:00	8.63	4883.56	
0735		4895.85	9/20/2005	11:38:00	6.87	4888.98	
0797		4908.04	9/21/2005	13:03:00	8.81	4899.23	
0850	B	4907.51	9/21/2005	13:46:00	8.73	4898.78	
1008		4890.8	9/19/2005	16:47:00	8.68	4882.12	
1077		4893.55	9/20/2005	09:02:00	11.7	4881.85	
1089		4891.5	9/20/2005	09:40:00	9.98	4881.52	

FLOW CODES: B BACKGROUND U UPGRADIENT C CROSS GRADIENT D DOWN GRADIENT O ON SITE

WATER LEVEL FLAGS: D Dry

**Time Versus Concentration Graphs
Terrace Locations**

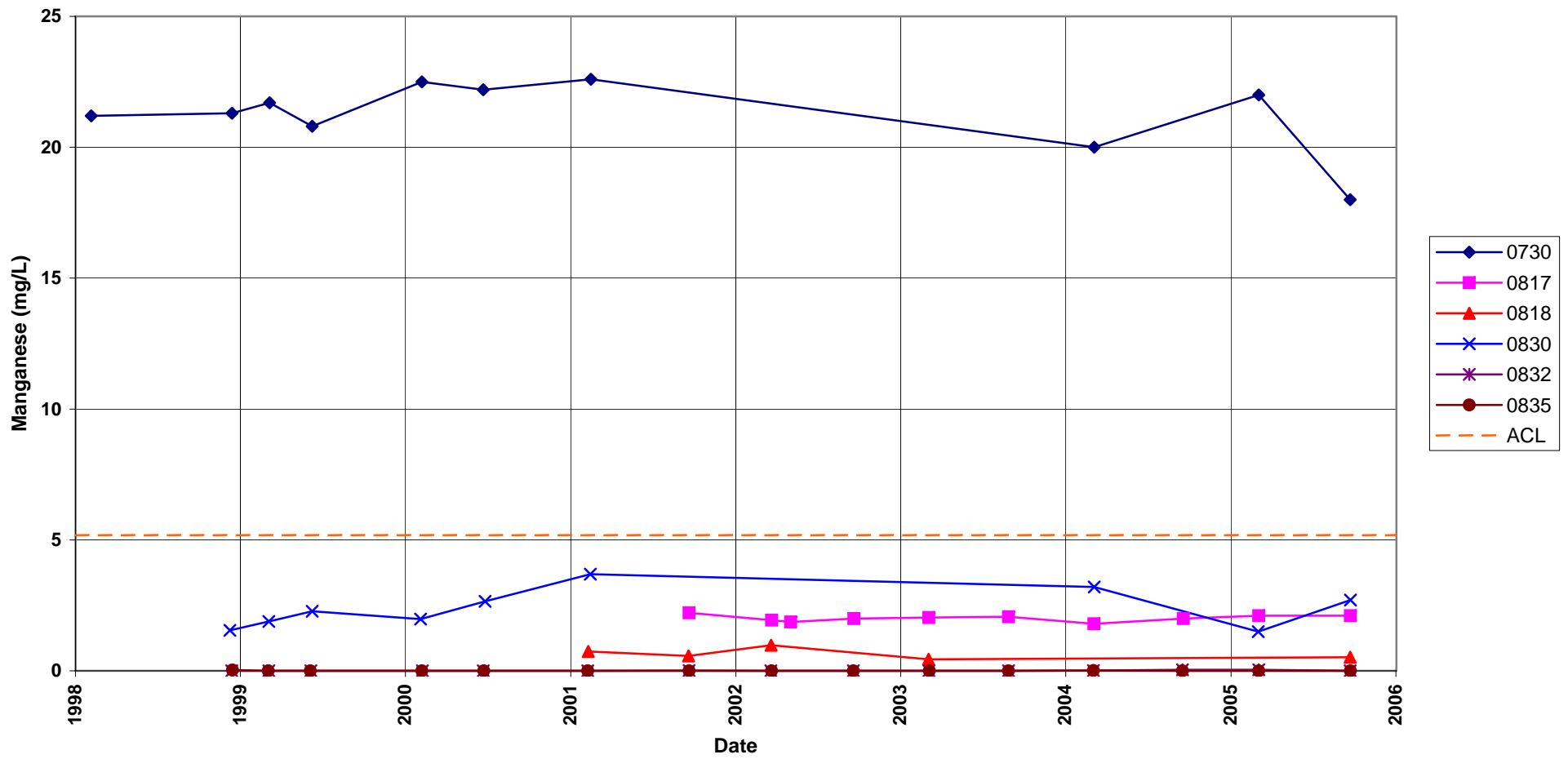
Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration



Shiprock Disposal Site (Terrace)

Manganese Concentration

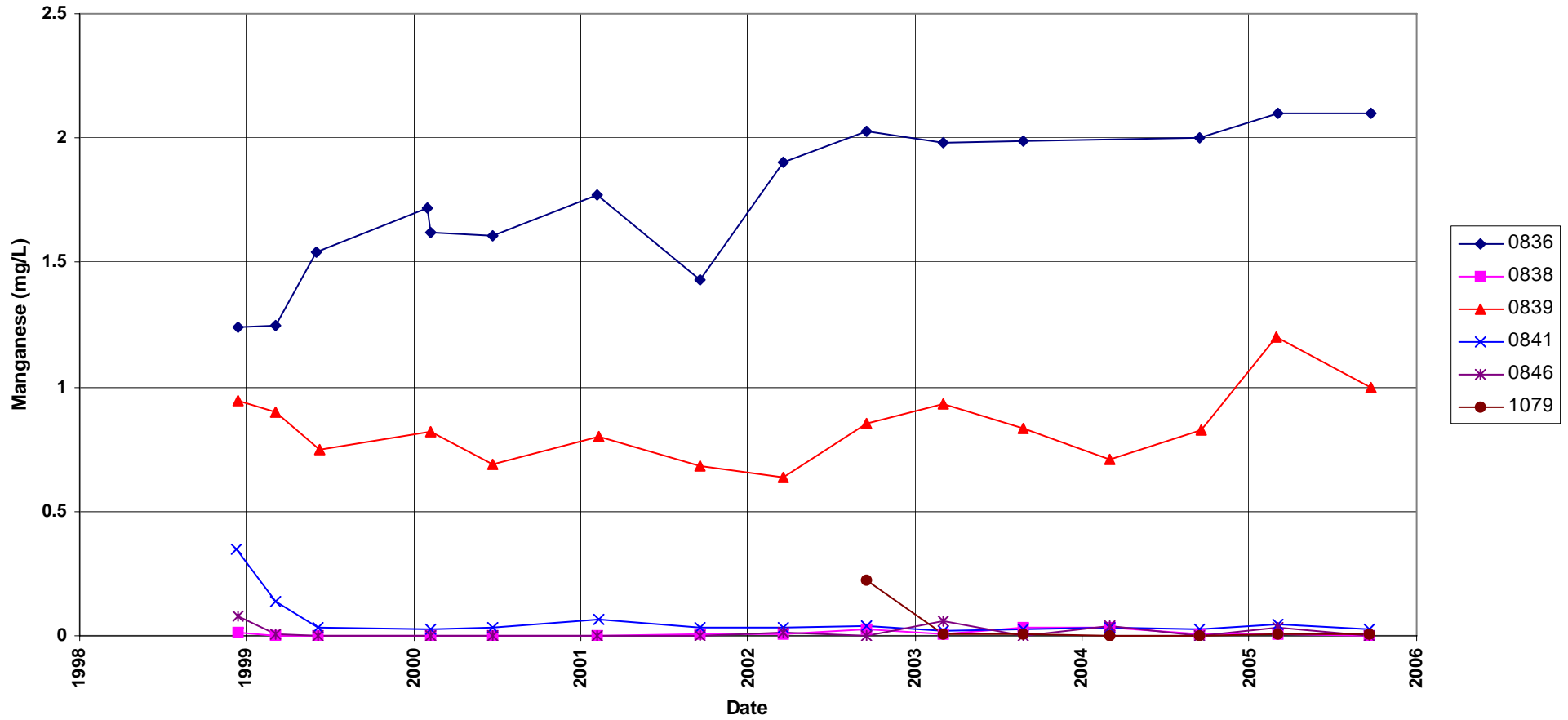
ACL = 5.18 mg/L



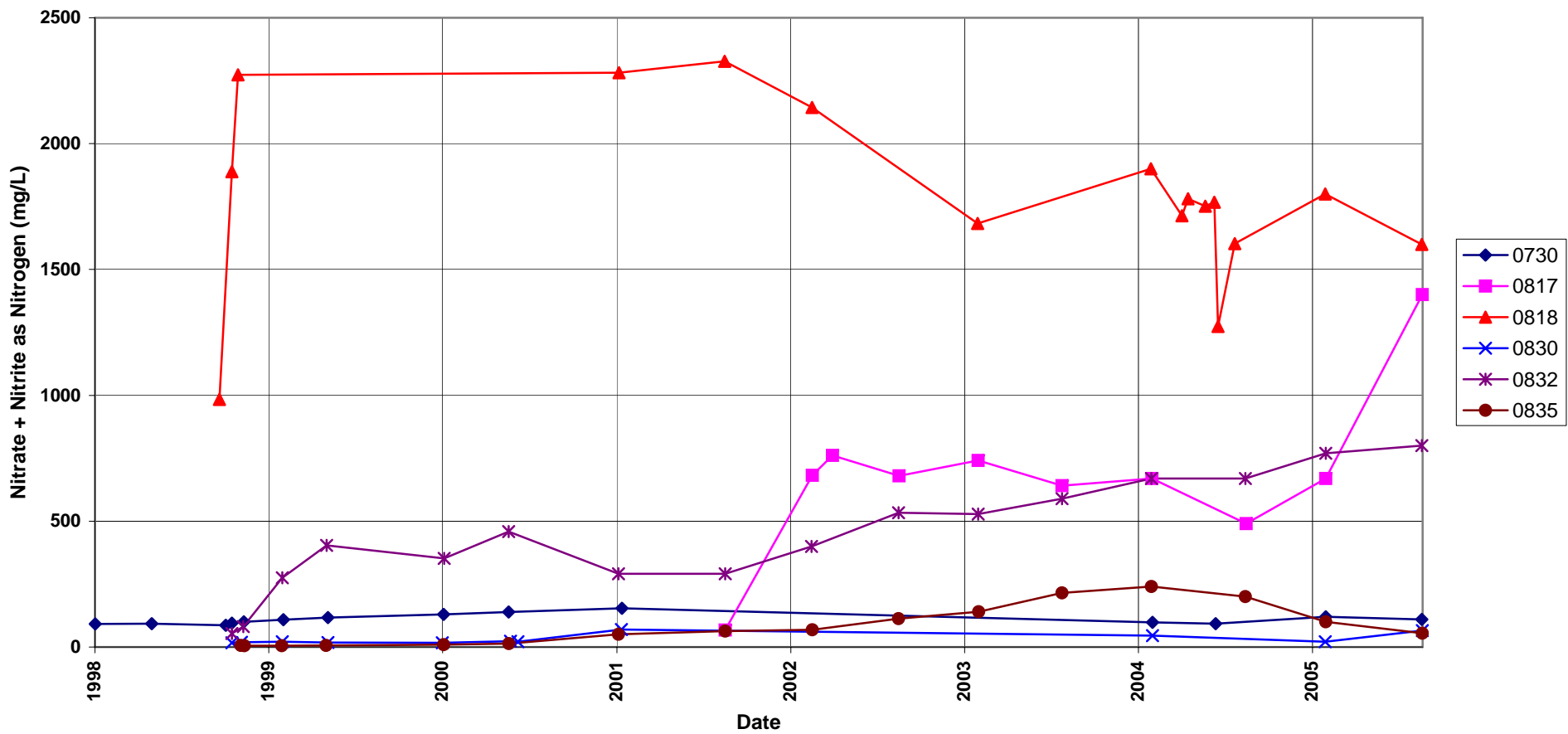
Shiprock Disposal Site (Terrace)

