DOE–LM/GJ1206–2006

Data Validation Package

March 2006
Shiprock, New Mexico, Disposal Site

June 2006

U.S. Department of Energy
Office of Legacy Management

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for the U.S. Department of Energy Office of Legacy Management.
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Contents

Sampling Event Summary

Site: Shiprock, New Mexico, Disposal Site

Sampling Period: March 6-16, 2006

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 *FY 2006 Sampling Frequencies and Analyses* (October 2005) and *Ground Water and Surface Water Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites* (DOE 2005). 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.

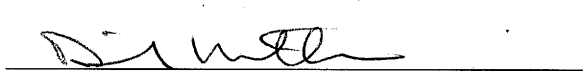
San Juan River downgradient locations 0957 and 0965 are sampled to determine if COCs from the floodplain contaminant plume are entering the river. These are neighboring locations on the westside and eastside of the river respectively. Analyte concentrations at these locations remain comparable showing 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	5.2
				0615	6.7
				0618	8.8
				0797	7.2
				1008	7.0
Nitrate as Nitrogen	10		SHP01	0608	560
				0614	870
				0615	960
				0618	250
				0735	570
				1008	74
				1089	27
				1104	180
Selenium	0.01	0.05	SHP01	0614	0.13
				0615	0.73
				0618	0.23
				0735	0.051
				1008	0.077
Uranium	0.044		SHP01	0608	2
				0614	3.1
				0615	4.2
				0618	2.7
				0619	0.64
				0734	0.18
				0735	0.33
				0736	0.099
				0850	0.048
				1008	1.7
				1089	1
				1104	2.6
Manganese		5.18	SHP02	0730	20
				1057	6.4
Nitrate as Nitrogen	10			0730	130
				0817	640
				0818	1600
				0830	44
				0832	660
				0835	42
				0838	62
				0839	530
				0841	620
				0846	17
				0846	17
				1057	1600
				1071	1900
				1078	630
				1079	42
				1091	1600
				1092	1500
				1093	3100
Selenium	0.01		SHP02	0830	0.024
				0832	3.8
				0835	0.13
				0836	0.085
				0838	0.35
				0841	3.5

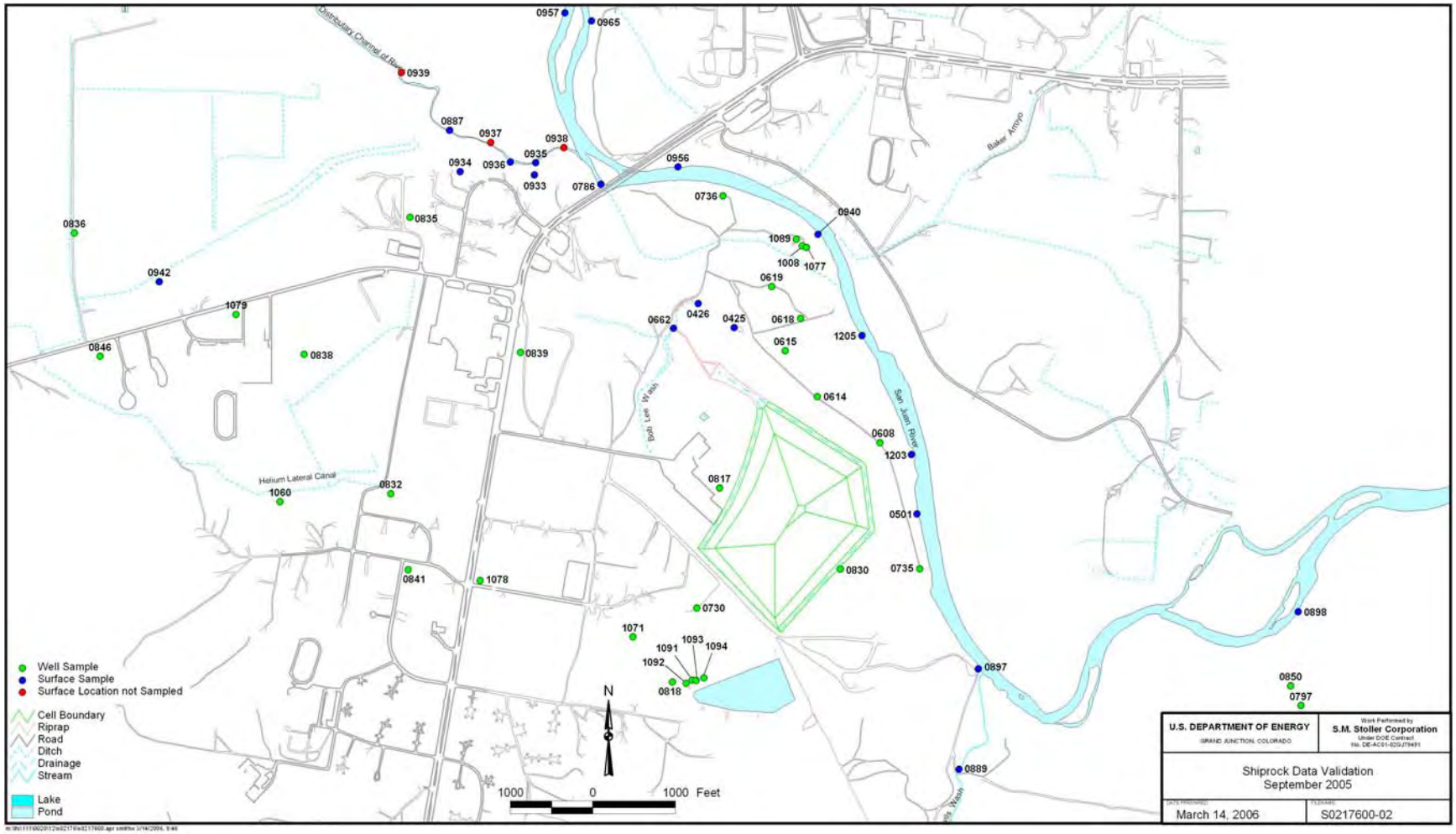
Analyte	Standard[a]	Proposed ACL[b]	Site Code	Location	Concentration
Selenium	0.01		SHP02	0846	0.19
				1057	0.33
				1079	0.27
Uranium	0.044		SHP02	0817	10
				0818	0.15
				0832	0.17
				0835	0.05
				0836	0.054
				0839	0.5
				0841	0.11
				0846	0.058
				1057	0.058
				1071	0.11
				1078	0.14
				1091	0.12
				1092	0.12
				1093	0.084

[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

6/2/06
Date



Sample Location Map, Shiprock, New Mexico, Disposal Site

Data Assessment Summary

Water Sampling Field Activities Verification Checklist

Project	Shiprock New Mexico	**Date(s) of Water Sampling**	March 6-16, 2006
Date(s) of Verification	April 28, 2006	**Name of Verifier**	Steve Donivan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures?	Yes	
List other documents, SOP's, instructions.		Work Order Letter dated February 13, 2006
2. Were the sampling locations specified in the planning documents sampled?	Yes	Well 1094 is out of service. Well 1060 was dry. Surface locations 0884, 0885, 0932, 0938, and 0942 were dry at the time of sampling.
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?	Yes	
Did the operational checks meet criteria?	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?	Yes	
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?	Yes	
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): 06020313
Sample Event: March 6-16, 2006
Site(s): Shiprock, New Mexico
Laboratory: Paragon Analytics, Fort Collins, Colorado
Work Order No.: 0603065
Analysis: Metals, Inorganics
Validator: Steve Donivan
Review Date: April 21, 2006

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 60 water samples on March 18, 2006, 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 listed sample ticket NDV 624; no samples were received with this ticket number. The COC form listed five bottles for ticket numbers NDV 625 and NFK 351, but only three bottles each were received. The samples were logged 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 cooler of 1.0 °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

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

Table 3. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0603065-2	0619	NH_3-N	J	Matrix spike failure
0603065-3	0730	Fe	U	Less than 5 times the calibration blank
0603065-6	0835	Mn	U	Less than 5 times the calibration blank
0603065-8	0838	Mn	U	Less than 5 times the calibration blank
0603065-18	1079	Mn	U	Less than 5 times the calibration blank
0603065-19	2604 (0846 Dup)	Mn	U	Less than 5 times the calibration blank
0603065-25	0736	Fe	U	Less than 5 times the calibration blank
0603065-25	0736	Se	U	Less than 5 times the calibration blank
0603065-27	0889	Mn	U	Less than 5 times the calibration blank
0603065-29	1008	Fe	U	Less than 5 times the calibration blank
0603065-40	0933	NH_3-N	J	Matrix spike failure
0603065-60	2609 (Equip Blank)	Ca	U	Less than 5 times the calibration blank
0603065-60	2609 (Equip Blank)	K	U	Less than 5 times the calibration blank
0603065-60	2609 (Equip Blank)	Na	U	Less than 5 times the calibration blank
0603065-60	2609 (Equip Blank)	U	U	Less than 5 times the calibration blank

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 NH_3-N were performed on March 17, 2006, and March 28, 2006, 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 ten 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 March 24, 2006, and March 27, 2006. The initial calibrations were performed using four calibration standards resulting in calibration curves with r^2 values greater than 0.995. The absolute values of the calibration 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 21 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 February 22, 2006. The resulting calibration curves had 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 17 CCVs. All initial and continuing calibration verification results were within the acceptance range.

Method SW-846 6020A
Calibrations were performed for selenium on March 16-17, 2006, and March 21, 2006; and for uranium on March 13, 2006, March 16, 2006, and March 21, 2006. The initial calibrations were performed using four calibration standards resulting in calibration curves with 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 26 CCVs for selenium and 23 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 within the acceptance range. 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 March 16, 2006, and March 28, 2006, using seven calibration standards. The resulting calibration curve had a 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 ten 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 December 1, 2005, using seven calibration standards. The resulting calibration curves had 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 seven 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 CCB6 analyzed for uranium on March 21, 2006. The samples associated with this CCB had concentrations greater than ten times the blank concentration. 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 NH_3-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, 2006. 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, 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 NH_3-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 twenty 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 fifty 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. Initial review of the data indicated possible dilution factor errors for the nitrate result for location 0615, and for the uranium results for locations 0898 and 0957. The laboratory was contacted on April 28, 2006, and asked to check the data for errors. The uranium analysis was repeated to correct the errors. Verifying the concentration and re-calculating the original result corrected the nitrate error. Corrected reports were received on May 12, 2006.

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 April 14, 2006. 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 be equal to the total cations when expressed in milliequivalents per liter (meq/L). Table 4 shows the total cation and anion results from this event and the charge balance, which is a relative percent difference calculation. Typically, a charge balance difference of 10 percent is considered acceptable.

Table 4. Comparison of Major Anions and Cations

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP01	0501	6.94	6.72	1.64
SHP01	0608	259.49	301.81	7.54
SHP01	0614	406.82	428.68	2.62
SHP01	0615	504.75	507.36	0.26
SHP01	0618	290.97	346.51	8.71
SHP01	0619	140.88	165.66	8.08
SHP01	0655	57.79	72.61	11.36
SHP01	0735	222.34	262.94	8.36
SHP01	0736	84.39	101.18	9.05
SHP01	0797	84.17	100.62	8.91
SHP01	0850	55.43	66.11	8.78
SHP01	0887	67.46	69.30	1.34
SHP01	0897	6.92	6.84	0.59
SHP01	0898	6.90	6.29	4.63
SHP01	0937	72.33	74.51	1.48
SHP01	0939	74.85	77.32	1.63
SHP01	0940	6.37	6.60	1.74
SHP01	0956	6.47	6.66	1.43
SHP01	0957	6.90	6.62	2.03
SHP01	0959	62.32	65.43	2.44
SHP01	0965	13.34	10.99	9.68
SHP01	1008	305.13	371.13	9.76

Table 4 (continued). Comparison of Major Anions and Cations

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP01	1203	6.61	6.75	1.04
SHP01	1205	6.61	6.87	1.95
SHP02	0425	167.89	185.57	5.00
SHP02	0426	73.29	85.01	7.41
SHP02	0662	35.06	44.50	11.86
SHP02	0730	47.23	51.29	4.12
SHP02	0786	74.99	76.54	1.02
SHP02	0817	221.33	290.41	13.50
SHP02	0830	43.80	40.23	4.25
SHP02	0832	294.43	354.47	9.25
SHP02	0835	88.73	80.69	4.74
SHP02	0836	66.45	67.12	0.50
SHP02	0838	64.99	62.84	1.69
SHP02	0839	272.17	279.56	1.34
SHP02	0841	285.20	353.12	10.64
SHP02	0846	113.13	112.77	0.16
SHP02	0889	394.19	518.98	13.67
SHP02	0933	51.15	49.86	1.27
SHP02	0934	24.77	21.07	8.08
SHP02	0935	74.64	72.25	1.63
SHP02	0936	68.57	66.11	1.82
SHP02	1057	246.10	331.09	14.72
SHP02	1079	43.80	46.53	3.02

The charge balance differences for wells 0662, 0655, 0817, 0841, 0889, and 1057 are 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.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Worksheet

RIN: 06020313 Lab Code: PAR Validator: Steve Donivan Validation Date: 4/21/2006

Site: SHIPROCK Analysis Type: ☑ Metals ☑ General Chem ☐ Rad ☐ Oraganics

# of Samples: 60 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.

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 06020313 **Lab Code:** PAR **Date Due:** 4/15/2006

Matrix: Water **Site Code:** SHP **Date Completed:** 4/19/2006

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Calcium	03/24/2006	0.0000	1.0000	OK	OK	OK	OK			90.0	112.0	2.0	104.0	2.0	98.3
Calcium	03/24/2006									95.0	99.0	1.0	107.0	1.0	97.9
Calcium	03/27/2006	0.0000	1.0000	OK	OK	OK	OK			96.0	101.0	1.0	105.0	2.0	98.4
Iron	03/24/2006	0.0000	1.0000	OK	OK	OK	OK			107.0	112.0	5.0	103.0		79.5
Iron	03/24/2006									82.0	86.0	4.0	105.0		71.0
Iron	03/27/2006	0.0000	1.0000	OK	OK	OK	OK			89.0	92.0	3.0	104.0		91.0
Magnesium	03/24/2006	0.0000	1.0000	OK	OK	OK	OK			97.0	105.0	2.0	103.0	1.0	99.9
Magnesium	03/24/2006									98.0	102.0	3.0	104.0	2.0	98.2
Magnesium	03/27/2006	0.0000	1.0000	OK	OK	OK	OK			99.0	103.0	3.0	104.0	3.0	100.0
Manganese	03/24/2006	0.0000	1.0000	OK	OK	OK	OK			98.0	103.0	5.0	95.0		107.0
Manganese	03/24/2006									98.0	101.0	3.0	94.0	10.0	104.0
Manganese	03/27/2006	0.0000	1.0000	OK	OK	OK	OK			100.0	102.0	2.0	94.0	6.0	107.0
Potassium	03/24/2006	0.0000	1.0000	OK	OK	OK	OK			117.0	120.0	2.0		24.0	90.4
Potassium	03/24/2006									100.0	103.0	3.0		35.0	87.8
Potassium	03/27/2006	0.0000	1.0000	OK	OK	OK	OK			100.0	104.0	3.0		25.0	88.9
Selenium	03/16/2006	0.0000	1.0000	OK	OK	OK	OK	OK	100.0	97.0	98.0	0.0	104.0	5.0	86.2
Selenium	03/16/2006							OK	101.0	104.0	103.0	1.0	107.0		
Selenium	03/20/2006	0.0000	1.0000	OK	OK	OK	OK	OK	104.0				106.0		94.2

Comments: _____

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SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 06020313 **Lab Code:** PAR **Date Due:** 4/15/2006

Matrix: Water **Site Code:** SHP **Date Completed:** 4/19/2006

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Selenium	03/21/2006	0.0000	1.0000	OK	OK	OK	OK	OK	103.0				113.0		99.0
Sodium	03/24/2006	0.0000	1.0000	OK	OK	OK	OK			46.0	69.0	3.0		2.0	88.2
Sodium	03/24/2006									89.0	92.0	3.0		1.0	84.3
Sodium	03/27/2006	0.0000	1.0000	OK	OK	OK	OK			89.0	93.0	2.0		1.0	87.5
Strontium	03/24/2006	0.0000	1.0000	OK	OK	OK	OK			77.0	79.0	0.0	98.0	1.0	107.0
Strontium	03/24/2006									90.0	92.0	1.0	96.0	3.0	101.0
Strontium	03/27/2006	0.0000	1.0000	OK	OK	OK	OK			90.0	96.0	2.0	97.0	1.0	110.0
Uranium	03/13/2006	0.0000	1.0000	OK	OK	OK	OK			122.0	102.0	6.0	105.0	6.0	99.0
Uranium	03/16/2006			OK	OK	OK	OK			118.0	119.0	0.0	115.0	10.0	110.0
Uranium	03/21/2006	0.0000	1.0000	OK	OK	OK	OK			105.0	102.0	1.0		1.0	110.0
Uranium	03/21/2006									106.0	108.0	0.0		4.0	
Uranium	03/21/2006									117.0	117.0	0.0		1.0	
Uranium	03/21/2006									116.0	120.0	1.0		3.0	

Comments: _____

SAMPLE MANAGEMENT SYSTEM

Inorganics Data Validation Worksheet

RIN: 06020313 **Lab Code:** PAR **Date Due:** 4/15/2006

Matrix: Water **Site Code:** SHP **Date Completed:** 4/19/2006

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	03/17/2006	-0.004	1.0000	OK	OK	OK	OK	OK	96.0	95.0	98.0	1.00	
Ammonia as N	03/17/2006							OK	95.0				
Ammonia as N	03/28/2006	-0.024	1.0000	OK	OK	OK	OK	OK	94.0	65.0	70.0	7.00	
Ammonia as N	03/28/2006							OK	93.0	96.0	98.0	2.00	
Chloride	03/10/2006	-0.058	1.0000	OK	OK	OK	OK	OK	99.0	99.0	99.0	0	
Chloride	03/15/2006				OK		OK	OK	98.0	100.0	98.0	1.00	
Chloride	03/21/2006				OK		OK	OK	95.0	101.0	102.0	0	
Chloride	03/21/2006							OK	95.0	101.0	102.0	0	
Nitrate+Nitrite as N	03/16/2006	-0.003	0.9999	OK	OK	OK	OK	OK	98.0	105.0	84.0	5.00	
Nitrate+Nitrite as N	03/16/2006							OK	97.0	89.0	78.0	3.00	
Nitrate+Nitrite as N	03/28/2006	-0.004	1.0000	OK	OK	OK	OK	OK	100.0	101.0	98.0	2.00	
Nitrate+Nitrite as N	03/28/2006							OK	95.0				
Sulfate	03/10/2006	1.000	0.1960	OK	OK	OK	OK	OK	102.0	99.0	96.0	1.00	
Sulfate	03/15/2006				OK		OK	OK	102.0	95.0	98.0	1.00	
Sulfate	03/21/2006				OK		OK	OK	100.0	106.0	105.0	0	
Sulfate	03/21/2006							OK	101.0	106.0	106.0	0	
Total Dissolved Solids	03/13/2006							OK	96.0			3.00	

Comments: _____

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SAMPLE MANAGEMENT SYSTEM

Inorganics Data Validation Worksheet

RIN: 06020313 **Lab Code:** PAR **Date Due:** 4/15/2006

Matrix: Water **Site Code:** SHP **Date Completed:** 4/19/2006

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 Dissolved Solids	03/16/2006							OK	97.0				
Total Dissolved Solids	03/22/2006							OK	99.0			1.00	
Total Organic Carbon	03/28/2006							OK	102.0	99.0	100.0	1.00	
Total Organic Carbon	03/28/2006								99.0				
Total Organic Carbon	03/29/2006							OK	101.0				
Total Organic Carbon	03/29/2006								98.0			3.00	

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 are category IV extraction wells. All 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 0817 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 exception: 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 0846, 0934, and 0965. 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 — Steve Donivan — 5-31-06 — Date

Data Validation Lead: Steve Donivan — Steve Donivan — 5-31-06 — 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 used to query the SEEPro database. The application compares the new data set with historical data and lists all new data that fall outside the historical data range. Data listed in the report require further review if:

(1) Identified low concentrations are not the result of improved detection limits.
(2) The concentration detected is not within 50 percent of historical minimum or maximum values.
(3) There were five or more historical sample results 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 September 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: 06020313
Comparison: History Begin Date: 1/6/1996
Report Date: 4/28/2006

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect
SHP01	0608	03/09/2006	Calcium	490		F	482			392		F	16	0
SHP01	0614	03/09/2006	Magnesium	3100		F	3000		F	1990			17	0
SHP01	0614	03/09/2006	Uranium	3.1		F	3		F	2			17	0
SHP01	0615	03/09/2006	Magnesium	3400		F	3220		F	1660		L	13	0
SHP01	0618	03/08/2006	Nitrate + Nitrite as Nitrogen	250		F	220		F	170		F	6	0
SHP01	0619	03/08/2006	Selenium	0.00053		F	0.481			0.0012		F	21	0
SHP01	0655	03/15/2006	Selenium	0.0016			0.0836			0.0019			14	0
SHP01	0734	03/15/2006	Chloride	140			373		F	149		QF	13	0
SHP01	0734	03/15/2006	Magnesium	230			928		F	340		Q	13	0
SHP01	0734	03/15/2006	Manganese	3.1			2.8		L	0.0055	B	F	14	1
SHP01	0734	03/15/2006	Sodium	790			3430		F	1340			13	0
SHP01	0734	03/15/2006	Total Dissolved Solids	8600			17000		FQ	8750			11	0
SHP01	0735	03/09/2006	Calcium	520		F	510		F	46		F	17	0
SHP01	0736	03/10/2006	Sodium	1100		F	4090			1700		F	13	0
SHP01	0736	03/10/2006	Strontium	5.7		F	11.1			6.1		F	13	0
SHP01	0736	03/10/2006	Total Dissolved Solids	6700		F	21300			7800		JF	11	0
SHP01	0736	03/10/2006	Uranium	0.099		F	0.746			0.146		F	14	0
SHP01	0797	03/07/2006	Calcium	450		F	320		FQ	42		F	10	0
SHP01	0797	03/07/2006	Chloride	190		F	130		FQ	16.7		F	10	0
SHP01	0797	03/07/2006	Magnesium	110		F	72		FQ	10.9		F	10	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06020313
Comparison: History Begin Date: 1/6/1996
Report Date: 4/28/2006

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect
SHP01	0797	03/07/2006	Manganese	7.2		F	3.6		FQ	0.0011	B	UF	10	1
SHP01	0797	03/07/2006	Potassium	12		F	9.1		FQ	1.84		F	10	0
SHP01	0797	03/07/2006	Sodium	1200		F	900		FQ	240		QF	10	0
SHP01	0797	03/07/2006	Strontium	7.1		F	5.1		FQ	0.834		F	10	0
SHP01	0797	03/07/2006	Sulfate	4000		F	2800		FQ	427		L	10	0
SHP01	0797	03/07/2006	Total Dissolved Solids	6900		F	4700		FQ	1100		QF	6	0
SHP01	0850	03/07/2006	Calcium	290		F	232		L	39.5		F	16	0
SHP01	0850	03/07/2006	Magnesium	55		F	48.3		F	8.64		F	16	0
SHP01	0850	03/07/2006	Nitrate + Nitrite as Nitrogen	1.7		F	0.01	U	F	0.01	U	F	5	5
SHP01	0850	03/07/2006	Potassium	9.9		F	8.4		JF	2.52		F	16	0
SHP01	0850	03/07/2006	Strontium	3.7		F	3.13		F	0.614		F	16	0
SHP01	0850	03/07/2006	Total Dissolved Solids	4400		F	3800		F	1200		F	12	0
SHP01	0850	03/07/2006	Uranium	0.048		F	0.04		F	0.0069		F	16	0
SHP01	0897	03/09/2006	Manganese	0.034			0.0333			0.0017	B		18	2
SHP01	0898	03/07/2006	Uranium	0.002			0.0032			0.00032	B		17	1
SHP01	0939	03/07/2006	Calcium	560			480			30.4			8	0
SHP01	0939	03/07/2006	Chloride	140			120			3.08			10	0
SHP01	0939	03/07/2006	Magnesium	320			260			5.06			8	0
SHP01	0939	03/07/2006	Manganese	2.5			1.8			0.0068	B		8	0
SHP01	0939	03/07/2006	Potassium	17			15		J	1.5	E	J	8	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06020313
Comparison: History Begin Date: 1/6/1996
Report Date: 4/28/2006

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect
SHP01	0939	03/07/2006	Sodium	460			400			11.4			8	0
SHP01	0939	03/07/2006	Strontium	6.2			5.6			0.284			8	0
SHP01	0939	03/07/2006	Sulfate	3100			2500			40.2			11	0
SHP01	0959	03/15/2006	Nitrate + Nitrite as Nitrogen	5.7			5.2			0.22			5	0
SHP01	0959	03/15/2006	Sodium	260			1110			430			7	0
SHP01	0959	03/15/2006	Strontium	5.8			7.81			6.2			7	0
SHP01	1089	03/14/2006	Uranium	1			2.1			1.1			10	0
SHP02	0426	03/14/2006	Sodium	860			1610			930			19	0
SHP02	0730	03/06/2006	Calcium	640		F	600		F	477		L	9	0
SHP02	0730	03/06/2006	Strontium	2.8		F	2.79		L	2.5		F	9	0
SHP02	0730	03/06/2006	Uranium	0.0049		F	0.0045		F	0.00056		F	13	0
SHP02	0786	03/15/2006	Chloride	35			184			50			11	0
SHP02	0786	03/15/2006	Selenium	0.011			0.179			0.024	N		11	0
SHP02	0786	03/15/2006	Sodium	430			845			490			11	0
SHP02	0817	03/15/2006	Sodium	1200		FQ	2720		L	1300		F	10	0
SHP02	0818	03/14/2006	Uranium	0.15			0.14			0.046			17	0
SHP02	0830	03/09/2006	Calcium	670		F	620		F	480		F	8	0
SHP02	0830	03/09/2006	Chloride	60		F	57		F	41		F	8	0
SHP02	0830	03/09/2006	Manganese	3.7		F	3.69			1.5		F	9	0
SHP02	0835	03/08/2006	Nitrate + Nitrite as Nitrogen	42		F	240		F	55		F	5	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06020313
Comparison: History Begin Date: 1/6/1996
Report Date: 4/28/2006

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect
SHP02	0838	03/08/2006	Calcium	760		F	580		F	399			15	0
SHP02	0838	03/08/2006	Chloride	100		F	93		F	12.8			15	0
SHP02	0838	03/08/2006	Magnesium	170		F	154		F	87.6			15	0
SHP02	0838	03/08/2006	Nitrate + Nitrite as Nitrogen	62		F	50		F	32		F	5	0
SHP02	0838	03/08/2006	Potassium	13		F	11		F	4			15	0
SHP02	0838	03/08/2006	Selenium	0.35		F	0.23		F	0.0272			17	0
SHP02	0838	03/08/2006	Strontium	6.3		F	5.37		F	3.51			15	0
SHP02	0838	03/08/2006	Sulfate	2400		F	2200		F	1180			18	0
SHP02	0838	03/08/2006	Total Dissolved Solids	4500		F	3800		F	2240			13	0
SHP02	0841	03/07/2006	Calcium	440		F	438		F	342		F	17	0
SHP02	0841	03/07/2006	Sodium	4600		F	6800		F	4800		F	17	0
SHP02	0933	03/15/2006	Calcium	540			530			410			14	0
SHP02	0935	03/15/2006	Chloride	37			252			39			10	0
SHP02	0935	03/15/2006	Magnesium	440			787			460			10	0
SHP02	0935	03/15/2006	Selenium	0.048			0.428			0.07			10	0
SHP02	0935	03/15/2006	Sodium	330			1030			410			10	0
SHP02	1057	03/14/2006	Calcium	520		F	510		F	430		F	7	0
SHP02	1057	03/14/2006	Chloride	450		F	595		L	490		F	7	0
SHP02	1057	03/14/2006	Magnesium	1900		F	2570		L	2270			7	0
SHP02	1057	03/14/2006	Manganese	6.4		F	10.7			6.5		F	8	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06020313
Comparison: History Begin Date: 1/6/1996
Report Date: 4/28/2006

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect
SHP02	1057	03/14/2006	Potassium	280		F	407	E	J	300		F	7	0
SHP02	1057	03/14/2006	Selenium	0.33		F	0.593		L	0.35		F	8	0
SHP02	1057	03/14/2006	Sodium	1300		F	1900		L	1400		F	7	0
SHP02	1057	03/14/2006	Strontium	8.7		F	10		F	9.33			7	0
SHP02	1057	03/14/2006	Sulfate	9400		F	16700		L	10500		L	8	0
SHP02	1078	03/07/2006	Nitrate + Nitrite as Nitrogen	630			810			710			5	0
SHP02	1079	03/08/2006	Calcium	470		F	730		F	567		F	8	0
SHP02	1079	03/08/2006	Magnesium	100		F	150		F	106		F	8	0
SHP02	1079	03/08/2006	Strontium	4.4		F	7.6		F	4.73		F	8	0
SHP02	1079	03/08/2006	Sulfate	1700		F	2500		F	1790		F	8	0
SHP02	1079	03/08/2006	Total Dissolved Solids	3300		F	4700		F	4110		F	5	0
SHP02	1087	03/14/2006	Sulfate	9100			8712			5000			13	0
SHP02	1088	03/14/2006	Uranium	0.2			0.18			0.119			11	0
SHP02	1093	03/14/2006	Sulfate	5300			6900		J	5600			12	0
SHP02	1093	03/14/2006	Uranium	0.084			0.08			0.066			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 Donivan	Steve Donivan	5-31-06
	Name (print)	Signature	Date
Site Hydrologist:	David Miller	D Miller	6/2/06
	Name (print)	Signature	Date