Manganese Concentration

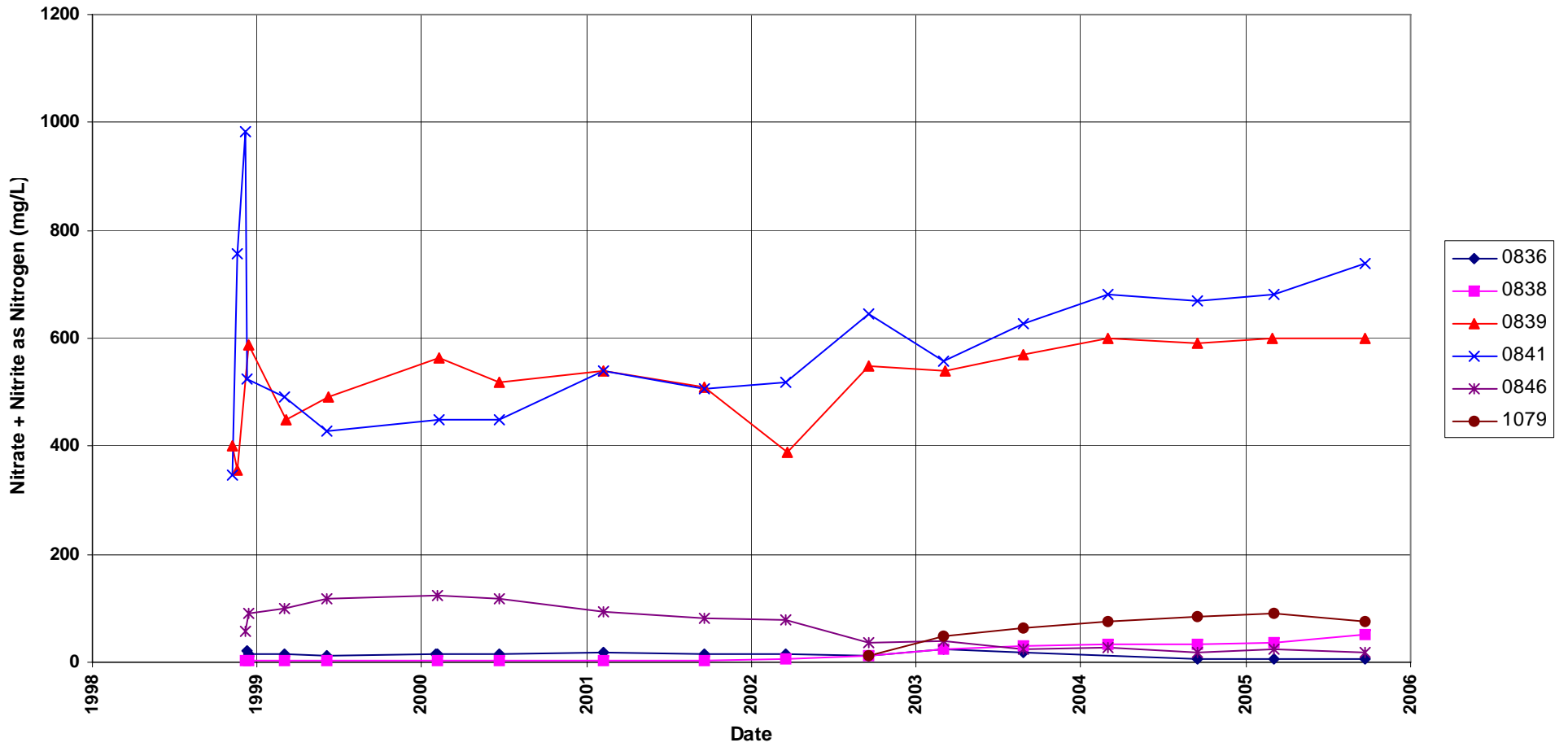
ACL = 5.18 mg/L



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



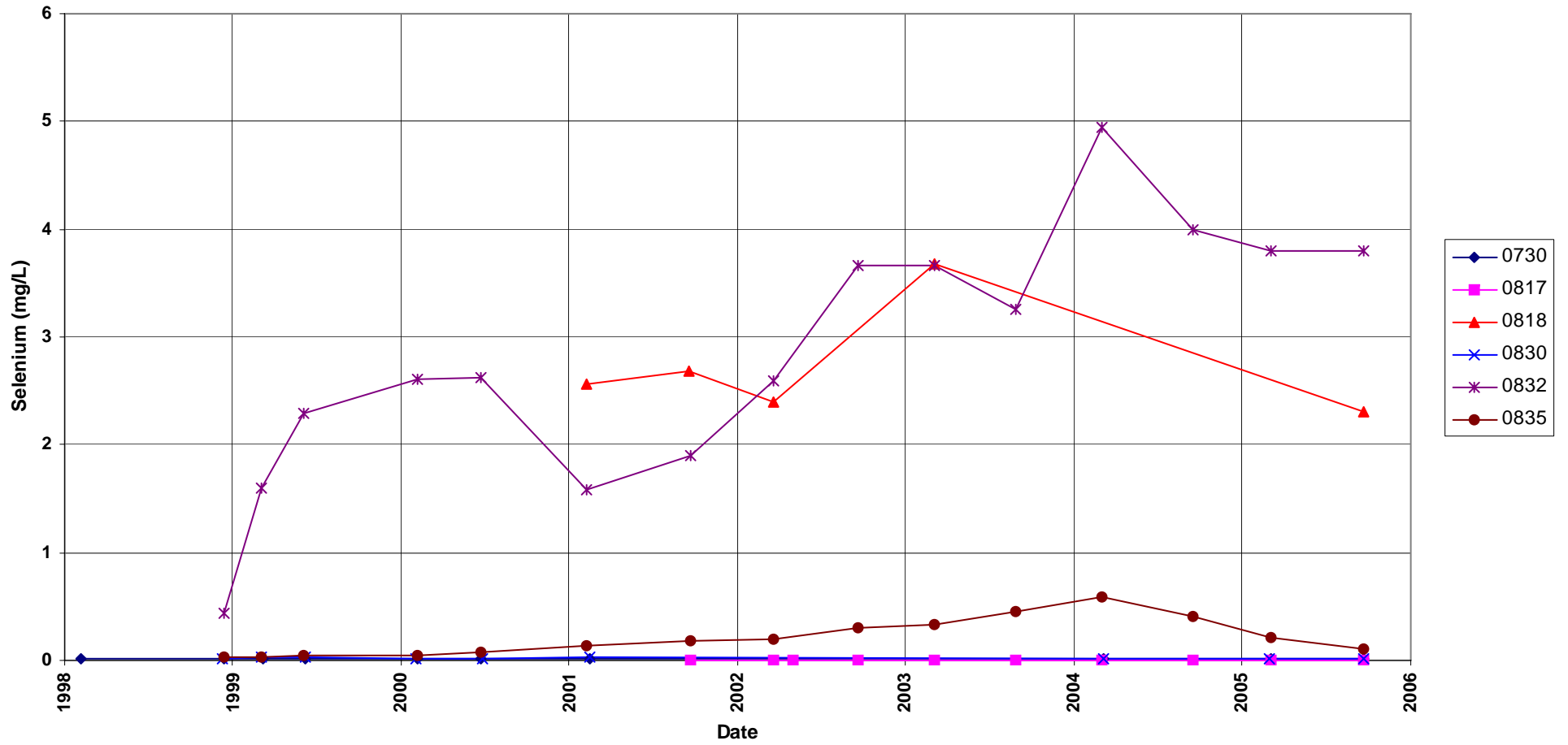
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



Shiprock Disposal Site (Terrace)

Selenium Concentration

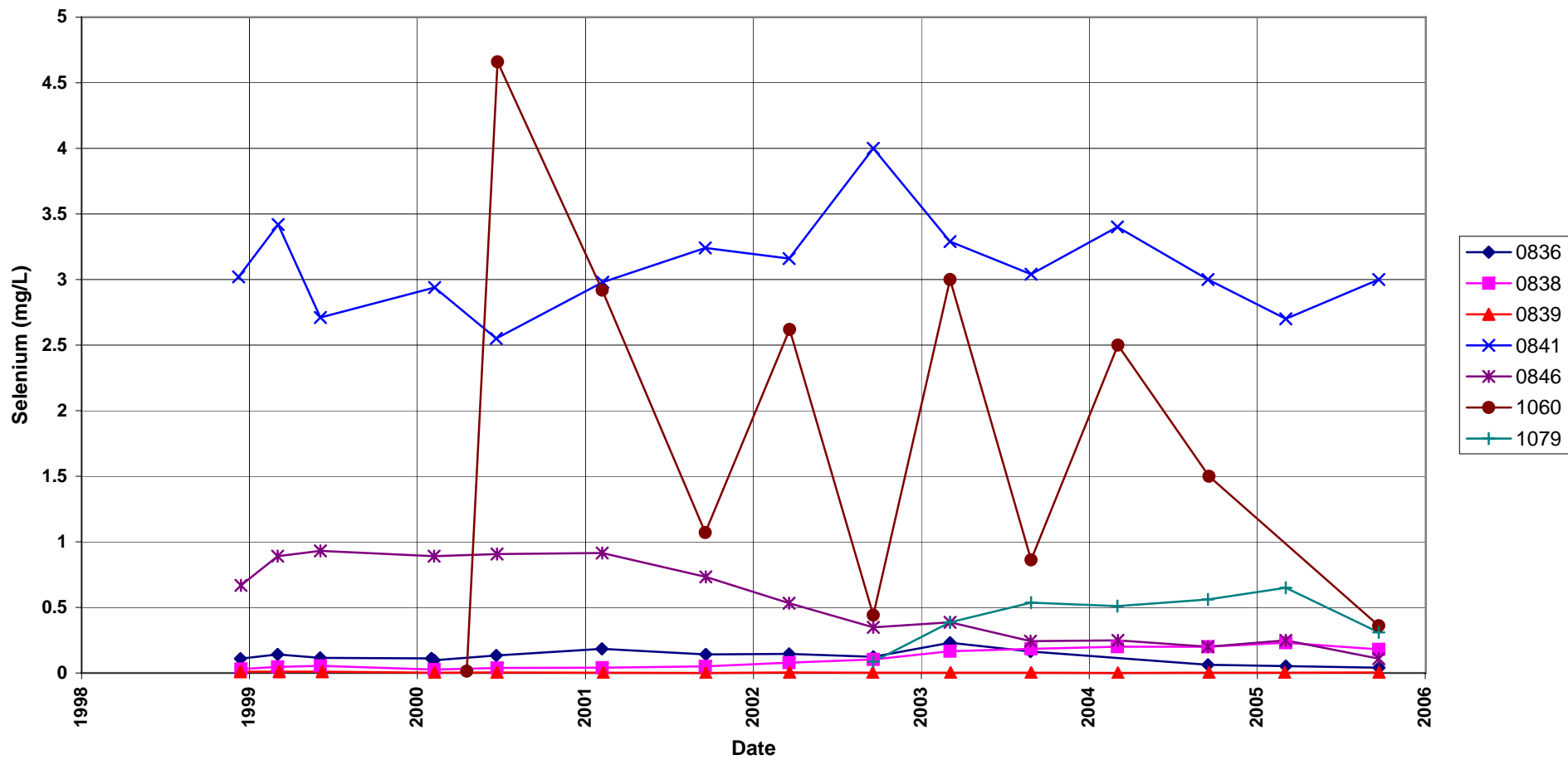
MCL = 0.01 mg/L



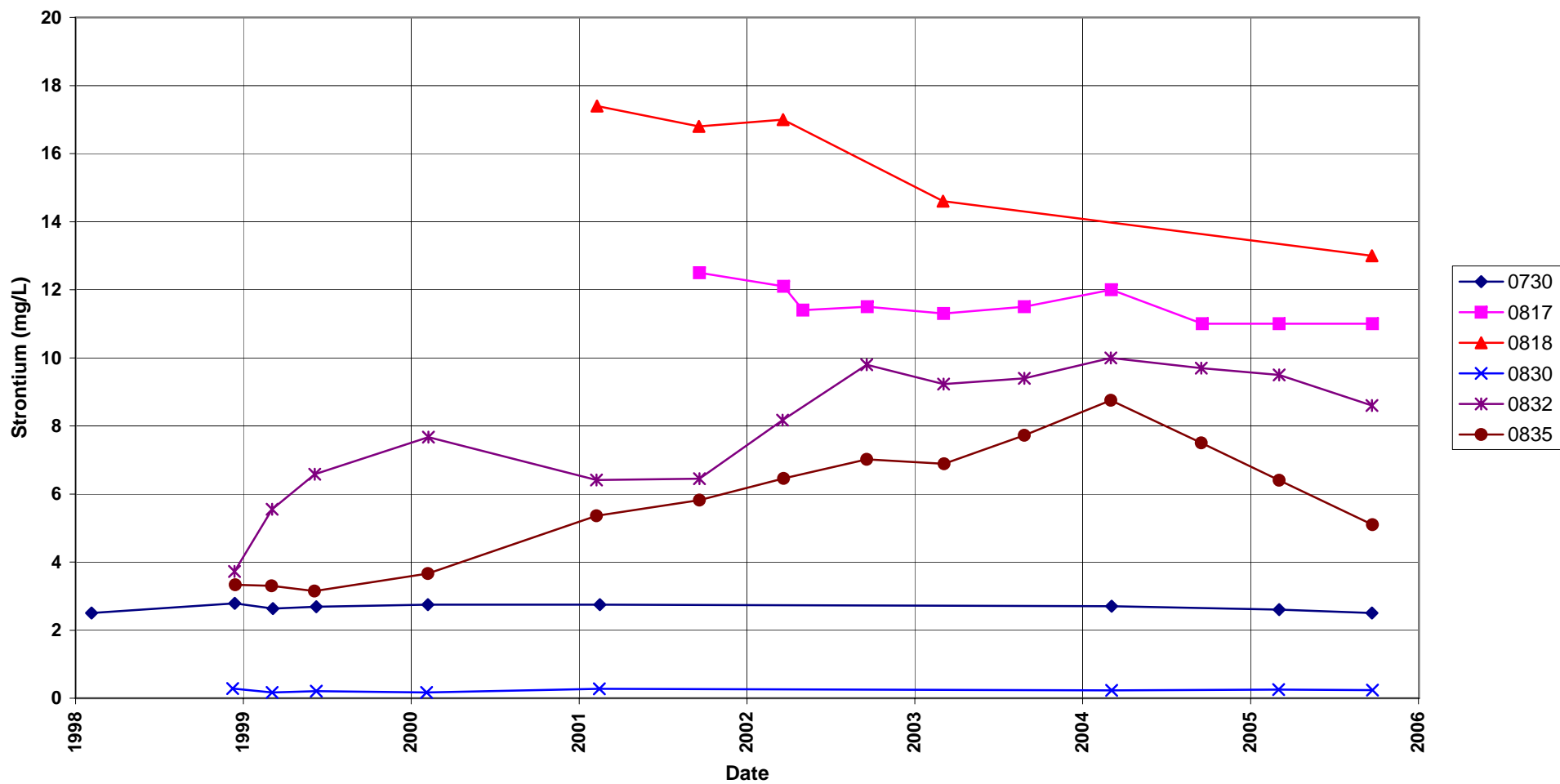
Shiprock Disposal Site (Terrace)