Date of Review: April 28, 2006

Loc. No.	Analyte	Type of Anomaly	Disposition
0619	Se	Low	Compare to future results
0797	Mg	High	Compare to future results
0797	Mn	High	Compare to future results
0850	NO3	High	Compare to future results
0786	Se	Low	Compare to future results
0838	Se	High	Compare to future results

Attachment 2
Data Presentation

Ground Water Quality Data
Floodplain Locations

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0608 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	10	-	15	6.85		F	#		
Ammonia Total as N	mg/L	03/09/2006	0001	10	-	15	240		F	#	20	
Calcium	mg/L	03/09/2006	0001	10	-	15	490		F	#	.0039	
Chloride	mg/L	03/09/2006	0001	10	-	15	420		F	#	40	
Dissolved Oxygen	mg/L	03/09/2006	N001	10	-	15	1.69		F	#		
Iron	mg/L	03/09/2006	0001	10	-	15	0.04	U	F	#	.04	
Magnesium	mg/L	03/09/2006	0001	10	-	15	1800		F	#	.019	
Manganese	mg/L	03/09/2006	0001	10	-	15	5.2		F	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	10	-	15	560		F	#	5	
Oxidation Reduction Potential	mV	03/09/2006	N001	10	-	15	210.6		F	#		
pH	s.u.	03/09/2006	N001	10	-	15	7.16		F	#		
Potassium	mg/L	03/09/2006	0001	10	-	15	160		F	#	.2	
Selenium	mg/L	03/09/2006	0001	10	-	15	0.006		F	#	.000066	
Sodium	mg/L	03/09/2006	0001	10	-	15	1900		F	#	.17	
Specific Conductance	umhos /cm	03/09/2006	N001	10	-	15	18250		F	#		
Strontium	mg/L	03/09/2006	0001	10	-	15	12		F	#	.0012	
Sulfate	mg/L	03/09/2006	0001	10	-	15	12000		F	#	100	
Temperature	C	03/09/2006	N001	10	-	15	9.05		F	#		
Total Dissolved Solids	mg/L	03/09/2006	0001	10	-	15	19000		F	#	400	
Total Organic Carbon	mg/L	03/09/2006	N001	10	-	15	16		F	#	1	
Turbidity	NTU	03/09/2006	N001	10	-	15	6.33		F	#		
Uranium	mg/L	03/09/2006	0001	10	-	15	2		F	#	.00012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0614 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	10	-	15	755		F	#		
Ammonia Total as N	mg/L	03/09/2006	0001	10	-	15	25		F	#	5	
Calcium	mg/L	03/09/2006	0001	10	-	15	490		F	#	.0078	
Chloride	mg/L	03/09/2006	0001	10	-	15	650		F	#	100	
Dissolved Oxygen	mg/L	03/09/2006	N001	10	-	15	2.02		F	#		
Iron	mg/L	03/09/2006	0001	10	-	15	0.08	U	F	#	.08	
Magnesium	mg/L	03/09/2006	0001	10	-	15	3100		F	#	.038	
Manganese	mg/L	03/09/2006	0001	10	-	15	3.8		F	#	.00054	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	10	-	15	870		F	#	5	
Oxidation Reduction Potential	mV	03/09/2006	N001	10	-	15	188.1		F	#		
pH	s.u.	03/09/2006	N001	10	-	15	7.04		F	#		
Potassium	mg/L	03/09/2006	0001	10	-	15	210		F	#	.39	
Selenium	mg/L	03/09/2006	0001	10	-	15	0.13		F	#	.00066	
Sodium	mg/L	03/09/2006	0001	10	-	15	2800		F	#	.17	
Specific Conductance	umhos /cm	03/09/2006	N001	10	-	15	23830		F	#		
Strontium	mg/L	03/09/2006	0001	10	-	15	12		F	#	.0024	
Sulfate	mg/L	03/09/2006	0001	10	-	15	16000		F	#	250	
Temperature	C	03/09/2006	N001	10	-	15	11.4		F	#		
Total Dissolved Solids	mg/L	03/09/2006	0001	10	-	15	28000		F	#	400	
Total Organic Carbon	mg/L	03/09/2006	N001	10	-	15	27		F	#	1	
Turbidity	NTU	03/09/2006	N001	10	-	15	2.64		F	#		
Uranium	mg/L	03/09/2006	0001	10	-	15	3.1		F	#	.00012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0615 WELL S of floodplain fence, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	4.5	-	9.5	896		F	#		
Ammonia Total as N	mg/L	03/09/2006	0001	4.5	-	9.5	39		F	#	5	
Calcium	mg/L	03/09/2006	0001	4.5	-	9.5	460		F	#	.0078	
Chloride	mg/L	03/09/2006	0001	4.5	-	9.5	870		F	#	100	
Dissolved Oxygen	mg/L	03/09/2006	N001	4.5	-	9.5	2.21		F	#		
Iron	mg/L	03/09/2006	0001	4.5	-	9.5	0.2	B	F	#	.08	
Magnesium	mg/L	03/09/2006	0001	4.5	-	9.5	3400		F	#	.038	
Manganese	mg/L	03/09/2006	0001	4.5	-	9.5	6.7		F	#	.00054	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	4.5	-	9.5	960		F	#	1	
Oxidation Reduction Potential	mV	03/09/2006	N001	4.5	-	9.5	191.7		F	#		
pH	s.u.	03/09/2006	N001	4.5	-	9.5	6.94		F	#		
Potassium	mg/L	03/09/2006	0001	4.5	-	9.5	240		F	#	.39	
Selenium	mg/L	03/09/2006	0001	4.5	-	9.5	0.73		F	#	.0033	
Sodium	mg/L	03/09/2006	0001	4.5	-	9.5	4500		F	#	.17	
Specific Conductance	umhos /cm	03/09/2006	N001	4.5	-	9.5	30580		F	#		
Strontium	mg/L	03/09/2006	0001	4.5	-	9.5	14		F	#	.0024	
Sulfate	mg/L	03/09/2006	0001	4.5	-	9.5	22000		F	#	250	
Temperature	C	03/09/2006	N001	4.5	-	9.5	10.41		F	#		
Total Dissolved Solids	mg/L	03/09/2006	0001	4.5	-	9.5	37000		F	#	1000	
Total Organic Carbon	mg/L	03/09/2006	N001	4.5	-	9.5	29		F	#	1	
Turbidity	NTU	03/09/2006	N001	4.5	-	9.5	6.43		F	#		
Uranium	mg/L	03/09/2006	0001	4.5	-	9.5	4.2		F	#	.00024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
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 Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	11	-	16	970		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	11	-	16	45		F	#	2	
Calcium	mg/L	03/08/2006	0001	11	-	16	440		F	#	.0039	
Chloride	mg/L	03/08/2006	0001	11	-	16	630		F	#	40	
Dissolved Oxygen	mg/L	03/08/2006	N001	11	-	16	2.4		F	#		
Iron	mg/L	03/08/2006	0001	11	-	16	0.04	U	F	#	.04	
Magnesium	mg/L	03/08/2006	0001	11	-	16	1800		F	#	.019	
Manganese	mg/L	03/08/2006	0001	11	-	16	8.8		F	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	11	-	16	250		F	#	2	
Oxidation Reduction Potential	mV	03/08/2006	N001	11	-	16	5.5		F	#		
pH	s.u.	03/08/2006	N001	11	-	16	6.85		F	#		
Potassium	mg/L	03/08/2006	0001	11	-	16	130		F	#	.2	
Selenium	mg/L	03/08/2006	0001	11	-	16	0.23		F	#	.0017	
Sodium	mg/L	03/08/2006	0001	11	-	16	2700		F	#	.17	
Specific Conductance	umhos /cm	03/08/2006	N001	11	-	16	19670		F	#		
Strontium	mg/L	03/08/2006	0001	11	-	16	9.8		F	#	.0012	
Sulfate	mg/L	03/08/2006	0001	11	-	16	14000		F	#	100	
Temperature	C	03/08/2006	N001	11	-	16	12.39		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	11	-	16	24000		F	#	400	
Total Organic Carbon	mg/L	03/08/2006	N001	11	-	16	20		F	#	1	
Turbidity	NTU	03/08/2006	N001	11	-	16	1.27		F	#		
Uranium	mg/L	03/08/2006	0001	11	-	16	2.7		F	#	.00012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0619 WELL Center of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	8	-	13	553		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	8	-	13	0.9		FJ	#	.1	
Calcium	mg/L	03/08/2006	0001	8	-	13	330		F	#	.0039	
Chloride	mg/L	03/08/2006	0001	8	-	13	240		F	#	40	
Dissolved Oxygen	mg/L	03/08/2006	N001	8	-	13	1.01		F	#		
Iron	mg/L	03/08/2006	0001	8	-	13	2.3		F	#	.04	
Magnesium	mg/L	03/08/2006	0001	8	-	13	540		F	#	.019	
Manganese	mg/L	03/08/2006	0001	8	-	13	3.7		F	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	8	-	13	0.05		F	#	.01	
Oxidation Reduction Potential	mV	03/08/2006	N001	8	-	13	-93		F	#		
pH	s.u.	03/08/2006	N001	8	-	13	7.16		F	#		
Potassium	mg/L	03/08/2006	0001	8	-	13	61		F	#	.2	
Selenium	mg/L	03/08/2006	0001	8	-	13	0.00053		F	#	.000066	
Sodium	mg/L	03/08/2006	0001	8	-	13	1800		F	#	.17	
Specific Conductance	umhos /cm	03/08/2006	N001	8	-	13	11860		F	#		
Strontium	mg/L	03/08/2006	0001	8	-	13	6.7		F	#	.0012	
Sulfate	mg/L	03/08/2006	0001	8	-	13	7100		F	#	100	
Temperature	C	03/08/2006	N001	8	-	13	11.93		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	8	-	13	12000		F	#	200	
Total Organic Carbon	mg/L	03/08/2006	N001	8	-	13	7.4		F	#	1	
Turbidity	NTU	03/08/2006	N001	8	-	13	1.03		F	#		
Uranium	mg/L	03/08/2006	0001	8	-	13	0.64		F	#	.00012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0734 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/15/2006	0001	2	-	4	0.1	U		#	.1	
Calcium	mg/L	03/15/2006	0001	2	-	4	350			#	.0023	
Chloride	mg/L	03/15/2006	0001	2	-	4	140			#	20	
Dissolved Oxygen	mg/L	03/15/2006	N001	2	-	4	6.02			#		
Iron	mg/L	03/15/2006	0001	2	-	4	0.024	U		#	.024	
Magnesium	mg/L	03/15/2006	0001	2	-	4	230			#	.011	
Manganese	mg/L	03/15/2006	0001	2	-	4	3.1			#	.00016	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	2	-	4	1.2			#	.01	
Oxidation Reduction Potential	mV	03/15/2006	N001	2	-	4	148.7			#		
pH	s.u.	03/15/2006	N001	2	-	4	7.22			#		
Potassium	mg/L	03/15/2006	0001	2	-	4	27			#	.12	
Selenium	mg/L	03/15/2006	0001	2	-	4	0.0095			#	.000033	
Sodium	mg/L	03/15/2006	0001	2	-	4	790			#	.084	
Specific Conductance	umhos /cm	03/15/2006	N001	2	-	4	10490			#		
Strontium	mg/L	03/15/2006	0001	2	-	4	8.6			#	.00072	
Sulfate	mg/L	03/15/2006	0001	2	-	4	5400			#	50	
Temperature	C	03/15/2006	N001	2	-	4	12.34			#		
Total Dissolved Solids	mg/L	03/15/2006	0001	2	-	4	8600			#	200	
Total Organic Carbon	mg/L	03/15/2006	N001	2	-	4	30			#	1	
Uranium	mg/L	03/15/2006	0001	2	-	4	0.18			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0735 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	3	-	8	697		F	#		
Ammonia Total as N	mg/L	03/09/2006	0001	3	-	8	20		F	#	5	
Calcium	mg/L	03/09/2006	0001	3	-	8	520		F	#	.0039	
Chloride	mg/L	03/09/2006	0001	3	-	8	520		F	#	40	
Dissolved Oxygen	mg/L	03/09/2006	N001	3	-	8	0.9		F	#		
Iron	mg/L	03/09/2006	0001	3	-	8	0.04	U	F	#	.04	
Magnesium	mg/L	03/09/2006	0001	3	-	8	1200		F	#	.019	
Manganese	mg/L	03/09/2006	0001	3	-	8	3.5		F	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	3	-	8	570		F	#	5	
Oxidation Reduction Potential	mV	03/09/2006	N001	3	-	8	232.2		F	#		
pH	s.u.	03/09/2006	N001	3	-	8	6.98		F	#		
Potassium	mg/L	03/09/2006	0001	3	-	8	70		F	#	.2	
Selenium	mg/L	03/09/2006	0001	3	-	8	0.051		F	#	.00033	
Sodium	mg/L	03/09/2006	0001	3	-	8	2200		F	#	.17	
Specific Conductance	umhos /cm	03/09/2006	N001	3	-	8	16810		F	#		
Strontium	mg/L	03/09/2006	0001	3	-	8	10		F	#	.0012	
Sulfate	mg/L	03/09/2006	0001	3	-	8	9300		F	#	100	
Temperature	C	03/09/2006	N001	3	-	8	7.85		F	#		
Total Dissolved Solids	mg/L	03/09/2006	0001	3	-	8	18000		F	#	400	
Total Organic Carbon	mg/L	03/09/2006	N001	3	-	8	16		F	#	1	
Turbidity	NTU	03/09/2006	N001	3	-	8	1.01		F	#		
Uranium	mg/L	03/09/2006	0001	3	-	8	0.33		F	#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0736 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/10/2006	0001	3	-	5	295		F	#		
Ammonia Total as N	mg/L	03/10/2006	0001	3	-	5	0.1	U	F	#	.1	
Calcium	mg/L	03/10/2006	0001	3	-	5	360		F	#	.0023	
Chloride	mg/L	03/10/2006	0001	3	-	5	130		F	#	20	
Dissolved Oxygen	mg/L	03/10/2006	N001	3	-	5	4		F	#		
Iron	mg/L	03/10/2006	0001	3	-	5	0.046	B	UF	#	.024	
Magnesium	mg/L	03/10/2006	0001	3	-	5	210		F	#	.011	
Manganese	mg/L	03/10/2006	0001	3	-	5	0.83		F	#	.00016	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2006	0001	3	-	5	0.052		F	#	.01	
Oxidation Reduction Potential	mV	03/10/2006	N001	3	-	5	22.1		F	#		
pH	s.u.	03/10/2006	N001	3	-	5	7.33		F	#		
Potassium	mg/L	03/10/2006	0001	3	-	5	46		F	#	.12	
Selenium	mg/L	03/10/2006	0001	3	-	5	0.000097	B	UF	#	.000033	
Sodium	mg/L	03/10/2006	0001	3	-	5	1100		F	#	.084	
Specific Conductance	umhos /cm	03/10/2006	N001	3	-	5	7432		F	#		
Strontium	mg/L	03/10/2006	0001	3	-	5	5.7		F	#	.00072	
Sulfate	mg/L	03/10/2006	0001	3	-	5	4400		F	#	50	
Temperature	C	03/10/2006	N001	3	-	5	9.17		F	#		
Total Dissolved Solids	mg/L	03/10/2006	0001	3	-	5	6700		F	#	200	
Total Organic Carbon	mg/L	03/10/2006	N001	3	-	5	3.3		F	#	1	
Turbidity	NTU	03/10/2006	N001	3	-	5	3.04		F	#		
Uranium	mg/L	03/10/2006	0001	3	-	5	0.099		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0797 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	7.3	-	9.3	599		F	#		
Ammonia Total as N	mg/L	03/07/2006	0001	7.3	-	9.3	0.1	U	F	#	.1	
Calcium	mg/L	03/07/2006	0001	7.3	-	9.3	450		F	#	.0023	
Chloride	mg/L	03/07/2006	0001	7.3	-	9.3	190		F	#	20	
Dissolved Oxygen	mg/L	03/07/2006	N001	7.3	-	9.3	0.99		F	#		
Iron	mg/L	03/07/2006	0001	7.3	-	9.3	0.024	U	F	#	.024	
Magnesium	mg/L	03/07/2006	0001	7.3	-	9.3	110		F	#	.011	
Manganese	mg/L	03/07/2006	0001	7.3	-	9.3	7.2		F	#	.00016	
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	7.3	-	9.3	0.025		F	#	.01	
Oxidation Reduction Potential	mV	03/07/2006	N001	7.3	-	9.3	123		F	#		
pH	s.u.	03/07/2006	N001	7.3	-	9.3	7.06		F	#		
Potassium	mg/L	03/07/2006	0001	7.3	-	9.3	12		F	#	.12	
Selenium	mg/L	03/07/2006	0001	7.3	-	9.3	0.00014		F	#	.000033	
Sodium	mg/L	03/07/2006	0001	7.3	-	9.3	1200		F	#	.084	
Specific Conductance	umhos /cm	03/07/2006	N001	7.3	-	9.3	7696		F	#		
Strontium	mg/L	03/07/2006	0001	7.3	-	9.3	7.1		F	#	.00072	
Sulfate	mg/L	03/07/2006	0001	7.3	-	9.3	4000		F	#	50	
Temperature	C	03/07/2006	N001	7.3	-	9.3	13.74		F	#		
Total Dissolved Solids	mg/L	03/07/2006	0001	7.3	-	9.3	6900		F	#	200	
Total Organic Carbon	mg/L	03/07/2006	N001	7.3	-	9.3	12		F	#	1	
Turbidity	NTU	03/07/2006	N001	7.3	-	9.3	3.49		F	#		
Uranium	mg/L	03/07/2006	0001	7.3	-	9.3	0.013		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0850 WELL Background area 1 mi E of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	5.6	-	15.4	367		F	#		
Ammonia Total as N	mg/L	03/07/2006	0001	5.6	-	15.4	0.1	U	F	#	.1	
Calcium	mg/L	03/07/2006	0001	5.6	-	15.4	290		F	#	.0016	
Chloride	mg/L	03/07/2006	0001	5.6	-	15.4	160		F	#	20	
Dissolved Oxygen	mg/L	03/07/2006	N001	5.6	-	15.4	1.67		F	#		
Iron	mg/L	03/07/2006	0001	5.6	-	15.4	0.44		F	#	.016	
Magnesium	mg/L	03/07/2006	0001	5.6	-	15.4	55		F	#	.0076	
Manganese	mg/L	03/07/2006	0001	5.6	-	15.4	1.2		F	#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	5.6	-	15.4	1.7		F	#	.01	
Oxidation Reduction Potential	mV	03/07/2006	N001	5.6	-	15.4	-10.5		F	#		
pH	s.u.	03/07/2006	N001	5.6	-	15.4	7.33		F	#		
Potassium	mg/L	03/07/2006	0001	5.6	-	15.4	9.9		F	#	.079	
Selenium	mg/L	03/07/2006	0001	5.6	-	15.4	0.002		F	#	.000066	
Sodium	mg/L	03/07/2006	0001	5.6	-	15.4	830		F	#	.084	
Specific Conductance	umhos /cm	03/07/2006	N001	5.6	-	15.4	5431		F	#		
Strontium	mg/L	03/07/2006	0001	5.6	-	15.4	3.7		F	#	.00048	
Sulfate	mg/L	03/07/2006	0001	5.6	-	15.4	2600		F	#	50	
Temperature	C	03/07/2006	N001	5.6	-	15.4	14.54		F	#		
Total Dissolved Solids	mg/L	03/07/2006	0001	5.6	-	15.4	4400		F	#	200	
Total Organic Carbon	mg/L	03/07/2006	N001	5.6	-	15.4	9.1		F	#	1	
Turbidity	NTU	03/07/2006	N001	5.6	-	15.4	7.59		F	#		
Uranium	mg/L	03/07/2006	0001	5.6	-	15.4	0.058		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 1008 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/10/2006	0001	6.9	-	16.9	705		F	#		
Ammonia Total as N	mg/L	03/10/2006	0001	6.9	-	16.9	13		F	#	1	
Calcium	mg/L	03/10/2006	0001	6.9	-	16.9	380		F	#	.0039	
Chloride	mg/L	03/10/2006	0001	6.9	-	16.9	660		F	#	40	
Dissolved Oxygen	mg/L	03/10/2006	N001	6.9	-	16.9	1.18		F	#		
Iron	mg/L	03/10/2006	0001	6.9	-	16.9	0.054	B	UF	#	.04	
Magnesium	mg/L	03/10/2006	0001	6.9	-	16.9	1800		F	#	.019	
Manganese	mg/L	03/10/2006	0001	6.9	-	16.9	7		F	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2006	0001	6.9	-	16.9	74		F	#	.5	
Oxidation Reduction Potential	mV	03/10/2006	N001	6.9	-	16.9	65.9		F	#		
pH	s.u.	03/10/2006	N001	6.9	-	16.9	7.03		F	#		
Potassium	mg/L	03/10/2006	0001	6.9	-	16.9	120		F	#	.2	
Selenium	mg/L	03/10/2006	0001	6.9	-	16.9	0.077		F	#	.00066	
Sodium	mg/L	03/10/2006	0001	6.9	-	16.9	3100		F	#	.17	
Specific Conductance	umhos /cm	03/10/2006	N001	6.9	-	16.9	20370		F	#		
Strontium	mg/L	03/10/2006	0001	6.9	-	16.9	10		F	#	.0012	
Sulfate	mg/L	03/10/2006	0001	6.9	-	16.9	16000		F	#	100	
Temperature	C	03/10/2006	N001	6.9	-	16.9	9.59		F	#		
Total Dissolved Solids	mg/L	03/10/2006	0001	6.9	-	16.9	25000		F	#	400	
Total Organic Carbon	mg/L	03/10/2006	N001	6.9	-	16.9	22		F	#	1	
Turbidity	NTU	03/10/2006	N001	6.9	-	16.9	0.88		F	#		
Uranium	mg/L	03/10/2006	0001	6.9	-	16.9	1.7		F	#	.00012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 1089 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	4.8	-	14.8	648			#		
Dissolved Oxygen	mg/L	03/14/2006	N001	4.8	-	14.8	1.95			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	4.8	-	14.8	27			#	.2	
Oxidation Reduction Potential	mV	03/14/2006	N001	4.8	-	14.8	206.8			#		
pH	s.u.	03/14/2006	N001	4.8	-	14.8	7.23			#		
Specific Conductance	umhos /cm	03/14/2006	N001	4.8	-	14.8	15140			#		
Sulfate	mg/L	03/14/2006	0001	4.8	-	14.8	10000			#	100	
Temperature	C	03/14/2006	N001	4.8	-	14.8	11.49			#		
Turbidity	NTU	03/14/2006	N001	4.8	-	14.8	1.62			#		
Uranium	mg/L	03/14/2006	0001	4.8	-	14.8	1			#	.00012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 1104 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	9999 - 9999	954			#		
Dissolved Oxygen	mg/L	03/14/2006	N001	9999 - 9999	2.37			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	9999 - 9999	180			#	2	
Oxidation Reduction Potential	mV	03/14/2006	N001	9999 - 9999	217.5			#		
pH	s.u.	03/14/2006	N001	9999 - 9999	7.21			#		
Specific Conductance	umhos /cm	03/14/2006	N001	9999 - 9999	24290			#		
Sulfate	mg/L	03/14/2006	0001	9999 - 9999	19000			#	250	
Temperature	C	03/14/2006	N001	9999 - 9999	11.05			#		
Turbidity	NTU	03/14/2006	N001	9999 - 9999	2.05			#		
Uranium	mg/L	03/14/2006	0001	9999 - 9999	2.6			#	.00012	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