Selenium Concentration

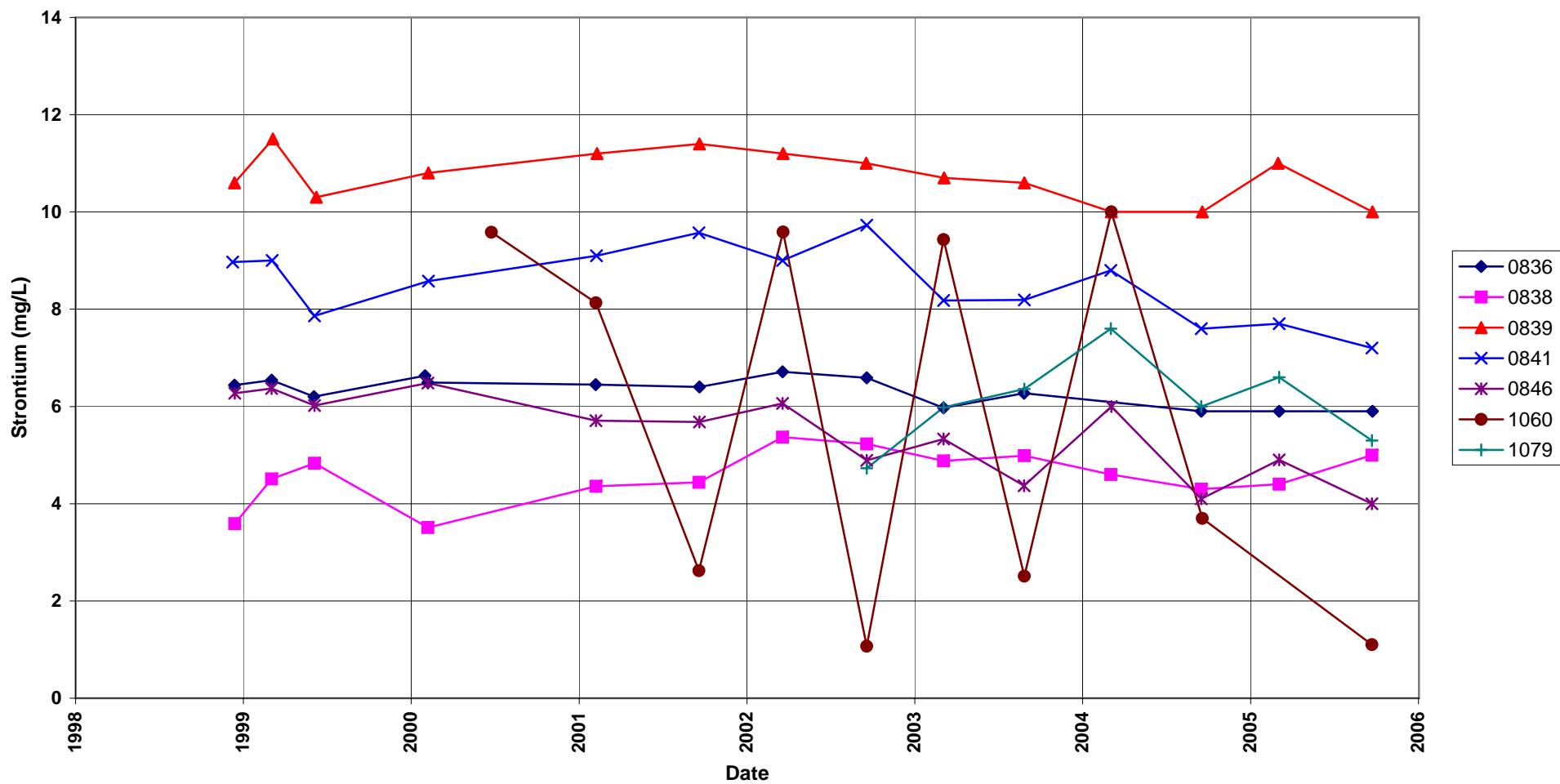
MCL = 0.01 mg/L



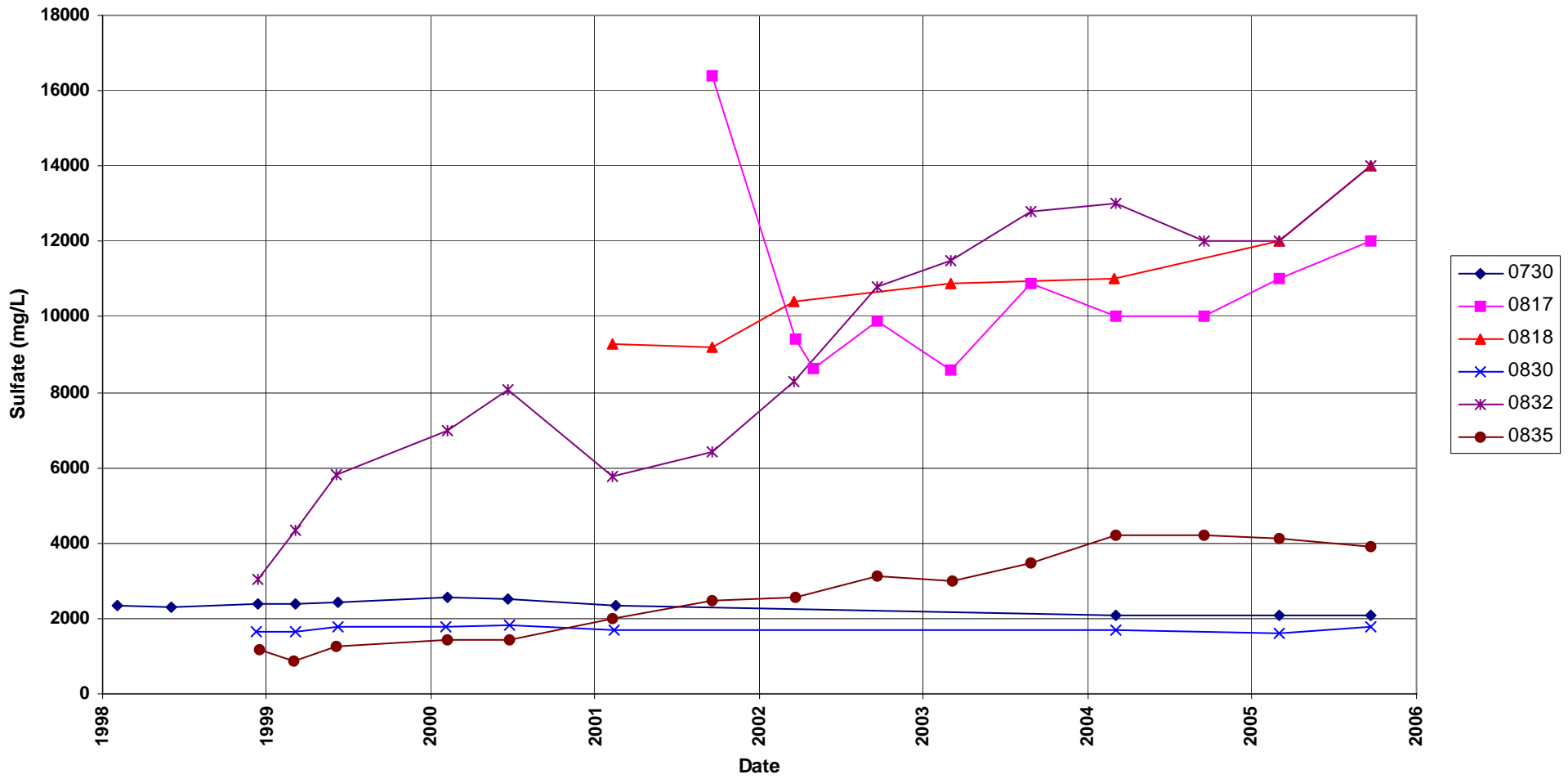
Shiprock Disposal Site (Terrace) Strontium Concentration



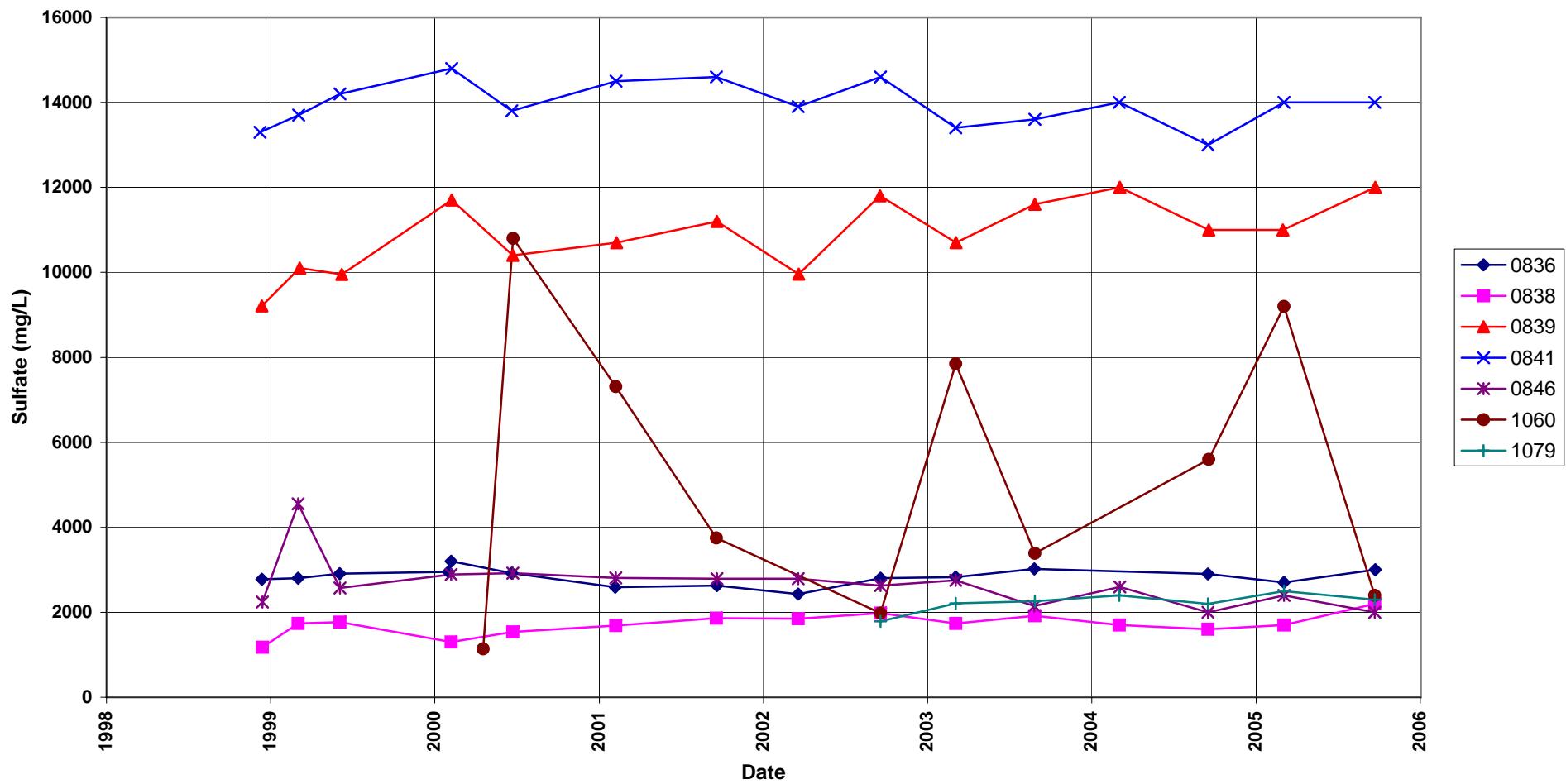
Shiprock Disposal Site (Terrace) Strontium Concentration



Shiprock Disposal Site (Terrace) Sulfate Concentration



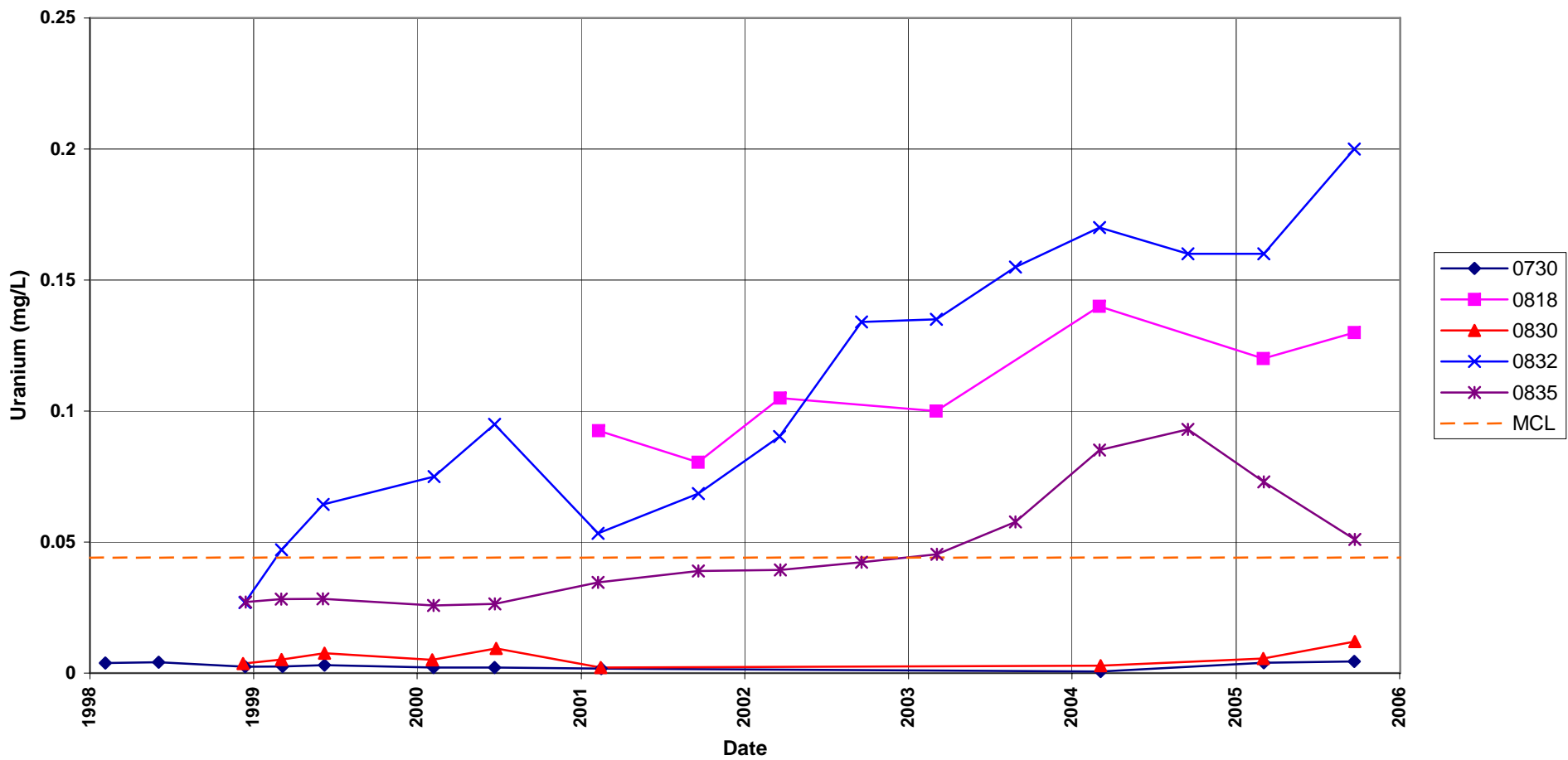
Shiprock Disposal Site (Terrace) Sulfate Concentration



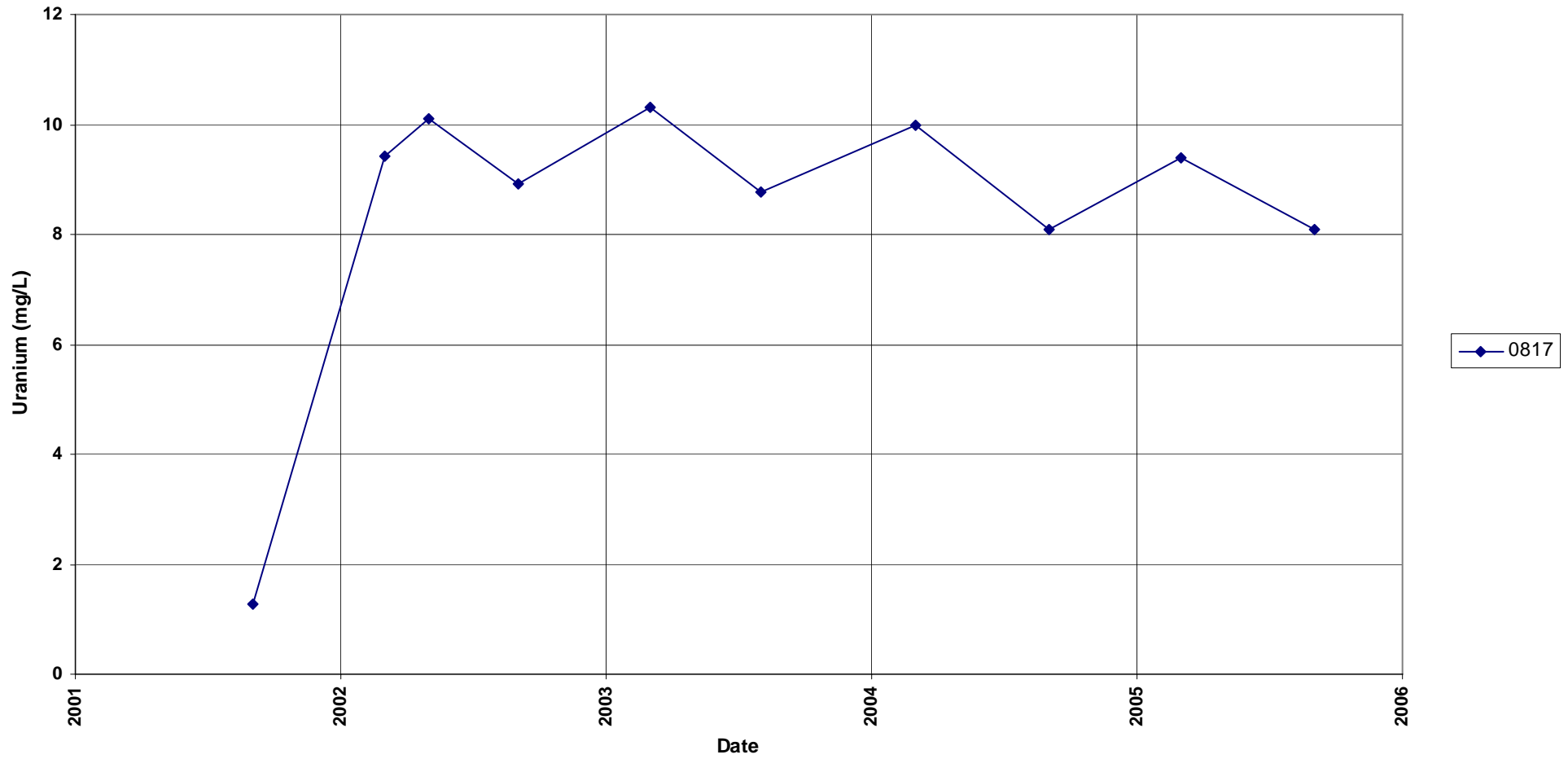
Shiprock Disposal Site (Terrace)

Uranium Concentration

MCL = 0.044 mg/L



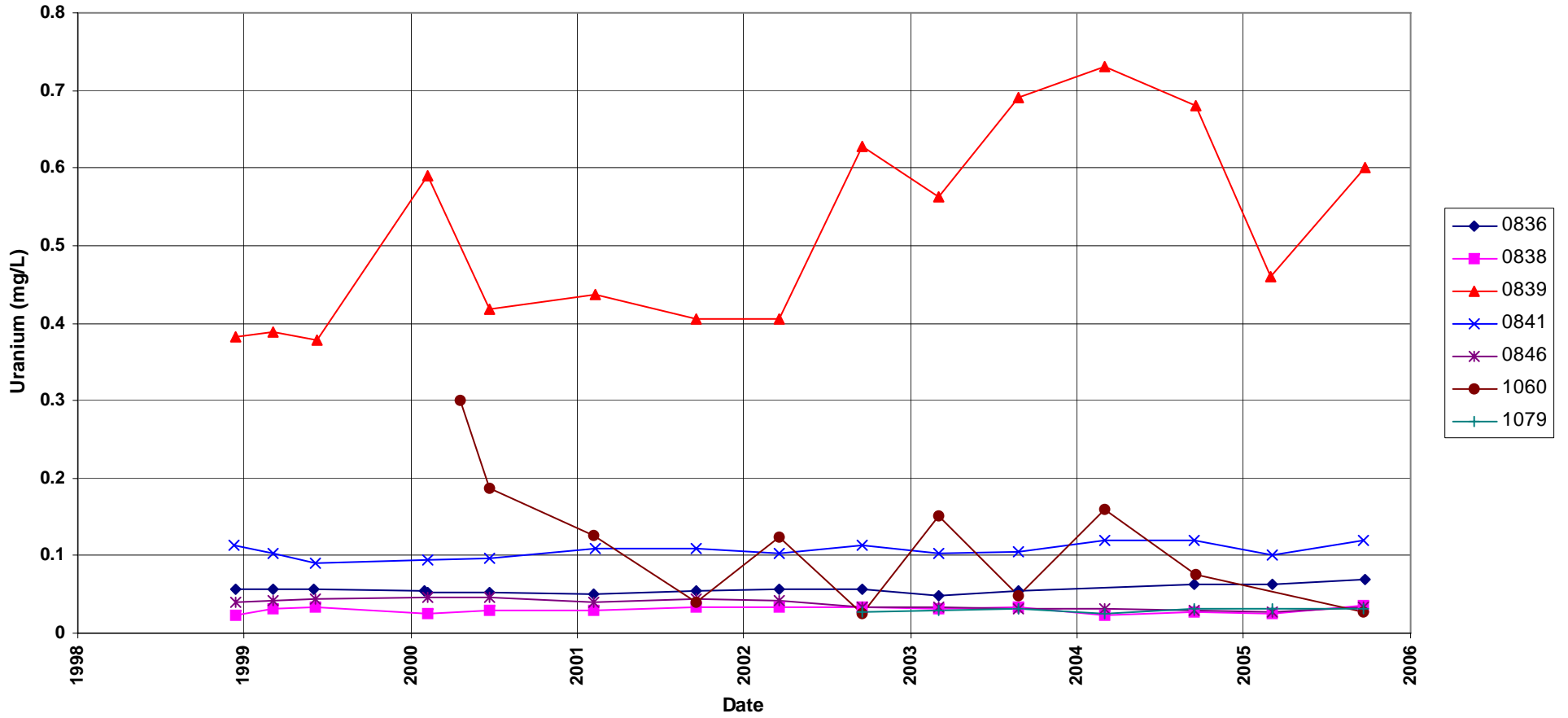
Shiprock Disposal Site (Terrace)
Uranium Concentration
MCL = 0.044 mg/L



Shiprock Disposal Site (Terrace)