Ground Water Quality Data
Terrace Locations

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0730 WELL Just SW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/06/2006	0001	26.93	-	36.93	83		F	#	10	
Calcium	mg/L	03/06/2006	0001	26.93	-	36.93	640		F	#	.0016	
Chloride	mg/L	03/06/2006	0001	26.93	-	36.93	13		F	#	2	
Dissolved Oxygen	mg/L	03/06/2006	N001	26.93	-	36.93	2.36		F	#		
Iron	mg/L	03/06/2006	0001	26.93	-	36.93	0.028	B	UF	#	.016	
Magnesium	mg/L	03/06/2006	0001	26.93	-	36.93	140		F	#	.0076	
Manganese	mg/L	03/06/2006	0001	26.93	-	36.93	20		F	#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/06/2006	0001	26.93	-	36.93	130		F	#	1	
Oxidation Reduction Potential	mV	03/06/2006	N001	26.93	-	36.93	393.8		F	#		
pH	s.u.	03/06/2006	N001	26.93	-	36.93	4.03		F	#		
Potassium	mg/L	03/06/2006	0001	26.93	-	36.93	23		F	#	.079	
Selenium	mg/L	03/06/2006	0001	26.93	-	36.93	0.0098		F	#	.000066	
Sodium	mg/L	03/06/2006	0001	26.93	-	36.93	72		F	#	.0034	
Specific Conductance	umhos /cm	03/06/2006	N001	26.93	-	36.93	3626		F	#		
Strontium	mg/L	03/06/2006	0001	26.93	-	36.93	2.8		F	#	.00048	
Sulfate	mg/L	03/06/2006	0001	26.93	-	36.93	2000		F	#	25	
Temperature	C	03/06/2006	N001	26.93	-	36.93	15.32		F	#		
Total Dissolved Solids	mg/L	03/06/2006	0001	26.93	-	36.93	3400		F	#	80	
Total Organic Carbon	mg/L	03/06/2006	N001	26.93	-	36.93	1.8		F	#	1	
Turbidity	NTU	03/06/2006	N001	26.93	-	36.93	0.68		F	#		
Uranium	mg/L	03/06/2006	0001	26.93	-	36.93	0.0049		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0817 WELL Just W of Disposal Cell, NECA yard