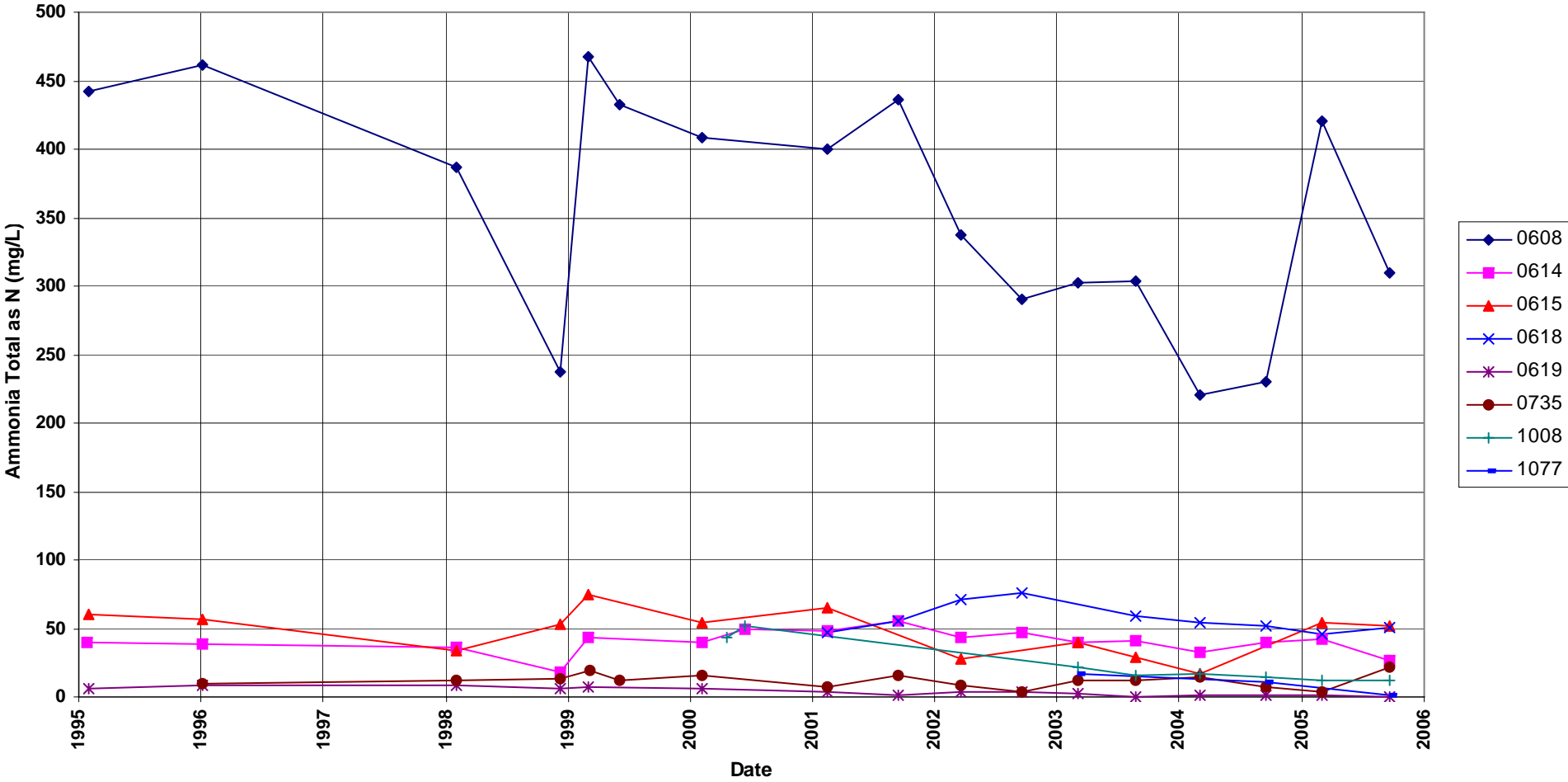
Uranium Concentration

MCL = 0.044 mg/L



**Time Versus Concentration Graphs
Floodplain Locations**

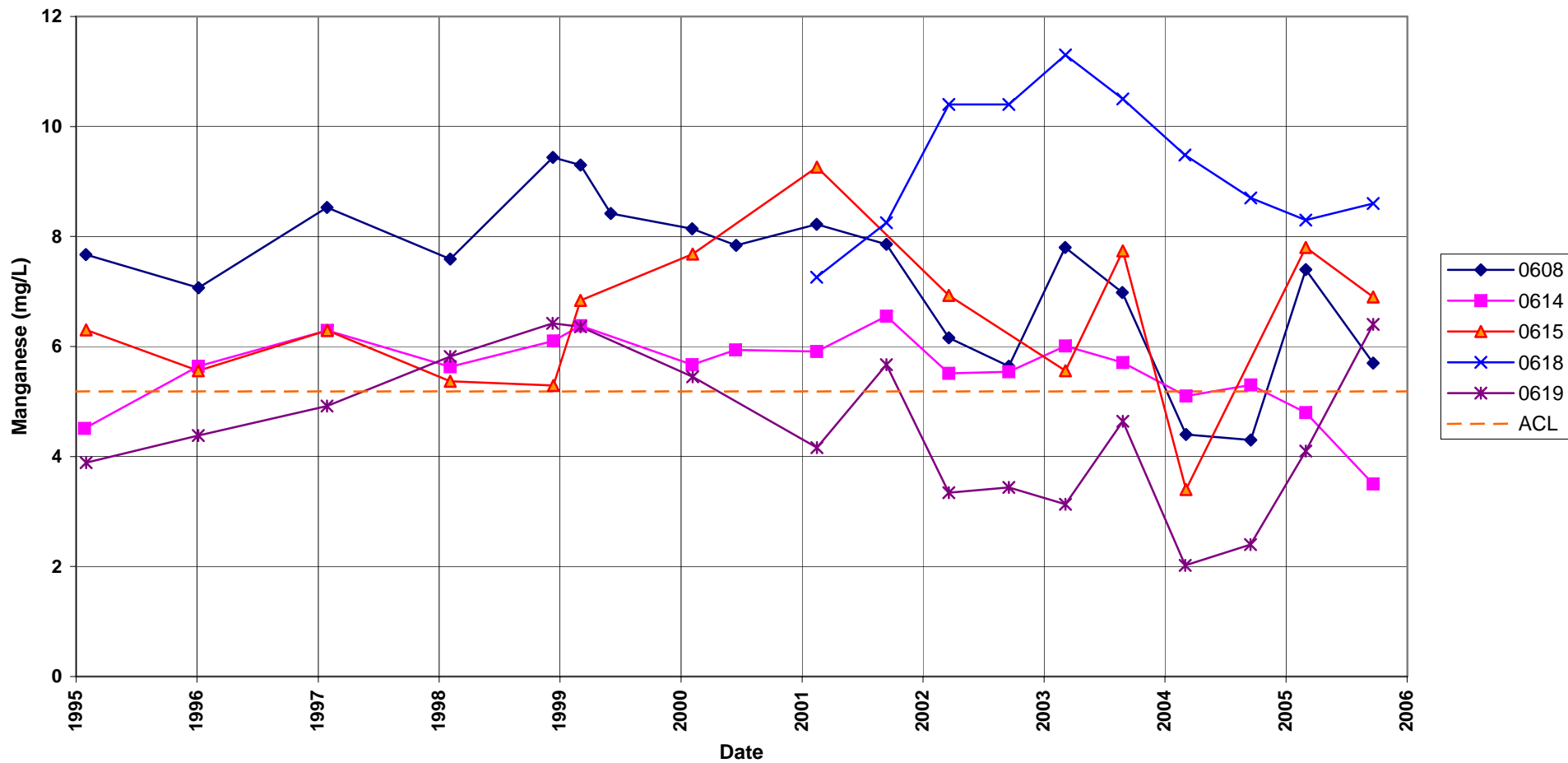
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



Shiprock Disposal Site (Floodplain)

Manganese Concentration

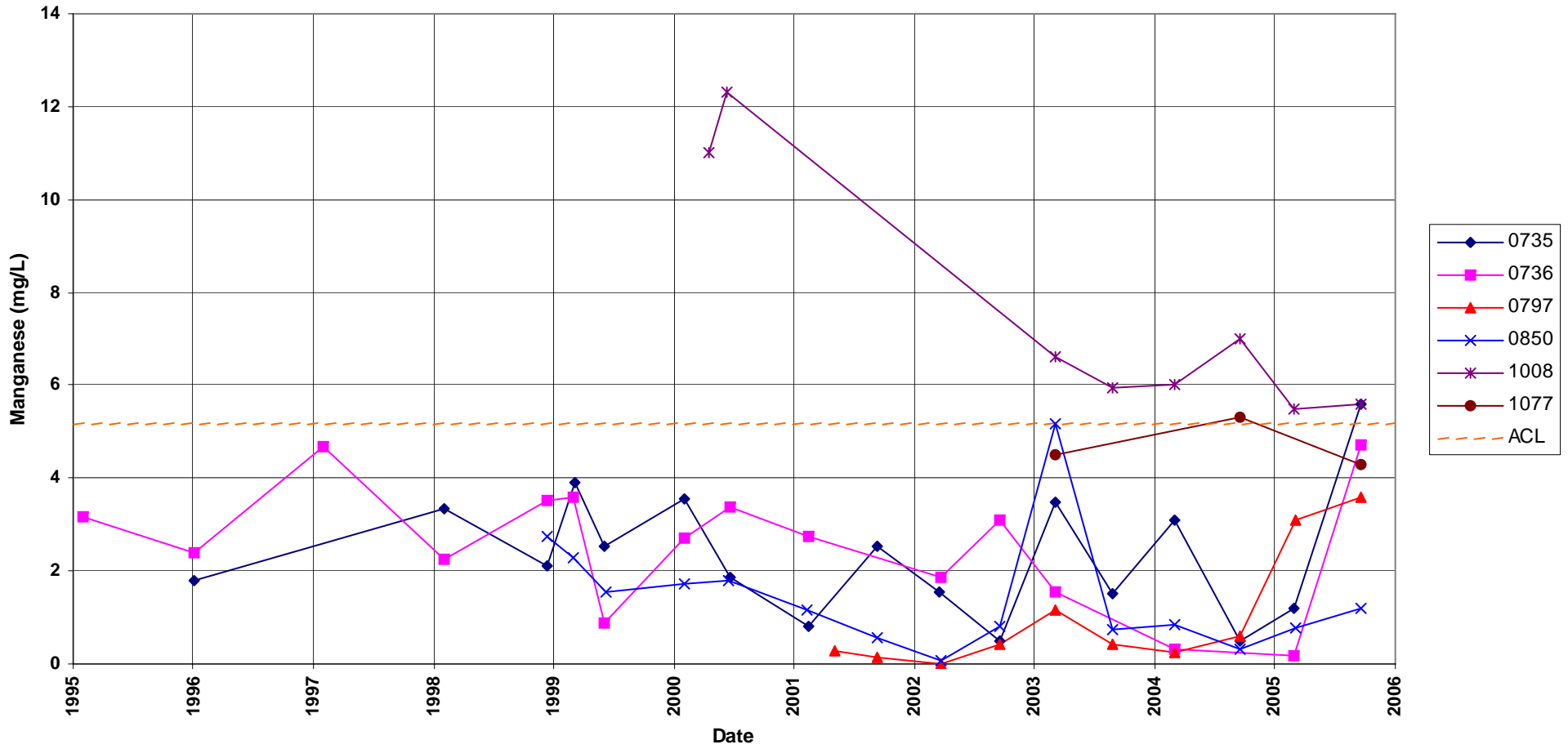
ACL = 5.18 mg/L



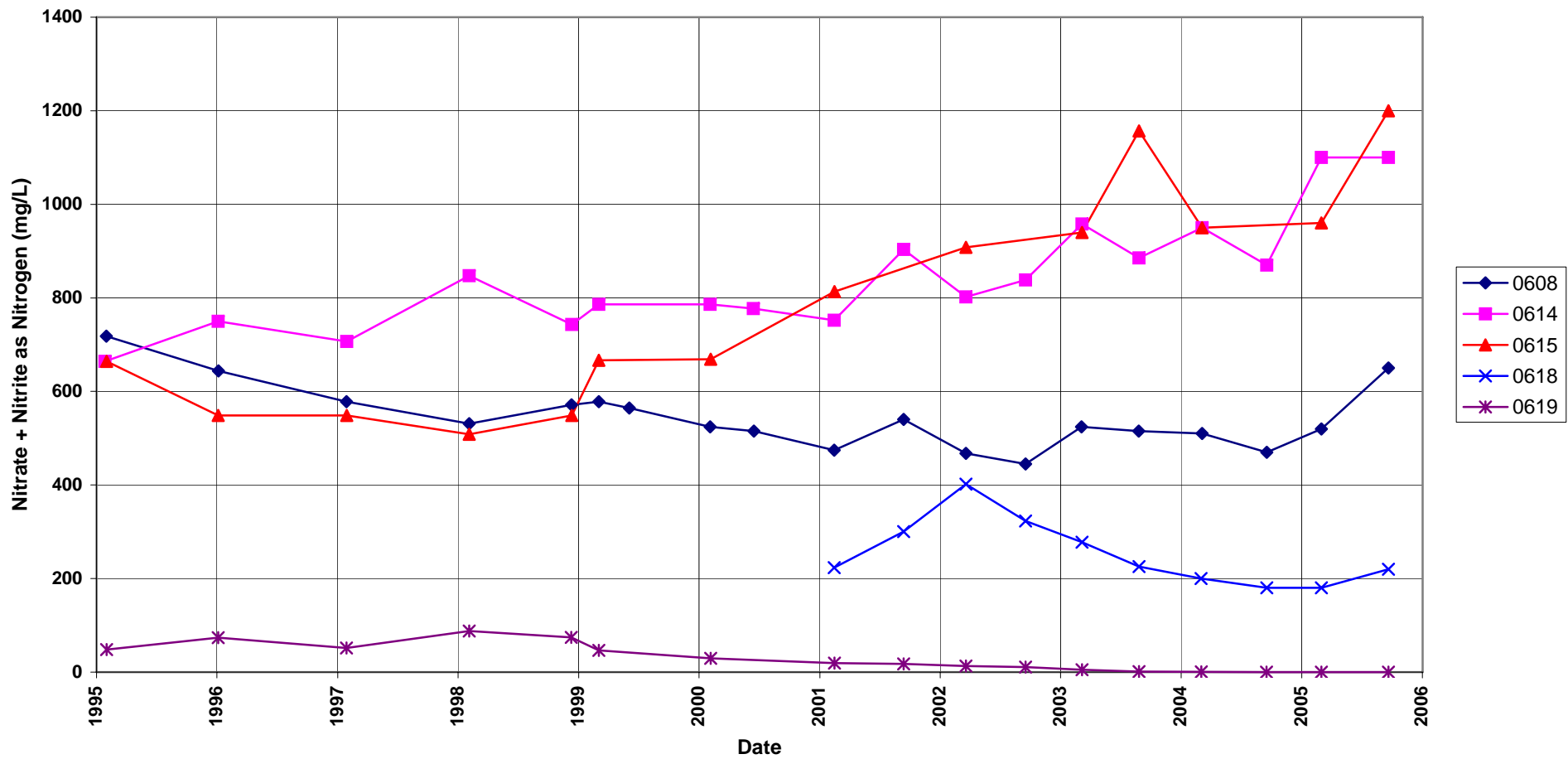
Shiprock Disposal Site (Floodplain)