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/15/2006	0001	21.6	-	31.62	1309		FQ	#		
Ammonia Total as N	mg/L	03/15/2006	0001	21.6	-	31.62	730		FQ	#	50	
Calcium	mg/L	03/15/2006	0001	21.6	-	31.62	470		FQ	#	.0039	
Chloride	mg/L	03/15/2006	0001	21.6	-	31.62	440		FQ	#	40	
Dissolved Oxygen	mg/L	03/15/2006	N001	21.6	-	31.62	2.36		FQ	#		
Iron	mg/L	03/15/2006	0001	21.6	-	31.62	0.04	U	FQ	#	.04	
Magnesium	mg/L	03/15/2006	0001	21.6	-	31.62	1700		FQ	#	.019	
Manganese	mg/L	03/15/2006	0001	21.6	-	31.62	1.9		FQ	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	21.6	-	31.62	640		FQ	#	5	
Oxidation Reduction Potential	mV	03/15/2006	N001	21.6	-	31.62	267.5		FQ	#		
pH	s.u.	03/15/2006	N001	21.6	-	31.62	6.52		FQ	#		
Potassium	mg/L	03/15/2006	0001	21.6	-	31.62	220		FQ	#	.2	
Selenium	mg/L	03/15/2006	0001	21.6	-	31.62	0.0028		FQ	#	.000066	
Sodium	mg/L	03/15/2006	0001	21.6	-	31.62	1200		FQ	#	.17	
Specific Conductance	umhos /cm	03/15/2006	N001	21.6	-	31.62	18320		FQ	#		
Strontium	mg/L	03/15/2006	0001	21.6	-	31.62	11		FQ	#	.0012	
Sulfate	mg/L	03/15/2006	0001	21.6	-	31.62	9900		FQ	#	100	
Temperature	C	03/15/2006	N001	21.6	-	31.62	16.74		FQ	#		
Total Dissolved Solids	mg/L	03/15/2006	0001	21.6	-	31.62	17000		FQ	#	400	
Total Organic Carbon	mg/L	03/15/2006	N001	21.6	-	31.62	22		FQ	#	1	
Turbidity	NTU	03/15/2006	N001	21.6	-	31.62	2.24		FQ	#		
Uranium	mg/L	03/15/2006	0001	21.6	-	31.62	10		FQ	#	.00047	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0818 WELL Just W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	52	-	61.5	606			#		
Dissolved Oxygen	mg/L	03/14/2006	N001	52	-	61.5	3.3			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	52	-	61.5	1600			#	10	
Oxidation Reduction Potential	mV	03/14/2006	N001	52	-	61.5	159			#		
pH	s.u.	03/14/2006	N001	52	-	61.5	6.81			#		
Specific Conductance	umhos /cm	03/14/2006	N001	52	-	61.5	24200			#		
Sulfate	mg/L	03/14/2006	0001	52	-	61.5	12000			#	250	
Temperature	C	03/14/2006	N001	52	-	61.5	14.21			#		
Turbidity	NTU	03/14/2006	N001	52	-	61.5	1.16			#		
Uranium	mg/L	03/14/2006	0001	52	-	61.5	0.15			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0830 WELL Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/09/2006	0001	7.7	-	17.7	11		F	#	1	
Calcium	mg/L	03/09/2006	0001	7.7	-	17.7	670		F	#	.0016	
Chloride	mg/L	03/09/2006	0001	7.7	-	17.7	60		F	#	10	
Iron	mg/L	03/09/2006	0001	7.7	-	17.7	0.016	U	F	#	.016	
Magnesium	mg/L	03/09/2006	0001	7.7	-	17.7	50		F	#	.0076	
Manganese	mg/L	03/09/2006	0001	7.7	-	17.7	3.7		F	#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	7.7	-	17.7	44		F	#	.5	
Oxidation Reduction Potential	mV	03/09/2006	N001	7.7	-	17.7	290		F	#		
pH	s.u.	03/09/2006	N001	7.7	-	17.7	4.62		F	#		
Potassium	mg/L	03/09/2006	0001	7.7	-	17.7	6.3		F	#	.079	
Selenium	mg/L	03/09/2006	0001	7.7	-	17.7	0.024		F	#	.00017	
Sodium	mg/L	03/09/2006	0001	7.7	-	17.7	140		F	#	.0034	
Specific Conductance	umhos /cm	03/09/2006	N001	7.7	-	17.7	3008		F	#		
Strontium	mg/L	03/09/2006	0001	7.7	-	17.7	0.25		F	#	.00048	
Sulfate	mg/L	03/09/2006	0001	7.7	-	17.7	1700		F	#	25	
Temperature	C	03/09/2006	N001	7.7	-	17.7	9.76		F	#		
Total Dissolved Solids	mg/L	03/09/2006	0001	7.7	-	17.7	2800		F	#	80	
Total Organic Carbon	mg/L	03/09/2006	N001	7.7	-	17.7	1.7		F	#	1	
Turbidity	NTU	03/09/2006	N001	7.7	-	17.7	7.12		F	#		
Uranium	mg/L	03/09/2006	0001	7.7	-	17.7	0.0045		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
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 Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	21.1	-	31.1	452		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	21.1	-	31.1	0.1	U	F	#	.1	
Calcium	mg/L	03/08/2006	0001	21.1	-	31.1	440		F	#	.0039	
Chloride	mg/L	03/08/2006	0001	21.1	-	31.1	980		F	#	40	
Dissolved Oxygen	mg/L	03/08/2006	N001	21.1	-	31.1	2.54		F	#		
Iron	mg/L	03/08/2006	0001	21.1	-	31.1	0.04	U	F	#	.04	
Magnesium	mg/L	03/08/2006	0001	21.1	-	31.1	1600		F	#	.019	
Manganese	mg/L	03/08/2006	0001	21.1	-	31.1	0.028		F	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	21.1	-	31.1	660		F	#	5	
Oxidation Reduction Potential	mV	03/08/2006	N001	21.1	-	31.1	158.8		F	#		
pH	s.u.	03/08/2006	N001	21.1	-	31.1	7.18		F	#		
Potassium	mg/L	03/08/2006	0001	21.1	-	31.1	58		F	#	.2	
Selenium	mg/L	03/08/2006	0001	21.1	-	31.1	3.8		F	#	.017	
Sodium	mg/L	03/08/2006	0001	21.1	-	31.1	3200		F	#	.17	
Specific Conductance	umhos /cm	03/08/2006	N001	21.1	-	31.1	2176		F	#		
Strontium	mg/L	03/08/2006	0001	21.1	-	31.1	9.8		F	#	.0012	
Sulfate	mg/L	03/08/2006	0001	21.1	-	31.1	13000		F	#	100	
Temperature	C	03/08/2006	N001	21.1	-	31.1	13.26		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	21.1	-	31.1	25000		F	#	400	
Total Organic Carbon	mg/L	03/08/2006	N001	21.1	-	31.1	30		F	#	1	
Turbidity	NTU	03/08/2006	N001	21.1	-	31.1	2.86		F	#		
Uranium	mg/L	03/08/2006	0001	21.1	-	31.1	0.17		F	#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0835 WELL Housing area between 2nd Wash and 3rd Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	21.9	-	31.9	3.12		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	21.9	-	31.9	0.1	U	F	#	.1	
Calcium	mg/L	03/08/2006	0001	21.9	-	31.9	490		F	#	.0023	
Chloride	mg/L	03/08/2006	0001	21.9	-	31.9	95		F	#	20	
Dissolved Oxygen	mg/L	03/08/2006	N001	21.9	-	31.9	4.73		F	#		
Iron	mg/L	03/08/2006	0001	21.9	-	31.9	0.024	U	F	#	.024	
Magnesium	mg/L	03/08/2006	0001	21.9	-	31.9	420		F	#	.011	
Manganese	mg/L	03/08/2006	0001	21.9	-	31.9	0.00051	B	UF	#	.00016	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	21.9	-	31.9	42		F	#	.5	
Oxidation Reduction Potential	mV	03/08/2006	N001	21.9	-	31.9	146.8		F	#		
pH	s.u.	03/08/2006	N001	21.9	-	31.9	7.1		F	#		
Potassium	mg/L	03/08/2006	0001	21.9	-	31.9	18		F	#	.12	
Selenium	mg/L	03/08/2006	0001	21.9	-	31.9	0.13		F	#	.00066	
Sodium	mg/L	03/08/2006	0001	21.9	-	31.9	670		F	#	.084	
Specific Conductance	umhos /cm	03/08/2006	N001	21.9	-	31.9	6290		F	#		
Strontium	mg/L	03/08/2006	0001	21.9	-	31.9	6		F	#	.00072	
Sulfate	mg/L	03/08/2006	0001	21.9	-	31.9	3600		F	#	50	
Temperature	C	03/08/2006	N001	21.9	-	31.9	11.38		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	21.9	-	31.9	6400		F	#	200	
Total Organic Carbon	mg/L	03/08/2006	N001	21.9	-	31.9	5.6		F	#	1	
Turbidity	NTU	03/08/2006	N001	21.9	-	31.9	1.35		F	#		
Uranium	mg/L	03/08/2006	0001	21.9	-	31.9	0.05		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
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 Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	26.8	-	36.8	369		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	26.8	-	36.8	0.1	U	F	#	.1	
Calcium	mg/L	03/08/2006	0001	26.8	-	36.8	550		F	#	.0016	
Chloride	mg/L	03/08/2006	0001	26.8	-	36.8	33		F	#	2	
Dissolved Oxygen	mg/L	03/08/2006	N001	26.8	-	36.8	3.42		F	#		
Iron	mg/L	03/08/2006	0001	26.8	-	36.8	0.016	U	F	#	.016	
Magnesium	mg/L	03/08/2006	0001	26.8	-	36.8	290		F	#	.0076	
Manganese	mg/L	03/08/2006	0001	26.8	-	36.8	2.1		F	#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	26.8	-	36.8	7.2		F	#	.05	
Oxidation Reduction Potential	mV	03/08/2006	N001	26.8	-	36.8	137		F	#		
pH	s.u.	03/08/2006	N001	26.8	-	36.8	7.08		F	#		
Potassium	mg/L	03/08/2006	0001	26.8	-	36.8	8.9		F	#	.079	
Selenium	mg/L	03/08/2006	0001	26.8	-	36.8	0.085		F	#	.00066	
Sodium	mg/L	03/08/2006	0001	26.8	-	36.8	340		F	#	.084	
Specific Conductance	umhos /cm	03/08/2006	N001	26.8	-	36.8	4510		F	#		
Strontium	mg/L	03/08/2006	0001	26.8	-	36.8	6.1		F	#	.00048	
Sulfate	mg/L	03/08/2006	0001	26.8	-	36.8	2800		F	#	25	
Temperature	C	03/08/2006	N001	26.8	-	36.8	12.97		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	26.8	-	36.8	4600		F	#	80	
Total Organic Carbon	mg/L	03/08/2006	N001	26.8	-	36.8	6.3		F	#	1	
Turbidity	NTU	03/08/2006	N001	26.8	-	36.8	8.19		F	#		
Uranium	mg/L	03/08/2006	0001	26.8	-	36.8	0.054		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0838 WELL W part of Dine College tract