Manganese Concentration

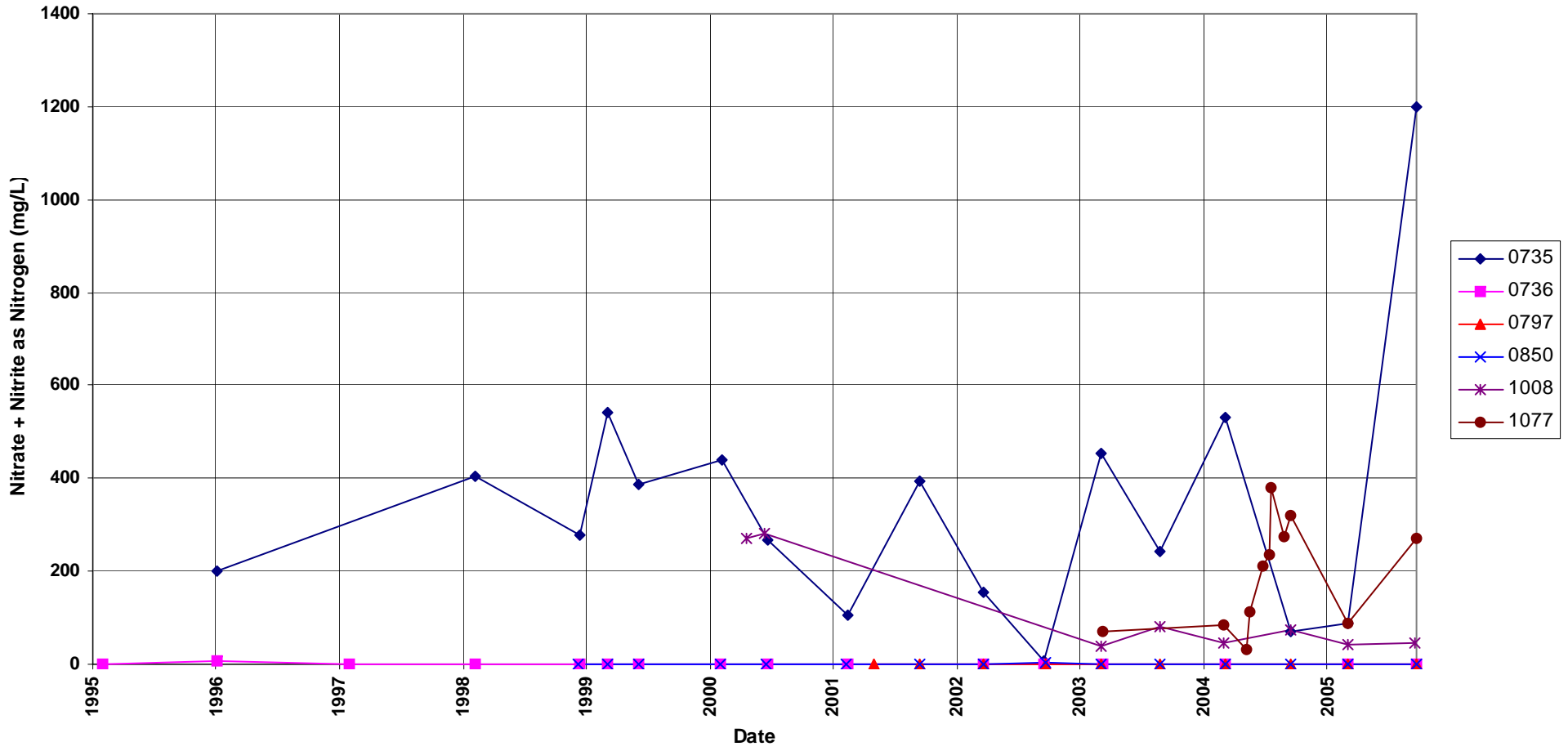
ACL = 5.18 mg/L



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



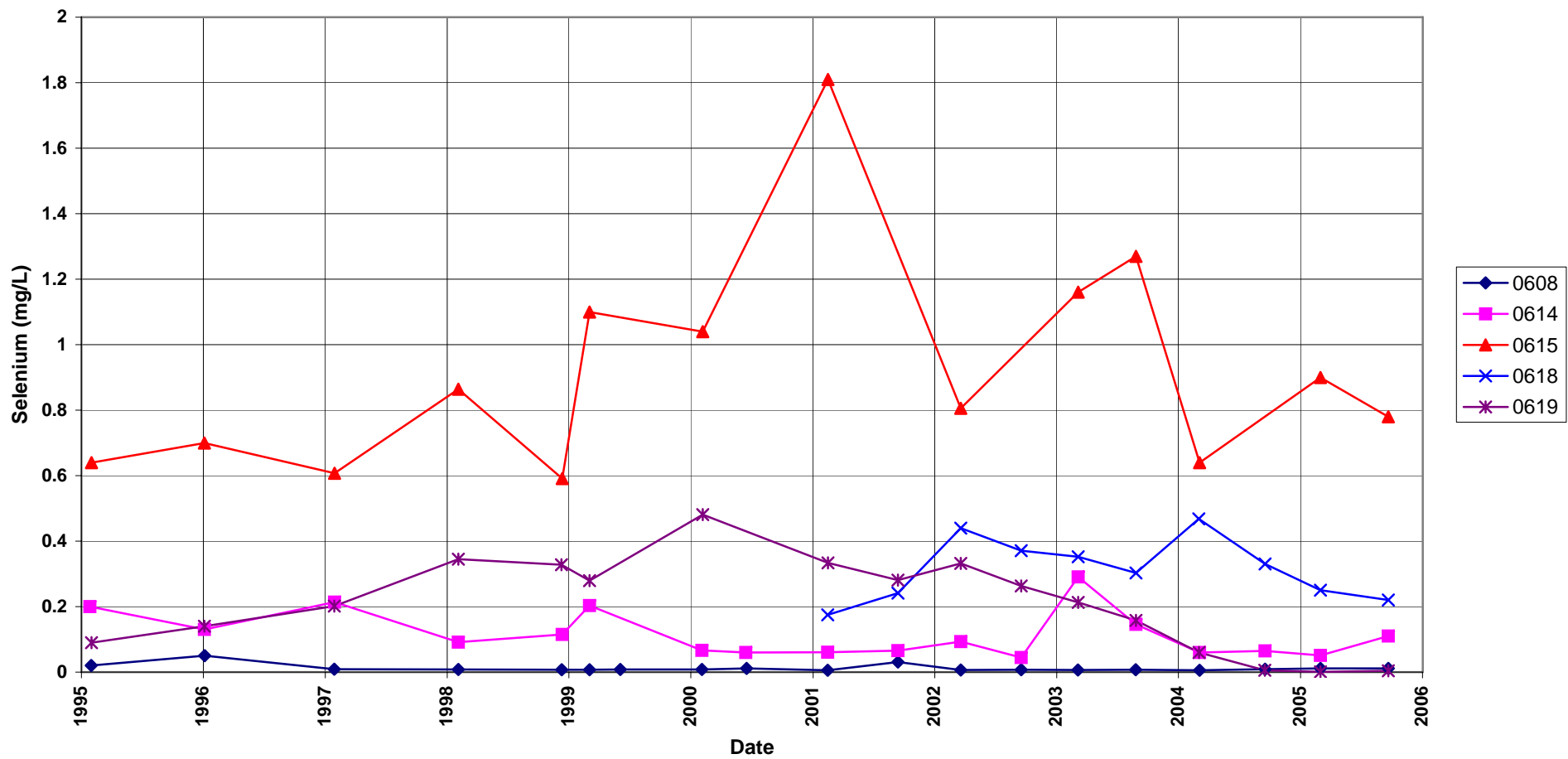
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



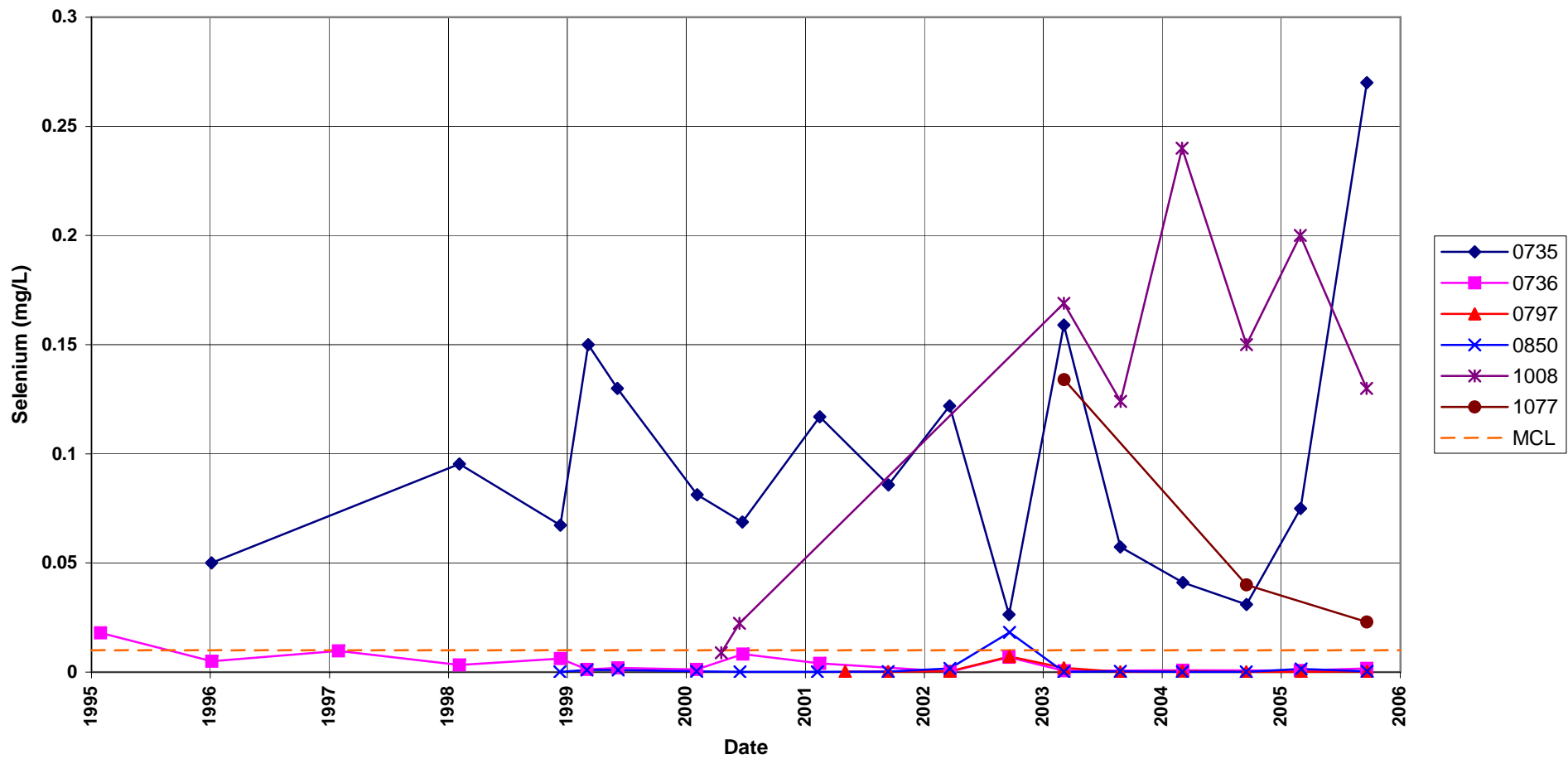
Shiprock Disposal Site (Floodplain)