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	21.9	-	31.9	281		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	21.9	-	31.9	0.1	U	F	#	.1	
Calcium	mg/L	03/08/2006	0001	21.9	-	31.9	760		F	#	.0016	
Chloride	mg/L	03/08/2006	0001	21.9	-	31.9	100		F	#	10	
Dissolved Oxygen	mg/L	03/08/2006	N001	21.9	-	31.9	2.21		F	#		
Iron	mg/L	03/08/2006	0001	21.9	-	31.9	0.016	U	F	#	.016	
Magnesium	mg/L	03/08/2006	0001	21.9	-	31.9	170		F	#	.0076	
Manganese	mg/L	03/08/2006	0001	21.9	-	31.9	0.0038	B	UF	#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	21.9	-	31.9	62		F	#	.5	
Oxidation Reduction Potential	mV	03/08/2006	N001	21.9	-	31.9	151.5		F	#		
pH	s.u.	03/08/2006	N001	21.9	-	31.9	6.98		F	#		
Potassium	mg/L	03/08/2006	0001	21.9	-	31.9	13		F	#	.079	
Selenium	mg/L	03/08/2006	0001	21.9	-	31.9	0.35		F	#	.0017	
Sodium	mg/L	03/08/2006	0001	21.9	-	31.9	290		F	#	.084	
Specific Conductance	umhos /cm	03/08/2006	N001	21.9	-	31.9	4488		F	#		
Strontium	mg/L	03/08/2006	0001	21.9	-	31.9	6.3		F	#	.00048	
Sulfate	mg/L	03/08/2006	0001	21.9	-	31.9	2400		F	#	25	
Temperature	C	03/08/2006	N001	21.9	-	31.9	13.85		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	21.9	-	31.9	4500		F	#	80	
Total Organic Carbon	mg/L	03/08/2006	N001	21.9	-	31.9	6.2		F	#	1	
Turbidity	NTU	03/08/2006	N001	21.9	-	31.9	0.61		F	#		
Uranium	mg/L	03/08/2006	0001	21.9	-	31.9	0.039		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0839 WELL West part of fairgrounds, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/15/2006	0001	18.1	-	28.1	66			#	2	
Calcium	mg/L	03/15/2006	0001	18.1	-	28.1	440			#	.0039	
Chloride	mg/L	03/15/2006	0001	18.1	-	28.1	450			#	40	
Dissolved Oxygen	mg/L	03/15/2006	N001	18.1	-	28.1	2.01			#		
Iron	mg/L	03/15/2006	0001	18.1	-	28.1	0.04	U		#	.04	
Magnesium	mg/L	03/15/2006	0001	18.1	-	28.1	2100			#	.019	
Manganese	mg/L	03/15/2006	0001	18.1	-	28.1	1.1			#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	18.1	-	28.1	530			#	5	
Oxidation Reduction Potential	mV	03/15/2006	N001	18.1	-	28.1	238.8			#		
pH	s.u.	03/15/2006	N001	18.1	-	28.1	6.67			#		
Potassium	mg/L	03/15/2006	0001	18.1	-	28.1	130			#	.2	
Selenium	mg/L	03/15/2006	0001	18.1	-	28.1	0.0013			#	.000066	
Sodium	mg/L	03/15/2006	0001	18.1	-	28.1	1700			#	.17	
Specific Conductance	umhos /cm	03/15/2006	N001	18.1	-	28.1	16780			#		
Strontium	mg/L	03/15/2006	0001	18.1	-	28.1	11			#	.0012	
Sulfate	mg/L	03/15/2006	0001	18.1	-	28.1	11000			#	100	
Temperature	C	03/15/2006	N001	18.1	-	28.1	16.53			#		
Total Dissolved Solids	mg/L	03/15/2006	0001	18.1	-	28.1	20000			#	400	
Total Organic Carbon	mg/L	03/15/2006	N001	18.1	-	28.1	26			#	1	
Turbidity	NTU	03/15/2006	N001	18.1	-	28.1	2.28			#		
Uranium	mg/L	03/15/2006	0001	18.1	-	28.1	0.5			#	.000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
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 Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	42	-	52	767		F	#		
Ammonia Total as N	mg/L	03/07/2006	0001	42	-	52	0.1	U	F	#	.1	
Calcium	mg/L	03/07/2006	0001	42	-	52	440		F	#	.0078	
Chloride	mg/L	03/07/2006	0001	42	-	52	810		F	#	100	
Dissolved Oxygen	mg/L	03/07/2006	N001	42	-	52	1.19		F	#		
Iron	mg/L	03/07/2006	0001	42	-	52	0.08	U	F	#	.08	
Magnesium	mg/L	03/07/2006	0001	42	-	52	740		F	#	.038	
Manganese	mg/L	03/07/2006	0001	42	-	52	0.031	B	F	#	.00054	
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	42	-	52	620		F	#	5	
Oxidation Reduction Potential	mV	03/07/2006	N001	42	-	52	159.3		F	#		
pH	s.u.	03/07/2006	N001	42	-	52	7.14		F	#		
Potassium	mg/L	03/07/2006	0001	42	-	52	83		F	#	.39	
Selenium	mg/L	03/07/2006	0001	42	-	52	3.5		F	#	.017	
Sodium	mg/L	03/07/2006	0001	42	-	52	4600		F	#	.17	
Specific Conductance	umhos /cm	03/07/2006	N001	42	-	52	24700		F	#		
Strontium	mg/L	03/07/2006	0001	42	-	52	7.9		F	#	.0024	
Sulfate	mg/L	03/07/2006	0001	42	-	52	13000		F	#	250	
Temperature	C	03/07/2006	N001	42	-	52	15.51		F	#		
Total Dissolved Solids	mg/L	03/07/2006	0001	42	-	52	25000		F	#	400	
Total Organic Carbon	mg/L	03/07/2006	N001	42	-	52	30		F	#	1	
Turbidity	NTU	03/07/2006	N001	42	-	52	2.64		F	#		
Uranium	mg/L	03/07/2006	0001	42	-	52	0.11		F	#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
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 Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	17.9	-	27.9	223		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	17.9	-	27.9	0.1	U	F	#	.1	
Ammonia Total as N	mg/L	03/08/2006	0002	17.9	-	27.9	0.1	U	F	#	.1	
Calcium	mg/L	03/08/2006	0001	17.9	-	27.9	550		F	#	.0016	
Calcium	mg/L	03/08/2006	0002	17.9	-	27.9	580		F	#	.0016	
Chloride	mg/L	03/08/2006	0001	17.9	-	27.9	31		F	#	10	
Chloride	mg/L	03/08/2006	0002	17.9	-	27.9	32		F	#	10	
Dissolved Oxygen	mg/L	03/08/2006	N001	17.9	-	27.9	6.19		F	#		
Iron	mg/L	03/08/2006	0001	17.9	-	27.9	0.016	U	F	#	.016	
Iron	mg/L	03/08/2006	0002	17.9	-	27.9	0.016	U	F	#	.016	
Magnesium	mg/L	03/08/2006	0001	17.9	-	27.9	200		F	#	.0076	
Magnesium	mg/L	03/08/2006	0002	17.9	-	27.9	210		F	#	.0076	
Manganese	mg/L	03/08/2006	0001	17.9	-	27.9	0.00011	U	F	#	.00011	
Manganese	mg/L	03/08/2006	0002	17.9	-	27.9	0.00036	B	UF	#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	17.9	-	27.9	17		F	#	.2	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0002	17.9	-	27.9	17		F	#	.1	
Oxidation Reduction Potential	mV	03/08/2006	N001	17.9	-	27.9	146.8		F	#		
pH	s.u.	03/08/2006	N001	17.9	-	27.9	7.12		F	#		
Potassium	mg/L	03/08/2006	0001	17.9	-	27.9	12		F	#	.079	
Potassium	mg/L	03/08/2006	0002	17.9	-	27.9	12		F	#	.079	
Selenium	mg/L	03/08/2006	0001	17.9	-	27.9	0.26		F	#	.0017	
Selenium	mg/L	03/08/2006	0002	17.9	-	27.9	0.19		F	#	.0017	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
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 Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Sodium	mg/L	03/08/2006	0001	17.9	-	27.9	250		F	#	.017	
Sodium	mg/L	03/08/2006	0002	17.9	-	27.9	260		F	#	.017	
Specific Conductance	umhos /cm	03/08/2006	N001	17.9	-	27.9	4046		F	#		
Strontium	mg/L	03/08/2006	0001	17.9	-	27.9	5.1		F	#	.00048	
Strontium	mg/L	03/08/2006	0002	17.9	-	27.9	5.1		F	#	.00048	
Sulfate	mg/L	03/08/2006	0001	17.9	-	27.9	2500		F	#	25	
Sulfate	mg/L	03/08/2006	0002	17.9	-	27.9	2500		F	#	25	
Temperature	C	03/08/2006	N001	17.9	-	27.9	13.92		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	17.9	-	27.9	4000		F	#	80	
Total Dissolved Solids	mg/L	03/08/2006	0002	17.9	-	27.9	4200		F	#	80	
Total Organic Carbon	mg/L	03/08/2006	N001	17.9	-	27.9	4.2		F	#	1	
Total Organic Carbon	mg/L	03/08/2006	N002	17.9	-	27.9	4.4		F	#	1	
Turbidity	NTU	03/08/2006	N001	17.9	-	27.9	6.81		F	#		
Uranium	mg/L	03/08/2006	0001	17.9	-	27.9	0.033		F	#	.0000024	
Uranium	mg/L	03/08/2006	0002	17.9	-	27.9	0.033		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1057 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	36.66	-	41.66	422		F	#		
Ammonia Total as N	mg/L	03/14/2006	0001	36.66	-	41.66	1100		F	#	50	
Calcium	mg/L	03/14/2006	0001	36.66	-	41.66	520		F	#	.0039	
Chloride	mg/L	03/14/2006	0001	36.66	-	41.66	450		F	#	40	
Dissolved Oxygen	mg/L	03/14/2006	N001	36.66	-	41.66	2.19		F	#		
Iron	mg/L	03/14/2006	0001	36.66	-	41.66	0.04	U	F	#	.04	
Magnesium	mg/L	03/14/2006	0001	36.66	-	41.66	1900		F	#	.019	
Manganese	mg/L	03/14/2006	0001	36.66	-	41.66	6.4		F	#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	36.66	-	41.66	1600		F	#	10	
Oxidation Reduction Potential	mV	03/14/2006	N001	36.66	-	41.66	193.7		F	#		
pH	s.u.	03/14/2006	N001	36.66	-	41.66	6.93		F	#		
Potassium	mg/L	03/14/2006	0001	36.66	-	41.66	280		F	#	.2	
Selenium	mg/L	03/14/2006	0001	36.66	-	41.66	0.33		F	#	.0017	
Sodium	mg/L	03/14/2006	0001	36.66	-	41.66	1300		F	#	.17	
Specific Conductance	umhos /cm	03/14/2006	N001	36.66	-	41.66	21980		F	#		
Strontium	mg/L	03/14/2006	0001	36.66	-	41.66	8.7		F	#	.0012	
Sulfate	mg/L	03/14/2006	0001	36.66	-	41.66	9400		F	#	100	
Temperature	C	03/14/2006	N001	36.66	-	41.66	12.77		F	#		
Total Dissolved Solids	mg/L	03/14/2006	0001	36.66	-	41.66	21000		F	#	400	
Total Organic Carbon	mg/L	03/14/2006	N001	36.66	-	41.66	6.6		F	#	1	
Turbidity	NTU	03/14/2006	N001	36.66	-	41.66	2.31		F	#		
Uranium	mg/L	03/14/2006	0001	36.66	-	41.66	0.058		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1071 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	36.5	-	46	182			#		
Dissolved Oxygen	mg/L	03/07/2006	N001	36.5	-	46	1.23			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	36.5	-	46	1900			#	20	
Oxidation Reduction Potential	mV	03/07/2006	N001	36.5	-	46	176.1			#		
pH	s.u.	03/07/2006	N001	36.5	-	46	6.35			#		
Specific Conductance	umhos /cm	03/07/2006	N001	36.5	-	46	19780			#		
Sulfate	mg/L	03/07/2006	0001	36.5	-	46	4600			#	100	
Temperature	C	03/07/2006	N001	36.5	-	46	13.58			#		
Turbidity	NTU	03/07/2006	N001	36.5	-	46	1.99			#		
Uranium	mg/L	03/07/2006	0001	36.5	-	46	0.11			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1078 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	35.5	-	45	437			#		
Dissolved Oxygen	mg/L	03/07/2006	N001	35.5	-	45	1.58			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	35.5	-	45	630			#	5	
Oxidation Reduction Potential	mV	03/07/2006	N001	35.5	-	45	174.1			#		
pH	s.u.	03/07/2006	N001	35.5	-	45	7.07			#		
Specific Conductance	umhos /cm	03/07/2006	N001	35.5	-	45	23650			#		
Sulfate	mg/L	03/07/2006	0001	35.5	-	45	14000			#	250	
Temperature	C	03/07/2006	N001	35.5	-	45	16.85			#		
Turbidity	NTU	03/07/2006	N001	35.5	-	45	1.31			#		
Uranium	mg/L	03/07/2006	0001	35.5	-	45	0.14			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1079 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/08/2006	0001	10.5	-	20	298		F	#		
Ammonia Total as N	mg/L	03/08/2006	0001	10.5	-	20	0.1	U	F	#	.1	
Calcium	mg/L	03/08/2006	0001	10.5	-	20	470		F	#	.0016	
Chloride	mg/L	03/08/2006	0001	10.5	-	20	77		F	#	10	
Dissolved Oxygen	mg/L	03/08/2006	N001	10.5	-	20	3.15		F	#		
Iron	mg/L	03/08/2006	0001	10.5	-	20	0.016	U	F	#	.016	
Magnesium	mg/L	03/08/2006	0001	10.5	-	20	100		F	#	.0076	
Manganese	mg/L	03/08/2006	0001	10.5	-	20	0.0012	B	UF	#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/08/2006	0001	10.5	-	20	42		F	#	.5	
Oxidation Reduction Potential	mV	03/08/2006	N001	10.5	-	20	147		F	#		
pH	s.u.	03/08/2006	N001	10.5	-	20	7		F	#		
Potassium	mg/L	03/08/2006	0001	10.5	-	20	11	E	F	#	.079	
Selenium	mg/L	03/08/2006	0001	10.5	-	20	0.27		F	#	.0017	
Sodium	mg/L	03/08/2006	0001	10.5	-	20	270		F	#	.017	
Specific Conductance	umhos /cm	03/08/2006	N001	10.5	-	20	3527		F	#		
Strontium	mg/L	03/08/2006	0001	10.5	-	20	4.4		F	#	.00048	
Sulfate	mg/L	03/08/2006	0001	10.5	-	20	1700		F	#	25	
Temperature	C	03/08/2006	N001	10.5	-	20	13.59		F	#		
Total Dissolved Solids	mg/L	03/08/2006	0001	10.5	-	20	3300		F	#	80	
Total Organic Carbon	mg/L	03/08/2006	N001	10.5	-	20	4.4		F	#	1	
Turbidity	NTU	03/08/2006	N001	10.5	-	20	7.36		F	#		
Uranium	mg/L	03/08/2006	0001	10.5	-	20	0.026		F	#	.0000024	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1087 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001		350			#		
Dissolved Oxygen	mg/L	03/14/2006	N001		2.12			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001		430			#	10	
Oxidation Reduction Potential	mV	03/14/2006	N001		115			#		
pH	s.u.	03/14/2006	N001		6.85			#		
Specific Conductance	umhos /cm	03/14/2006	N001		14540			#		
Sulfate	mg/L	03/14/2006	0001		9100			#	250	
Temperature	C	03/14/2006	N001		11.85			#		
Uranium	mg/L	03/14/2006	0001		0.69			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1088 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001		586			#		
Dissolved Oxygen	mg/L	03/14/2006	N001		3.22			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001		720			#	10	
Oxidation Reduction Potential	mV	03/14/2006	N001		198.2			#		
pH	s.u.	03/14/2006	N001		7.54			#		
Specific Conductance	umhos /cm	03/14/2006	N001		29310			#		
Sulfate	mg/L	03/14/2006	0001		19000			#	250	
Temperature	C	03/14/2006	N001		7.9			#		
Uranium	mg/L	03/14/2006	0001		0.2			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1091 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	33	-	43	877			#		
Dissolved Oxygen	mg/L	03/14/2006	N001	33	-	43	2.7			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	33	-	43	1600			#	10	
Oxidation Reduction Potential	mV	03/14/2006	N001	33	-	43	164			#		
pH	s.u.	03/14/2006	N001	33	-	43	6.67			#		
Specific Conductance	umhos /cm	03/14/2006	N001	33	-	43	25370			#		
Sulfate	mg/L	03/14/2006	0001	33	-	43	11000			#	250	
Temperature	C	03/14/2006	N001	33	-	43	11.9			#		
Uranium	mg/L	03/14/2006	0001	33	-	43	0.12			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1092 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	33	-	43	854			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	33	-	43	1500			#	10	
Oxidation Reduction Potential	mV	03/14/2006	N001	33	-	43	143			#		
pH	s.u.	03/14/2006	N001	33	-	43	6.8			#		
Specific Conductance	umhos /cm	03/14/2006	N001	33	-	43	25840			#		
Sulfate	mg/L	03/14/2006	0001	33	-	43	13000			#	100	
Temperature	C	03/14/2006	N001	33	-	43	15.54			#		
Uranium	mg/L	03/14/2006	0001	33	-	43	0.12			#	.000012	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 1093 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	31.17	-	34.5	340			#		
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	31.17	-	34.5	3100			#	20	
Oxidation Reduction Potential	mV	03/14/2006	N001	31.17	-	34.5	158			#		
pH	s.u.	03/14/2006	N001	31.17	-	34.5	6.78			#		
Specific Conductance	umhos /cm	03/14/2006	N001	31.17	-	34.5	27120			#		
Sulfate	mg/L	03/14/2006	0001	31.17	-	34.5	5300			#	100	
Temperature	C	03/14/2006	N001	31.17	-	34.5	10.15			#		
Uranium	mg/L	03/14/2006	0001	31.17	-	34.5	0.084			#	.0000024	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

Surface Water Quality Data
Floodplain Locations

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0501 SURFACE LOCATION S. bank San Juan River just E of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	120			#		
Ammonia Total as N	mg/L	03/09/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/09/2006	0001	78			#	.00078	
Chloride	mg/L	03/09/2006	0001	18			#	2	
Magnesium	mg/L	03/09/2006	0001	14			#	.0038	
Manganese	mg/L	03/09/2006	0001	0.02			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	0.87			#	.01	
Oxidation Reduction Potential	mV	03/09/2006	N001	144			#		
pH	s.u.	03/09/2006	N001	8.9			#		
Potassium	mg/L	03/09/2006	0001	3.7			#	.039	
Selenium	mg/L	03/09/2006	0001	0.00068			#	.000033	
Sodium	mg/L	03/09/2006	0001	41			#	.0017	
Specific Conductance	umhos/cm	03/09/2006	N001	675			#		
Strontium	mg/L	03/09/2006	0001	0.92			#	.00024	
Sulfate	mg/L	03/09/2006	0001	180			#	5	
Temperature	C	03/09/2006	N001	6.86			#		
Uranium	mg/L	03/09/2006	0001	0.0019			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0655 SURFACE LOCATION Ditch in NW end of floodplain

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/15/2006	0001	396			#		
Ammonia Total as N	mg/L	03/15/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/15/2006	0001	260			#	.0016	
Chloride	mg/L	03/15/2006	0001	77			#	20	
Dissolved Oxygen	mg/L	03/15/2006	N001	10.74			#		
Magnesium	mg/L	03/15/2006	0001	72			#	.0076	
Manganese	mg/L	03/15/2006	0001	1.3			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	0.75			#	.01	
Oxidation Reduction Potential	mV	03/15/2006	N001	142.1			#		
pH	s.u.	03/15/2006	N001	7.61			#		
Potassium	mg/L	03/15/2006	0001	17			#	.079	
Selenium	mg/L	03/15/2006	0001	0.0016			#	.000033	
Sodium	mg/L	03/15/2006	0001	880			#	.084	
Specific Conductance	umhos/cm	03/15/2006	N001	5676			#		
Strontium	mg/L	03/15/2006	0001	8.2			#	.00048	
Sulfate	mg/L	03/15/2006	0001	3000			#	50	
Temperature	C	03/15/2006	N001	6.37			#		
Uranium	mg/L	03/15/2006	0001	0.043			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0887 SURFACE LOCATION Distributary channel of San Juan River; Adjusted 33 Ft. North of GPS Location

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	283			#		
Ammonia Total as N	mg/L	03/07/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/07/2006	0001	500			#	.0016	
Chloride	mg/L	03/07/2006	0001	75			#	10	
Dissolved Oxygen	mg/L	03/07/2006	N001	10.93			#		
Magnesium	mg/L	03/07/2006	0001	320			#	.0076	
Manganese	mg/L	03/07/2006	0001	0.28			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	16			#	.1	
Oxidation Reduction Potential	mV	03/07/2006	N001	140.2			#		
pH	s.u.	03/07/2006	N001	7.93			#		
Potassium	mg/L	03/07/2006	0001	16			#	.079	
Selenium	mg/L	03/07/2006	0001	0.074			#	.00066	
Sodium	mg/L	03/07/2006	0001	360			#	.084	
Specific Conductance	umhos/cm	03/07/2006	N001	4849			#		
Strontium	mg/L	03/07/2006	0001	5.7			#	.00048	
Sulfate	mg/L	03/07/2006	0001	2900			#	25	
Temperature	C	03/07/2006	N001	12.27			#		
Uranium	mg/L	03/07/2006	0001	0.048			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0897 SURFACE LOCATION S. bank San Juan River, just below Many Devils Wash confluence

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	115			#		
Ammonia Total as N	mg/L	03/09/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/09/2006	0001	76			#	.00078	
Chloride	mg/L	03/09/2006	0001	18			#	2	
Dissolved Oxygen	mg/L	03/09/2006	N001	12.6			#		
Magnesium	mg/L	03/09/2006	0001	14			#	.0038	
Manganese	mg/L	03/09/2006	0001	0.034			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	1.1			#	.01	
Oxidation Reduction Potential	mV	03/09/2006	N001	165			#		
pH	s.u.	03/09/2006	N001	8.59			#		
Potassium	mg/L	03/09/2006	0001	3.5			#	.039	
Selenium	mg/L	03/09/2006	0001	0.0011			#	.000033	
Sodium	mg/L	03/09/2006	0001	43			#	.0017	
Specific Conductance	umhos/cm	03/09/2006	N001	662			#		
Strontium	mg/L	03/09/2006	0001	0.93			#	.00024	
Sulfate	mg/L	03/09/2006	0001	190			#	5	
Temperature	C	03/09/2006	N001	5.14			#		
Uranium	mg/L	03/09/2006	0001	0.002			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0898 SURFACE LOCATION S. bank San Juan River, N of floodplain background area

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	104			#		
Ammonia Total as N	mg/L	03/07/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/07/2006	0001	78			#	.00078	
Chloride	mg/L	03/07/2006	0001	16			#	2	
Dissolved Oxygen	mg/L	03/07/2006	N001	12.22			#		
Magnesium	mg/L	03/07/2006	0001	14			#	.0038	
Manganese	mg/L	03/07/2006	0001	0.025			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	0.17			#	.01	
Oxidation Reduction Potential	mV	03/07/2006	N001	39.9			#		
pH	s.u.	03/07/2006	N001	8.69			#		
Potassium	mg/L	03/07/2006	0001	3.8			#	.039	
Selenium	mg/L	03/07/2006	0001	0.00068			#	.000033	
Sodium	mg/L	03/07/2006	0001	40			#	.0017	
Specific Conductance	umhos/cm	03/07/2006	N001	638			#		
Strontium	mg/L	03/07/2006	0001	0.96			#	.00024	
Sulfate	mg/L	03/07/2006	0001	180			#	5	
Temperature	C	03/07/2006	N001	11.58			#		
Turbidity	NTU	03/07/2006	N001	17.7			#		
Uranium	mg/L	03/07/2006	0001	0.002			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0937 SURFACE LOCATION Distributary channel of San Juan River

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/16/2006	0001	320			#		
Ammonia Total as N	mg/L	03/16/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/16/2006	0001	530			#	.0016	
Chloride	mg/L	03/16/2006	0001	81			#	10	
Dissolved Oxygen	mg/L	03/16/2006	N001	10.71			#		
Magnesium	mg/L	03/16/2006	0001	350			#	.0076	
Manganese	mg/L	03/16/2006	0001	0.42			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/16/2006	0001	18			#	.2	
Oxidation Reduction Potential	mV	03/16/2006	N001	170.9			#		
pH	s.u.	03/16/2006	N001	7.66			#		
Potassium	mg/L	03/16/2006	0001	17			#	.079	
Selenium	mg/L	03/16/2006	0001	0.074			#	.00033	
Sodium	mg/L	03/16/2006	0001	380			#	.084	
Specific Conductance	umhos/cm	03/16/2006	N001	5064			#		
Strontium	mg/L	03/16/2006	0001	6.1			#	.00048	
Sulfate	mg/L	03/16/2006	0001	3100			#	25	
Temperature	C	03/16/2006	N001	6.41			#		
Uranium	mg/L	03/16/2006	0001	0.056			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0939 SURFACE LOCATION Distributary channel of San Juan River

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	345			#		
Ammonia Total as N	mg/L	03/07/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/07/2006	0001	560			#	.0016	
Chloride	mg/L	03/07/2006	0001	140			#	20	
Dissolved Oxygen	mg/L	03/07/2006	N001	14.4			#		
Magnesium	mg/L	03/07/2006	0001	320			#	.0076	
Manganese	mg/L	03/07/2006	0001	2.5			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	27			#	.2	
Oxidation Reduction Potential	mV	03/07/2006	N001	149			#		
pH	s.u.	03/07/2006	N001	7.68			#		
Potassium	mg/L	03/07/2006	0001	17			#	.079	
Selenium	mg/L	03/07/2006	0001	0.16			#	.00066	
Sodium	mg/L	03/07/2006	0001	460			#	.084	
Specific Conductance	umhos/cm	03/07/2006	N001	5387			#		
Strontium	mg/L	03/07/2006	0001	6.2			#	.00048	
Sulfate	mg/L	03/07/2006	0001	3100			#	50	
Temperature	C	03/07/2006	N001	15.16			#		
Uranium	mg/L	03/07/2006	0001	0.056			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0940 SURFACE LOCATION S. bank San Juan River about 2500 ft E of US Hwy 666 bridge

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	119			#		
Ammonia Total as N	mg/L	03/14/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/14/2006	0001	71			#	.00078	
Chloride	mg/L	03/14/2006	0001	16			#	1	
Dissolved Oxygen	mg/L	03/14/2006	N001	18.5			#		
Magnesium	mg/L	03/14/2006	0001	13			#	.0038	
Manganese	mg/L	03/14/2006	0001	0.022			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	0.27			#	.01	
Oxidation Reduction Potential	mV	03/14/2006	N001	183			#		
pH	s.u.	03/14/2006	N001	8.78			#		
Potassium	mg/L	03/14/2006	0001	3.4	E		#	.039	
Selenium	mg/L	03/14/2006	0001	0.00058			#	.000033	
Sodium	mg/L	03/14/2006	0001	38			#	.0017	
Specific Conductance	umhos/cm	03/14/2006	N001	654			#		
Strontium	mg/L	03/14/2006	0001	0.89			#	.00024	
Sulfate	mg/L	03/14/2006	0001	180			#	2.5	
Temperature	C	03/14/2006	N001	8.41			#		
Uranium	mg/L	03/14/2006	0001	0.0023			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0956 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/16/2006	0001	121			#		
Ammonia Total as N	mg/L	03/16/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/16/2006	0001	72			#	.00078	
Chloride	mg/L	03/16/2006	0001	17			#	1	
Dissolved Oxygen	mg/L	03/16/2006	N001	17.4			#		
Magnesium	mg/L	03/16/2006	0001	13			#	.0038	
Manganese	mg/L	03/16/2006	0001	0.028			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/16/2006	0001	0.16			#	.01	
Oxidation Reduction Potential	mV	03/16/2006	N001	105.3			#		
pH	s.u.	03/16/2006	N001	8.79			#		
Potassium	mg/L	03/16/2006	0001	3.6			#	.039	
Selenium	mg/L	03/16/2006	0001	0.00057			#	.000033	
Sodium	mg/L	03/16/2006	0001	39			#	.0017	
Specific Conductance	umhos/cm	03/16/2006	N001	637			#		
Strontium	mg/L	03/16/2006	0001	0.9			#	.00024	
Sulfate	mg/L	03/16/2006	0001	180			#	2.5	
Temperature	C	03/16/2006	N001	9.5			#		
Uranium	mg/L	03/16/2006	0001	0.0019			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0957 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/07/2006	0001	115			#		
Ammonia Total as N	mg/L	03/07/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/07/2006	0001	77			#	.00078	
Chloride	mg/L	03/07/2006	0001	17			#	2	
Dissolved Oxygen	mg/L	03/07/2006	N001	13.41			#		
Magnesium	mg/L	03/07/2006	0001	14			#	.0038	
Manganese	mg/L	03/07/2006	0001	0.022			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/07/2006	0001	1.3			#	.01	
Oxidation Reduction Potential	mV	03/07/2006	N001	115.2			#		
pH	s.u.	03/07/2006	N001	8.9			#		
Potassium	mg/L	03/07/2006	0001	3.8			#	.039	
Selenium	mg/L	03/07/2006	0001	0.00061			#	.000033	
Sodium	mg/L	03/07/2006	0001	41			#	.0017	
Specific Conductance	umhos/cm	03/07/2006	N001	632			#		
Strontium	mg/L	03/07/2006	0001	0.95			#	.00024	
Sulfate	mg/L	03/07/2006	0001	180			#	5	
Temperature	C	03/07/2006	N001	12.55			#		
Uranium	mg/L	03/07/2006	0001	0.0022			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0959 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/15/2006	0001	270			#		
Ammonia Total as N	mg/L	03/15/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/15/2006	0001	500			#	.0016	
Chloride	mg/L	03/15/2006	0001	47			#	10	
Dissolved Oxygen	mg/L	03/15/2006	N001	8.11			#		
Magnesium	mg/L	03/15/2006	0001	310			#	.0076	
Manganese	mg/L	03/15/2006	0001	0.053			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	5.7			#	.05	
Oxidation Reduction Potential	mV	03/15/2006	N001	139.9			#		
pH	s.u.	03/15/2006	N001	7.94			#		
Potassium	mg/L	03/15/2006	0001	17			#	.079	
Selenium	mg/L	03/15/2006	0001	0.026			#	.00017	
Sodium	mg/L	03/15/2006	0001	260			#	.017	
Specific Conductance	umhos/cm	03/15/2006	N001	4278			#		
Strontium	mg/L	03/15/2006	0001	5.8			#	.00048	
Sulfate	mg/L	03/15/2006	0001	2800			#	25	
Temperature	C	03/15/2006	N001	14.58			#		
Uranium	mg/L	03/15/2006	0001	0.039			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 0965 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/16/2006	0001	115			#		
Ammonia Total as N	mg/L	03/16/2006	0001	0.1	U		#	.1	
Ammonia Total as N	mg/L	03/16/2006	0002	0.1	U		#	.1	
Calcium	mg/L	03/16/2006	0001	73			#	.00078	
Calcium	mg/L	03/16/2006	0002	73			#	.00078	
Chloride	mg/L	03/16/2006	0001	17			#	1	
Chloride	mg/L	03/16/2006	0002	17			#	1	
Dissolved Oxygen	mg/L	03/16/2006	N001	12.36			#		
Magnesium	mg/L	03/16/2006	0001	14			#	.0038	
Magnesium	mg/L	03/16/2006	0002	14			#	.0038	
Manganese	mg/L	03/16/2006	0001	0.031			#	.000054	
Manganese	mg/L	03/16/2006	0002	0.032			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/16/2006	0001	0.16			#	.01	
Nitrate + Nitrite as Nitrogen	mg/L	03/16/2006	0002	0.17			#	.01	
Oxidation Reduction Potential	mV	03/16/2006	N001	194.4			#		
pH	s.u.	03/16/2006	N001	8.67			#		
Potassium	mg/L	03/16/2006	0001	3.7			#	.039	
Potassium	mg/L	03/16/2006	0002	3.7			#	.039	
Selenium	mg/L	03/16/2006	0001	0.00058			#	.000033	
Selenium	mg/L	03/16/2006	0002	0.0006			#	.000033	
Sodium	mg/L	03/16/2006	0001	40			#	.0017	
Sodium	mg/L	03/16/2006	0002	41			#	.0017	
Specific Conductance	umhos/cm	03/16/2006	N001	652			#		
Strontium	mg/L	03/16/2006	0001	0.9			#	.00024	
Strontium	mg/L	03/16/2006	0002	0.92			#	.00024	
Sulfate	mg/L	03/16/2006	0001	180			#	2.5	
Sulfate	mg/L	03/16/2006	0002	190			#	2.5	
Temperature	C	03/16/2006	N001	6.98			#		
Uranium	mg/L	03/16/2006	0001	0.002			#	.0000024	
Uranium	mg/L	03/16/2006	0002	0.0018			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 1203 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	122			#		
Ammonia Total as N	mg/L	03/09/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/09/2006	0001	73			#	.00078	
Chloride	mg/L	03/09/2006	0001	18			#	2	
Magnesium	mg/L	03/09/2006	0001	13			#	.0038	
Manganese	mg/L	03/09/2006	0001	0.02			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	0.71			#	.01	
Oxidation Reduction Potential	mV	03/09/2006	N001	137.8			#		
pH	s.u.	03/09/2006	N001	8.93			#		
Potassium	mg/L	03/09/2006	0001	3.6	E		#	.039	
Selenium	mg/L	03/09/2006	0001	0.00068			#	.000033	
Sodium	mg/L	03/09/2006	0001	41			#	.0017	
Specific Conductance	umhos/cm	03/09/2006	N001	723			#		
Strontium	mg/L	03/09/2006	0001	0.91			#	.00024	
Sulfate	mg/L	03/09/2006	0001	180			#	5	
Temperature	C	03/09/2006	N001	7.29			#		
Uranium	mg/L	03/09/2006	0001	0.0019			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006
Location: 1205 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	115			#		
Ammonia Total as N	mg/L	03/09/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/09/2006	0001	73			#	.00078	
Chloride	mg/L	03/09/2006	0001	18			#	2	
Magnesium	mg/L	03/09/2006	0001	13			#	.0038	
Manganese	mg/L	03/09/2006	0001	0.018			#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	1.5			#	.01	
Oxidation Reduction Potential	mV	03/09/2006	N001	127.3			#		
pH	s.u.	03/09/2006	N001	8.95			#		
Potassium	mg/L	03/09/2006	0001	3.6			#	.039	
Selenium	mg/L	03/09/2006	0001	0.00066			#	.000033	
Sodium	mg/L	03/09/2006	0001	41			#	.0017	
Specific Conductance	umhos/cm	03/09/2006	N001	925			#		
Strontium	mg/L	03/09/2006	0001	0.92			#	.00024	
Sulfate	mg/L	03/09/2006	0001	190			#	5	
Temperature	C	03/09/2006	N001	7.85			#		
Uranium	mg/L	03/09/2006	0001	0.0019			#	.0000024	

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

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

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

QA QUALIFIER:
- # Validated according to quality assurance guidelines.