Selenium Concentration

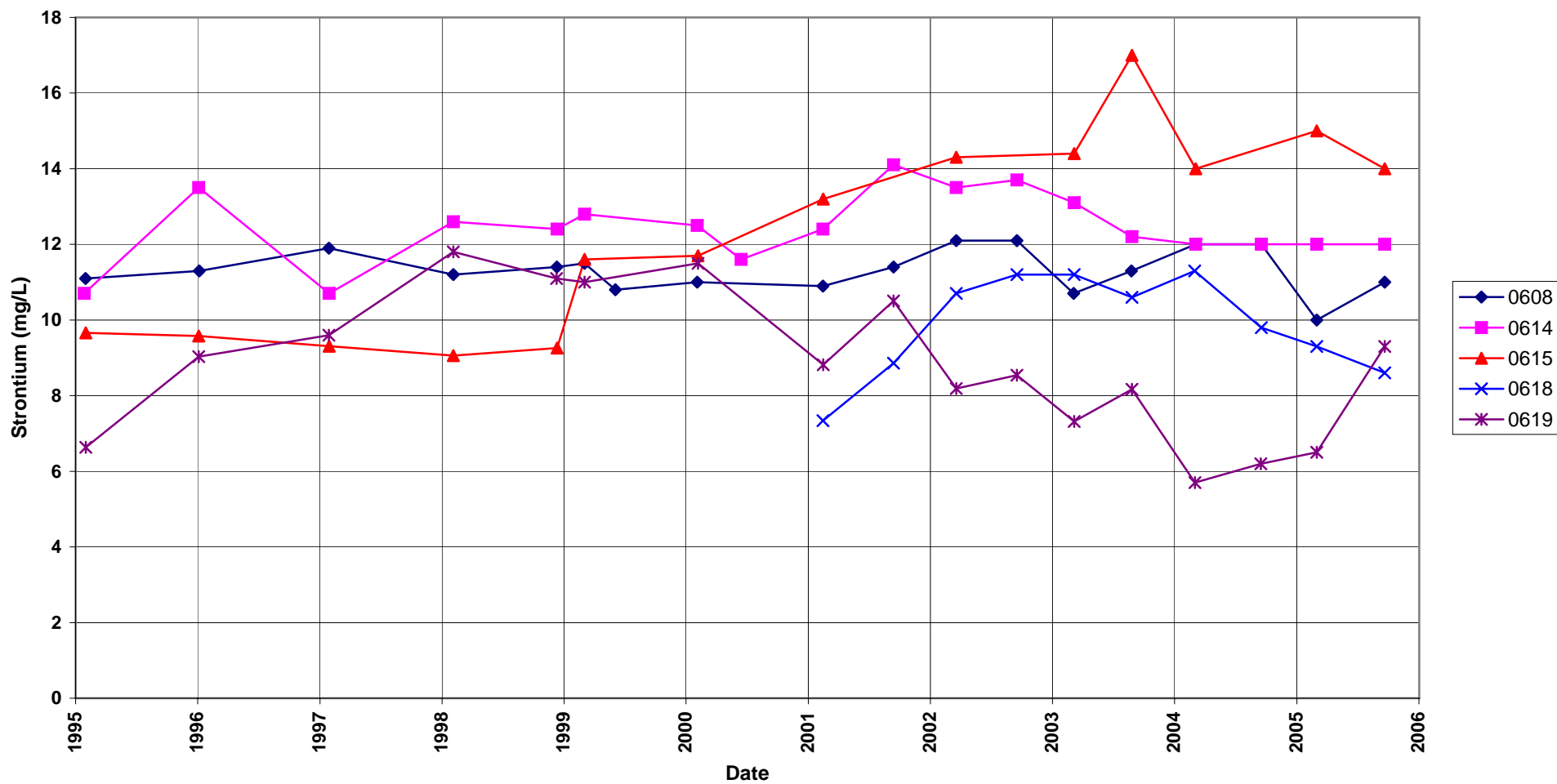
MCL = 0.01 mg/L



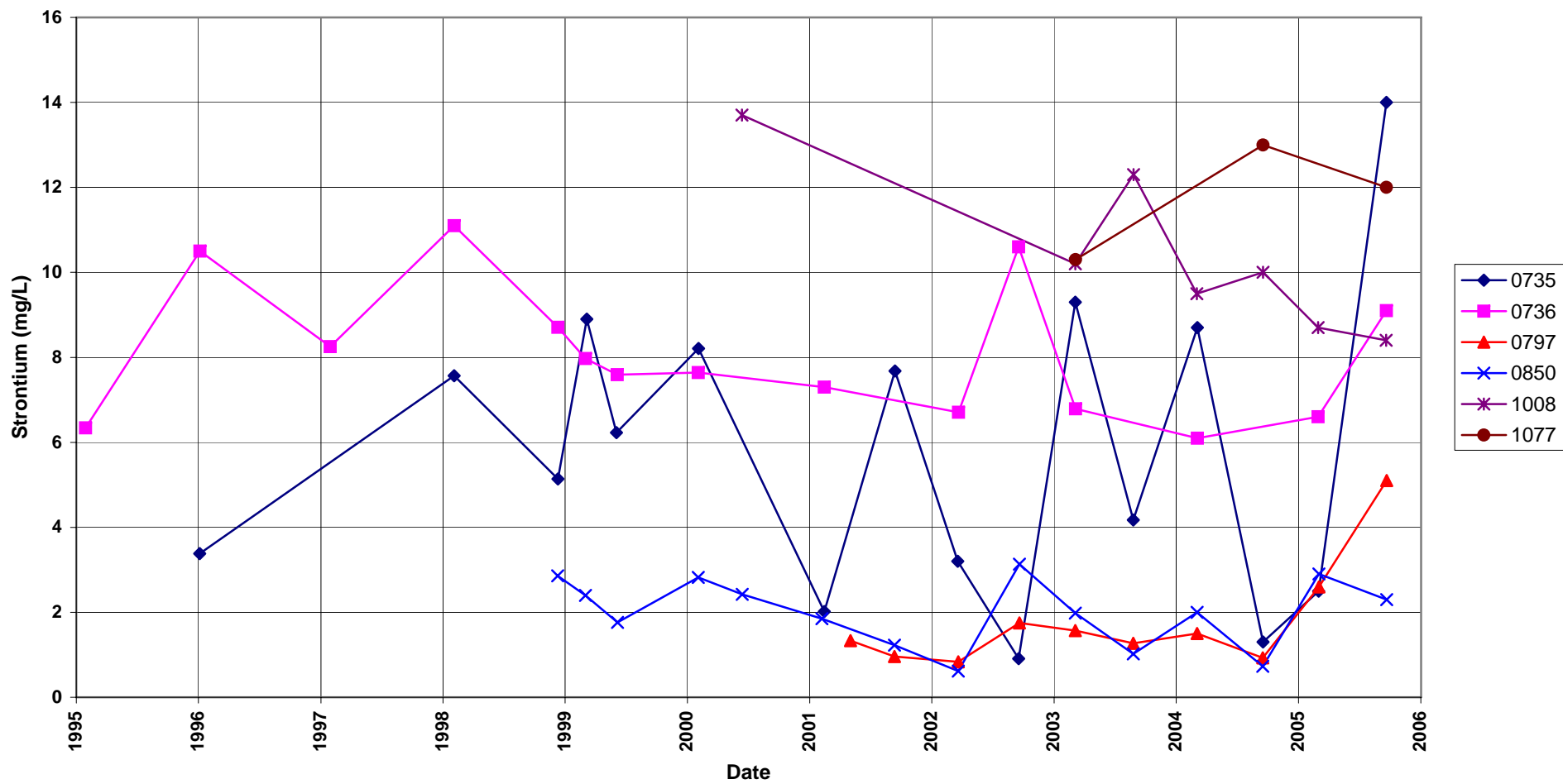
Shiprock Disposal Site (Floodplain)
Selenium Concentration
MCL = 0.01 mg/L



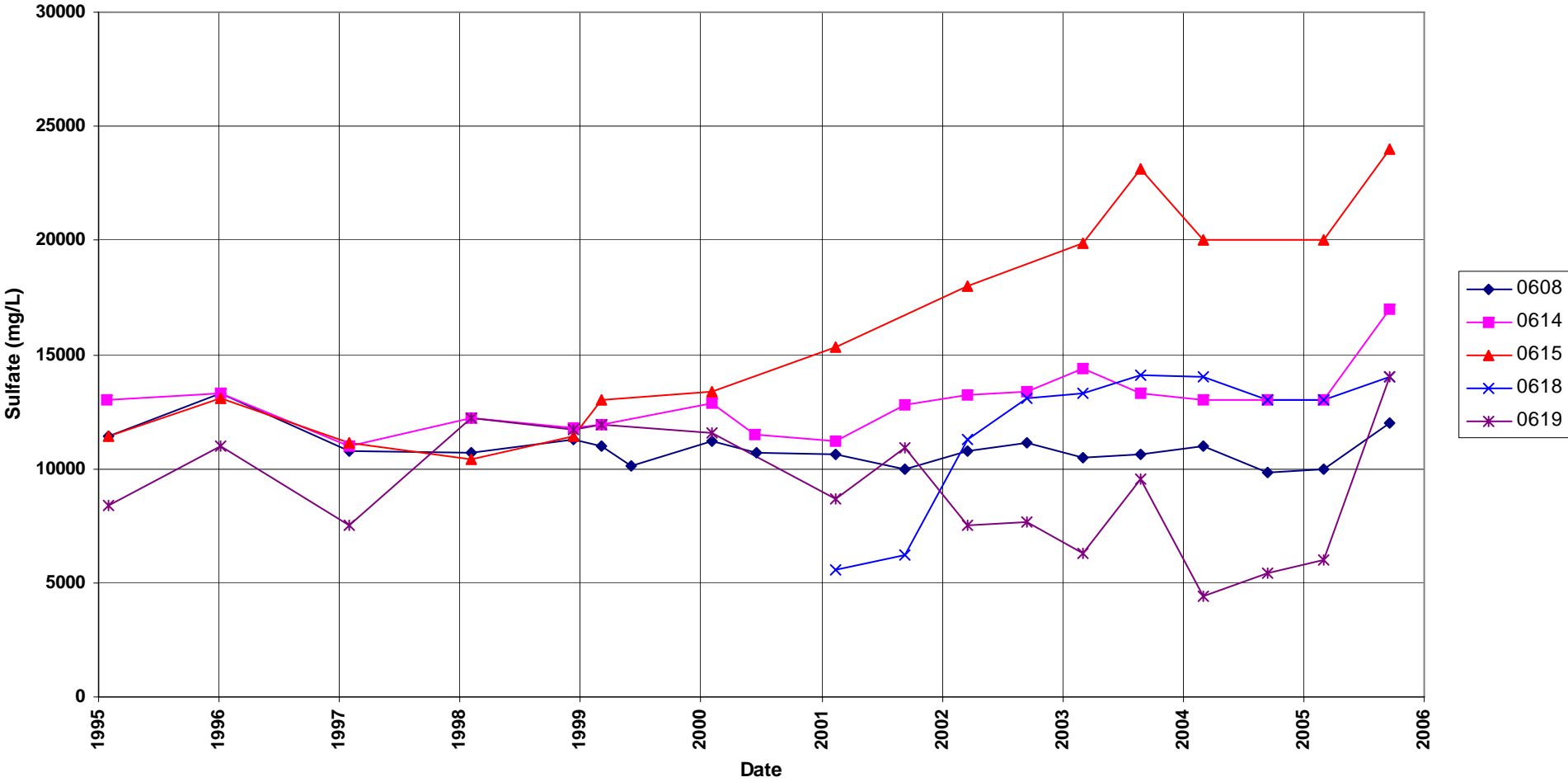
Shiprock Disposal Site (Floodplain) Strontium Concentration



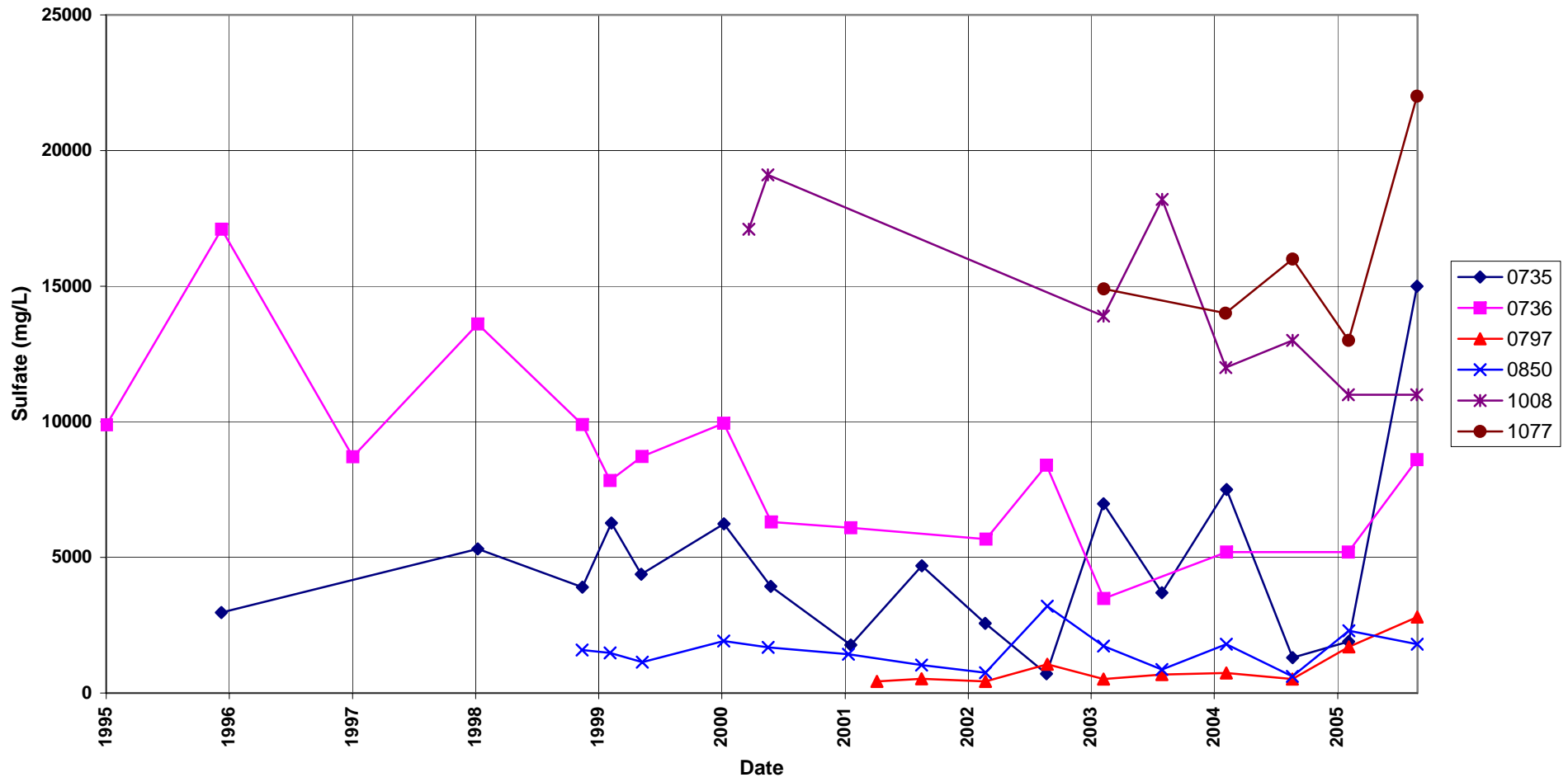
Shiprock Disposal Site (Floodplain) Strontium Concentration



Shiprock Disposal Site (Floodplain)
Sulfate Concentration



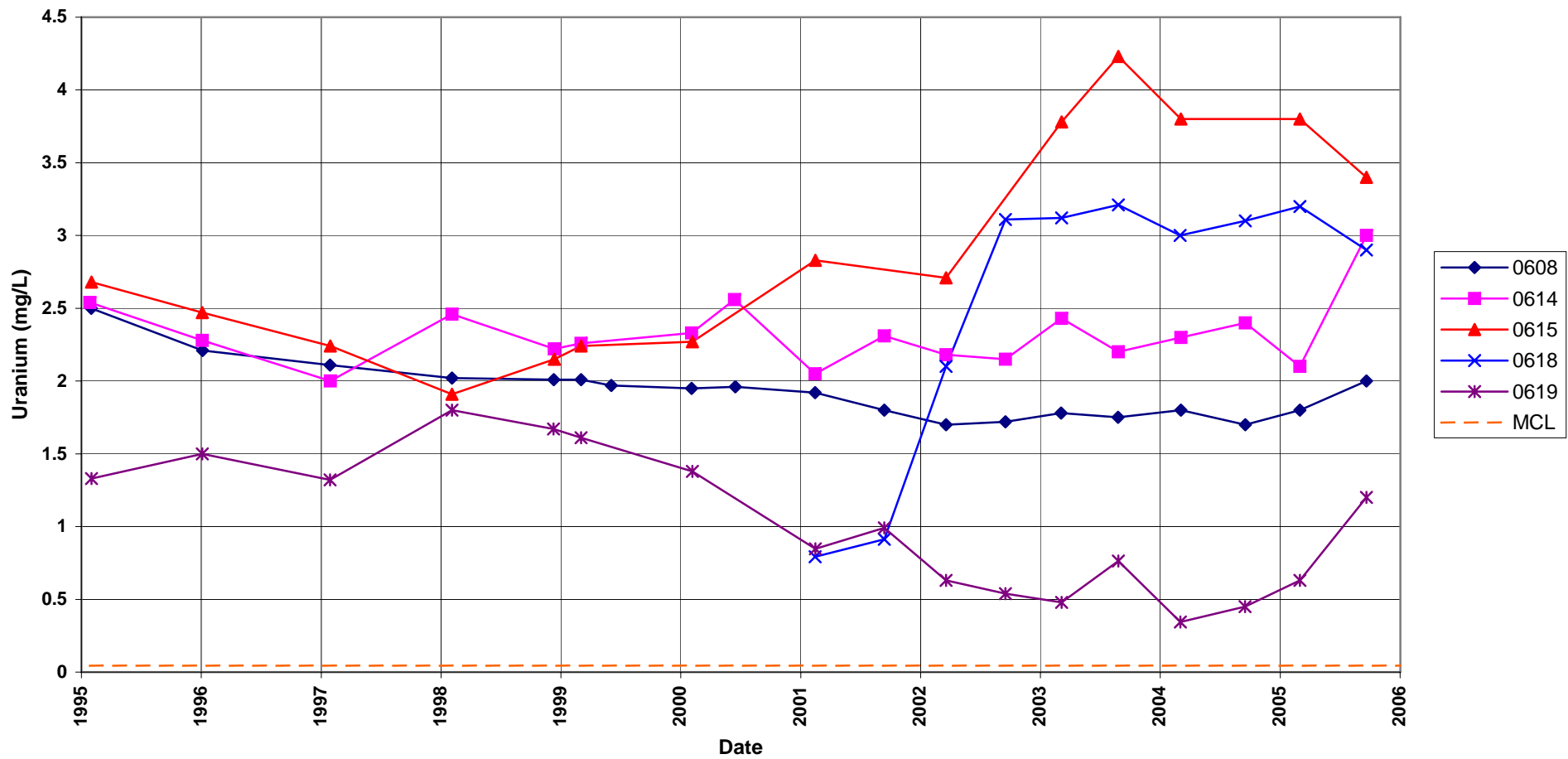
Shiprock Disposal Site (Floodplain) Sulfate Concentration



Shiprock Disposal Site (Floodplain)

Uranium Concentration

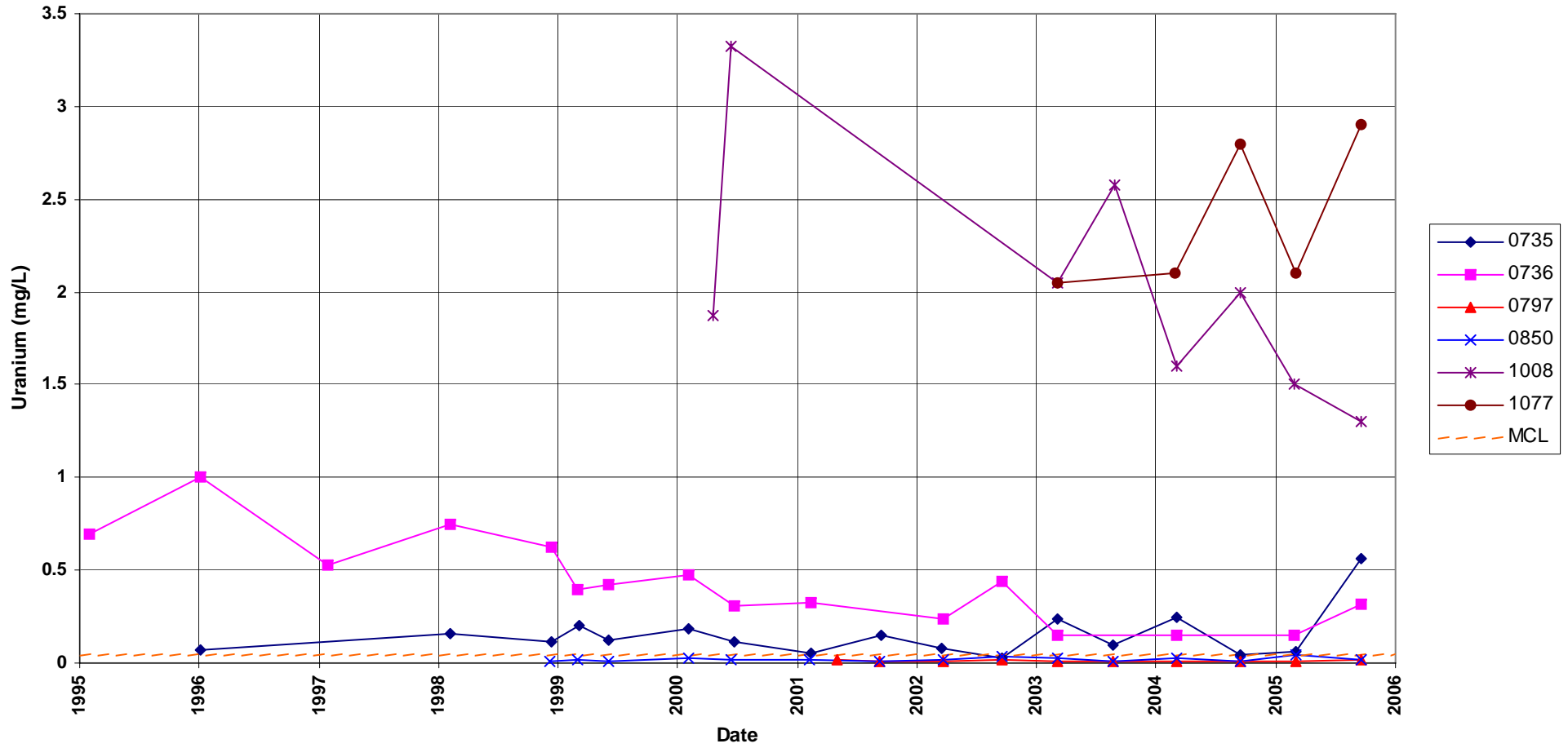
MCL = 0.044 mg/L



Shiprock Disposal Site (Floodplain)

Uranium Concentration

MCL = 0.044 mg/L



Attachment 3
Sampling and Analysis Work Order



established 1959

Task Order ST05-100
Control Number 1000-T05-1913

August 4, 2005

Richard P. Bush
Program Manager
U.S. Department of Energy
Grand Junction Office
2597 B $\frac{3}{4}$ Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AC01-02GJ79491, Stoller
September 2005 Environmental Sampling at Shiprock, New Mexico

Reference: FY 2005 LM Task Order No. ST05-100-06

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 5, 2005.

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

Monitor Wells (filtered)*

SHP01

608 Km	615 Al	619 Al	735 Al	797 Al	1008 Al	1089 Nr
614 Al	618 Al	734 Al	736 Al	850 Al	1077 Al	

SHP02

730 Al	832 Al	838 Al	846 Al	1070 Al	1079 Al	1091 Nr
817 Km	835 Al	839 Al	1071 Al	1087 Nr	1092 Nr	1093 Nr
818 Al	836 Al	841 Al	1060 Al	1078 Al	1088 Nr	1094 Nr
830 Km						

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

Surface Water (filtered)

SHP01

501	887	898	956	959	1203	1205
655	897	940	957	965		

SHP02

425	786	889	933	935	937	939
426	884	932	934	936	938	942
662	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 GJO Projects*. 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,

Signature on original

Clay Carpenter
Project Manager

CC/lcg/lac
Enclosures (3)

cc: S. E. Donovan, Stoller (e)
L. C. Goodknight, Stoller (e)
D. E. Miller, Stoller (e)
K. E. Miller, Stoller (e)
D. G. Traub, Stoller (e)

cc w/o enclosures:
Correspondence Control File (Thru V. Creagar)

Site	Shiprock	
	Ground Water	Surface Water
Analyte		
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 (NH3-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	X	
Lead		
Lead-210		
Magnesium	X	X
Manganese	X	X
Mercury		
Molybdenum		
Nickel		
Nickel-63		
Nitrate + Nitrite as N (NO3+NO2)-N	X	X
Organics		
PCBs		
Phosphate		
Polonium-210		
Potassium	X	X
Radium-226		

Analyte	Ground Water	Surface Water
Radium-228		
Radon-222		
Selenium	X	X
Silica		
Sodium	X	X
Strontium	X	X
Sulfate	X	X
Sulfide		
Thallium		
Thorium-230		
Thorium-232		
Tin		
Total Dissolved Solids	X	
Total Organic Carbon	X	
Tritium		
Uranium	X	X
Uranium-234, -238		
Vanadium		
VOCs		
Zinc		
Total Analytes	15	12

Attachment 4
Trip Report

Memorandum

Control Number N/A

DATE: October 4, 2005
TO: David E. Miller
FROM: David G. Traub
SUBJECT: Sampling Trip Report

Sites: Shiprock, New Mexico

Dates of Sampling Event: September 19 - 22, 2005.

Samplers: Dave Traub, Jeff Price, Emile Bettez, and Farlie Pearl

Number of Locations Sampled: 31 ground water wells and 22 surface water locations were sampled during this trip. Troll 4000 data loggers were downloaded at several wells.

Locations Not Sampled/Reason: Well 0734 was not sampled as it was dry. Well 1070 was not sampled because there was no power to the pump. Surface water locations 0655, 0884, 0885, 0932, and 0959 were not sampled as there was insufficient water. Surface water locations 0937, 0938, and 0939 were inadvertently overlooked and, therefore, not sampled. Many of the seeps were flowing more than in the past.

Field Variance: None.

Quality Control Sample Cross Reference:

Ticket Number	Sample ID	Date	Location	Sample Type	Comment
NDV 376	2604	9/21/05	1078	Duplicate	
NDV 378	2605	9/21/05	0818	Duplicate	
NDV 396	2606	9/22/05	NA	Equipment Blank	
NDV 606	2609	9/21/05	0850-01	Duplicate	
NDV 616	2608	9/22/05	NA	Equipment Blank	

RIN Numbers Assigned: Samples were assigned RIN 05080225. Samples were shipped to Paragon Analytics on September 23.

Water Level Measurements: Water levels were measured only in the sampled wells.

Well Inspection Summary: All wells sampled were in good condition.

Equipment: All equipment functioned properly.

Location Specific Information: Wells 1077 and 1089 were sampled with the peristaltic pump because the dedicated pump had been turned off due to construction.

Seeps flow rates:	0425 = 1.7 L/min	0426 = 4.8 L/min
	0889 = 1-2 L/min	0935 = 0.5 L/min

Water level for well 0730 was at the top of the dedicated pump.

The flush mount well vault for well 0832 had flooded during a recent rain event.

Wells 0608, 0615, 0619, and 1008 had a yellowish tint to the purge water. Roots had to be cleaned out of well 0736 before sampling; 2 liters of muck and organics were removed before purging began. Three liters of sediment and roots were pumped from well 0850 to clear it.

Regulatory: No issues.

Site Issues: The flooding earlier this year has caused an increase in the number and size of weeds, willows, tamarisk, and Russian olive sprouts. This has caused considerable access problems at several of the surface water locations. If possible, some paths should be mowed or cut to these locations before the plants get too large. Also, the fence needs to be fixed so that access to location SHP02-0662 can be obtained more readily.

Corrective Action Required / Taken / Needed: None required.

(DGT/lcg)

cc: R. P. Bush, LM-50
S. E. Donovan, Stoller (e)
K. E. Miller, Stoller

Site Status Report

This form is intended to capture gross site status observations by visitors on the site for purposes other than the annual site inspection. Please record observations for those features you encounter—there is no need to visit features that are not in your work area unless specifically requested to do so by the Site Lead Inspector.

Site: SHIRROCK On-site staff: none
Date of visit: 9/19 - 9/22, 2005 Sampling crew: S. Price
Purpose of visit: Water sampling F. Pearl

Security/Access Controls

Are access controls intact? yes

Are signs legible and in acceptable condition? yes

Do access controls appear effective? Describe signs of intrusion (human, livestock, wildlife): none
yes none observed (prairie dog burrowing not uncommon)

Vegetation - Flood plain area grossly
Does site vegetation appear healthy? overgrown

Is there encroachment on riprap-covered areas?

Did you encounter noxious weeds?

Describe possible vegetation concerns; indicate location and species: Flood plain overgrown
with tamarisk, Russian Olive, and annual weeds - access to sw locations & sw locations
and difficult - need to clear brush (chain saw) and re-establish access

Containment or Site Integrity

Describe any observations indicating concerns about site integrity (evidence of slope stability, impaired drainage structures, erosion, etc.):

Maintenance

Describe observed maintenance needs: Drainage control need at 1092 - vault inundated
with mud-flow off side slope. Also ~~erosion~~ severe erosion from flows down the side slope

Health and Safety

Describe observed site health and safety concerns and recommend corrective action: None
Black widow spiders in well vaults - especially in the
extraction well vaults but webbing noted in most wells - need
some insecticide treatment

Stakeholders

Describe contacts with stakeholders, including landowners, regulators, or local officials and list any concerns:

Form completed by: JEFF PRICE J. Price 10/10/05
Printed name Signature Date