Surface Water Quality Data
Terrace Locations

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0425 SURFACE LOCATION Escarpment seep N of millsite

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	1097			#		
Ammonia Total as N	mg/L	03/14/2006	0001	0.1	UN		#	.1	
Calcium	mg/L	03/14/2006	0001	470			#	.0039	
Chloride	mg/L	03/14/2006	0001	360			#	40	
Magnesium	mg/L	03/14/2006	0001	1100			#	.019	
Manganese	mg/L	03/14/2006	0001	0.00027	U		#	.00027	
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	50			#	.5	
Oxidation Reduction Potential	mV	03/14/2006	N001	185.5			#		
pH	s.u.	03/14/2006	N001	6.94			#		
Potassium	mg/L	03/14/2006	0001	61			#	.2	
Selenium	mg/L	03/14/2006	0001	0.025			#	.00017	
Sodium	mg/L	03/14/2006	0001	1200			#	.084	
Specific Conductance	umhos/cm	03/14/2006	N001	11270			#		
Strontium	mg/L	03/14/2006	0001	9.6			#	.0012	
Sulfate	mg/L	03/14/2006	0001	7200			#	100	
Temperature	C	03/14/2006	N001	10.14			#		
Uranium	mg/L	03/14/2006	0001	0.84			#	.000047	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0426 SURFACE LOCATION Escarpment seep just E of Bob Lee Wash mouth

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	292			#		
Ammonia Total as N	mg/L	03/14/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/14/2006	0001	440			#	.0016	
Chloride	mg/L	03/14/2006	0001	99			#	20	
Magnesium	mg/L	03/14/2006	0001	160			#	.0076	
Manganese	mg/L	03/14/2006	0001	0.031			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	20			#	.2	
Oxidation Reduction Potential	mV	03/14/2006	N001	162.3			#		
pH	s.u.	03/14/2006	N001	7.15			#		
Potassium	mg/L	03/14/2006	0001	22			#	.079	
Selenium	mg/L	03/14/2006	0001	0.1			#	.00033	
Sodium	mg/L	03/14/2006	0001	860			#	.084	
Specific Conductance	umhos/cm	03/14/2006	N001	6228			#		
Strontium	mg/L	03/14/2006	0001	8.8			#	.00048	
Sulfate	mg/L	03/14/2006	0001	3600			#	50	
Temperature	C	03/14/2006	N001	12.98			#		
Uranium	mg/L	03/14/2006	0001	0.19			#	.000012	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0662 SURFACE LOCATION Bob Lee Wash, just below outflow ditch confluence

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/14/2006	0001	67			#		
Ammonia Total as N	mg/L	03/14/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/14/2006	0001	110			#	.0016	
Chloride	mg/L	03/14/2006	0001	53			#	10	
Dissolved Oxygen	mg/L	03/14/2006	N001	11.08			#		
Magnesium	mg/L	03/14/2006	0001	14			#	.0076	
Manganese	mg/L	03/14/2006	0001	0.0025	B		#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/14/2006	0001	0.29			#	.01	
Oxidation Reduction Potential	mV	03/14/2006	N001	111.3			#		
pH	s.u.	03/14/2006	N001	8.2			#		
Potassium	mg/L	03/14/2006	0001	13			#	.079	
Selenium	mg/L	03/14/2006	0001	0.000033	U		#	.000033	
Sodium	mg/L	03/14/2006	0001	640			#	.084	
Specific Conductance	umhos/cm	03/14/2006	N001	4032			#		
Strontium	mg/L	03/14/2006	0001	11			#	.00048	
Sulfate	mg/L	03/14/2006	0001	2000			#	25	
Temperature	C	03/14/2006	N001	16.07			#		
Uranium	mg/L	03/14/2006	0001	0.0002			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0786 SURFACE LOCATION Escarpment seep at US Hwy 666 bridge

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/15/2006	0001	227			#		
Ammonia Total as N	mg/L	03/15/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/15/2006	0001	470			#	.0016	
Chloride	mg/L	03/15/2006	0001	35			#	4	
Dissolved Oxygen	mg/L	03/15/2006	N001	11.42			#		
Magnesium	mg/L	03/15/2006	0001	390			#	.0076	
Manganese	mg/L	03/15/2006	0001	0.0015	B		#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	3.1			#	.02	
Oxidation Reduction Potential	mV	03/15/2006	N001	145.6			#		
pH	s.u.	03/15/2006	N001	8.09			#		
Potassium	mg/L	03/15/2006	0001	24			#	.079	
Selenium	mg/L	03/15/2006	0001	0.011			#	.000033	
Sodium	mg/L	03/15/2006	0001	430			#	.084	
Specific Conductance	umhos/cm	03/15/2006	N001	5240			#		
Strontium	mg/L	03/15/2006	0001	6.6			#	.00048	
Sulfate	mg/L	03/15/2006	0001	3400			#	50	
Temperature	C	03/15/2006	N001	7.55			#		
Uranium	mg/L	03/15/2006	0001	0.032			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0889 SURFACE LOCATION Many Devils Wash, just below knickpoint

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/09/2006	0001	589			#		
Ammonia Total as N	mg/L	03/09/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/09/2006	0001	390			#	.0078	
Chloride	mg/L	03/09/2006	0001	1700			#	100	
Magnesium	mg/L	03/09/2006	0001	1200			#	.038	
Manganese	mg/L	03/09/2006	0001	0.0048	B	U	#	.00054	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2006	0001	600			#	5	
Oxidation Reduction Potential	mV	03/09/2006	N001	202			#		
pH	s.u.	03/09/2006	N001	8.06			#		
Potassium	mg/L	03/09/2006	0001	70			#	.39	
Selenium	mg/L	03/09/2006	0001	1.6			#	.0066	
Sodium	mg/L	03/09/2006	0001	6300			#	.17	
Specific Conductance	umhos/cm	03/09/2006	N001	30520			#		
Strontium	mg/L	03/09/2006	0001	9.6			#	.0024	
Sulfate	mg/L	03/09/2006	0001	20000			#	250	
Temperature	C	03/09/2006	N001	8.13			#		
Uranium	mg/L	03/09/2006	0001	0.19			#	.000012	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0933 SURFACE LOCATION 1st wash, W of US Hwy 666

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/15/2006	0001	255			#		
Ammonia Total as N	mg/L	03/15/2006	0001	0.34		J	#	.1	
Calcium	mg/L	03/15/2006	0001	540			#	.0016	
Chloride	mg/L	03/15/2006	0001	34			#	10	
Dissolved Oxygen	mg/L	03/15/2006	N001	14.26			#		
Magnesium	mg/L	03/15/2006	0001	220			#	.0076	
Manganese	mg/L	03/15/2006	0001	0.69			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	1.1			#	.01	
Oxidation Reduction Potential	mV	03/15/2006	N001	66.1			#		
pH	s.u.	03/15/2006	N001	7.46			#		
Potassium	mg/L	03/15/2006	0001	13			#	.079	
Selenium	mg/L	03/15/2006	0001	0.0041			#	.000033	
Sodium	mg/L	03/15/2006	0001	130			#	.0034	
Specific Conductance	umhos/cm	03/15/2006	N001	1839			#		
Strontium	mg/L	03/15/2006	0001	5.3			#	.00048	
Sulfate	mg/L	03/15/2006	0001	2100			#	25	
Temperature	C	03/15/2006	N001	8.45			#		
Uranium	mg/L	03/15/2006	0001	0.02			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0934 SURFACE LOCATION Upper part of 2nd wash, W of US Hwy 666

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/16/2006	0001	154			#		
Ammonia Total as N	mg/L	03/16/2006	0001	0.1	U		#	.1	
Ammonia Total as N	mg/L	03/16/2006	0002	0.1	U		#	.1	
Calcium	mg/L	03/16/2006	0001	130			#	.00078	
Calcium	mg/L	03/16/2006	0002	130			#	.00078	
Chloride	mg/L	03/16/2006	0001	22			#	4	
Chloride	mg/L	03/16/2006	0002	22			#	4	
Dissolved Oxygen	mg/L	03/16/2006	N001	8.27			#		
Magnesium	mg/L	03/16/2006	0001	43			#	.0038	
Magnesium	mg/L	03/16/2006	0002	41			#	.0038	
Manganese	mg/L	03/16/2006	0001	0.0011	B		#	.000054	
Manganese	mg/L	03/16/2006	0002	0.00081	B		#	.000054	
Nitrate + Nitrite as Nitrogen	mg/L	03/16/2006	0001	3.5			#	.05	
Nitrate + Nitrite as Nitrogen	mg/L	03/16/2006	0002	3.6			#	.05	
Oxidation Reduction Potential	mV	03/16/2006	N001	142.6			#		
pH	s.u.	03/16/2006	N001	7.92			#		
Potassium	mg/L	03/16/2006	0001	4.6			#	.039	
Potassium	mg/L	03/16/2006	0002	4.2			#	.039	
Selenium	mg/L	03/16/2006	0001	0.015			#	.00017	
Selenium	mg/L	03/16/2006	0002	0.015			#	.000033	
Sodium	mg/L	03/16/2006	0001	53			#	.0017	
Sodium	mg/L	03/16/2006	0002	53			#	.0017	
Specific Conductance	umhos/cm	03/16/2006	N001	1069			#		
Strontium	mg/L	03/16/2006	0001	1.2			#	.00024	
Strontium	mg/L	03/16/2006	0002	1.2			#	.00024	
Sulfate	mg/L	03/16/2006	0001	390			#	10	
Sulfate	mg/L	03/16/2006	0002	390			#	10	
Temperature	C	03/16/2006	N001	10.98			#		
Uranium	mg/L	03/16/2006	0001	0.0092			#	.0000024	
Uranium	mg/L	03/16/2006	0002	0.009			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0935 SURFACE LOCATION Seep just upstream from 1st wash confluence with distributary channel

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/15/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/15/2006	0001	470			#	.0016	
Chloride	mg/L	03/15/2006	0001	37			#	2	
Magnesium	mg/L	03/15/2006	0001	440			#	.0076	
Manganese	mg/L	03/15/2006	0001	0.027			#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	5.8			#	.1	
Potassium	mg/L	03/15/2006	0001	20			#	.079	
Selenium	mg/L	03/15/2006	0001	0.048			#	.00033	
Sodium	mg/L	03/15/2006	0001	330			#	.084	
Strontium	mg/L	03/15/2006	0001	6			#	.00048	
Sulfate	mg/L	03/15/2006	0001	3400			#	50	
Uranium	mg/L	03/15/2006	0001	0.05			#	.0000024	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006
Location: 0936 SURFACE LOCATION Seep between 1st wash and 2nd wash, W of US Hwy 666

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	03/15/2006	0001	289			#		
Ammonia Total as N	mg/L	03/15/2006	0001	0.1	U		#	.1	
Calcium	mg/L	03/15/2006	0001	580			#	.0016	
Chloride	mg/L	03/15/2006	0001	75			#	10	
Magnesium	mg/L	03/15/2006	0001	290			#	.0076	
Manganese	mg/L	03/15/2006	0001	0.0043	B		#	.00011	
Nitrate + Nitrite as Nitrogen	mg/L	03/15/2006	0001	28			#	.2	
Oxidation Reduction Potential	mV	03/15/2006	N001	151			#		
pH	s.u.	03/15/2006	N001	7.07			#		
Potassium	mg/L	03/15/2006	0001	16			#	.079	
Selenium	mg/L	03/15/2006	0001	0.15			#	.00066	
Sodium	mg/L	03/15/2006	0001	350			#	.084	
Specific Conductance	umhos/cm	03/15/2006	N001	4729			#		
Strontium	mg/L	03/15/2006	0001	6.2			#	.00048	
Sulfate	mg/L	03/15/2006	0001	2700			#	25	
Temperature	C	03/15/2006	N001	9.47			#		
Uranium	mg/L	03/15/2006	0001	0.047			#	.0000024	

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

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

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

QA QUALIFIER:
- # Validated according to quality assurance guidelines.

Static Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 4/28/2006

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	07-MAR-06	15:12:00	6.12	4887.23	
0608		4893.35	09-MAR-06	14:42:00	6.05	4887.3	
0614		4892.79	07-MAR-06	15:19:00	7.34	4885.45	
0614		4892.79	09-MAR-06	15:56:00	7.27	4885.52	
0615		4892.23	07-MAR-06	15:23:00	7.37	4884.86	
0615		4892.23	09-MAR-06	16:35:00	7.29	4884.94	
0617		4891.9	07-MAR-06	15:54:00	7.34	4884.56	
0618		4891.51	07-MAR-06	16:13:00	6.89	4884.62	
0618		4891.51	08-MAR-06	16:50:00	6.88	4884.63	
0619		4892.19	07-MAR-06	16:20:00	7.42	4884.77	
0619		4892.19	08-MAR-06	15:43:00	7.18	4885.01	
0734		4886.55	07-MAR-06	17:00:00	6.57	4879.98	
0734		4886.55	15-MAR-06	12:20:00	6.67	4879.88	
0735		4895.85	07-MAR-06	15:00:00	6.79	4889.06	
0735		4895.85	09-MAR-06	13:13:00	6.72	4889.13	
0736		4887.99	07-MAR-06	16:53:00	6.1	4881.89	
0736		4887.99	10-MAR-06	08:00:00	6.09	4881.9	
0797		4908.04	07-MAR-06	08:35:00	8.23	4899.81	
0850	B	4907.51	07-MAR-06	09:23:00	8	4899.51	
0854		4890.09	07-MAR-06	16:41:00	8.74	4881.35	
0857		4894.02	07-MAR-06	15:31:00	10.28	4883.74	
1008		4890.8	07-MAR-06	16:21:00	8.56	4882.24	
1008		4890.8	10-MAR-06	08:50:00	8.52	4882.28	
1008		4890.8	10-MAR-06	08:50:00	8.52	4882.28	

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

WATER LEVEL FLAGS: D Dry

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006

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
0602		4956.89	08-MAR-06	14:35:00	21.82	4935.07	
0603		4978.62	08-MAR-06	17:20:00	30.44	4948.18	
0604		4995.87	08-MAR-06	13:45:00	54.3	4941.57	
0725		4908.58	07-MAR-06	17:07:00	13.55	4895.03	
0726		4939.95	07-MAR-06	17:18:00	26.82	4913.13	
0727		4940.65	07-MAR-06	17:25:00	7.1	4933.55	
0728		4964.46	07-MAR-06	13:40:00	24.45	4940.01	
0730		4977.75	09-MAR-06	12:00:00	35.58	4942.17	
0731		4972.15	09-MAR-06	17:00:00	24.16	4947.99	
0812		5004.98	09-MAR-06	13:30:00	61.01	4943.97	
0813		4984.37	08-MAR-06	11:05:00	43.52	4940.85	
0814		4968.12	08-MAR-06	13:55:00	31.91	4936.21	
0817		4957.34	08-MAR-06	14:31:00	18.62	4938.72	
0817		4957.34	15-MAR-06	10:18:00	18.9	4938.44	
0819		4955.76	08-MAR-06	14:20:00	20.06	4935.7	
0826		4950.73	08-MAR-06	14:10:00	17.79	4932.94	
0827		4946.92	08-MAR-06	17:30:00	26.68	4920.24	
0828		4949.34	08-MAR-06	14:44:00	14.88	4934.46	
0829		4941.94	09-MAR-06	14:50:00	52.4	4889.54	
0830		4960.77	09-MAR-06	08:48:00	17.32	4943.45	
0830		4960.77	09-MAR-06		17.33	4943.44	
0832		4964.65	08-MAR-06	10:25:00			D
0833		4940.52	08-MAR-06	10:41:00	29.26	4911.26	
0835		4930.48	08-MAR-06	07:45:00	19.5	4910.98	
0835		4930.48	08-MAR-06	10:45:00	19.57	4910.91	
0836		4901.74	08-MAR-06	09:20:00	24.68	4877.06	
0836		4901.74	08-MAR-06		24.75	4876.99	
0837		4889.54	08-MAR-06	09:25:00	17.81	4871.73	
0838		4937.7	08-MAR-06	10:10:00	26.65	4911.05	
0838		4937.7	08-MAR-06	13:32:00	26.59	4911.11	

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 4/28/2006

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
0841		4984.05	07-MAR-06	17:26:00	45.22	4938.83	
0843		4883.56	08-MAR-06	09:33:00	12.03	4871.53	
0844		4948.46	08-MAR-06	10:15:00	31.83	4916.63	
0846		4934.57	08-MAR-06	09:59:00	25.06	4909.51	
0846		4934.57	08-MAR-06	10:25:00	25.01	4909.56	
0848		4949.91	08-MAR-06	08:00:00	39.18	4910.73	
1007		4962.01	08-MAR-06	15:04:00	44.46	4917.55	
1048		4921.35	09-MAR-06	09:45:00	5.25	4916.1	
1049		4923.89	09-MAR-06	10:00:00	5.95	4917.94	
1057		4984.83	09-MAR-06	10:30:00	38.46	4946.37	
1057		4984.83	14-MAR-06	08:35:00	38.42	4946.41	
1059		4970.52	09-MAR-06	10:20:00	23.13	4947.39	
1060		4970.62	08-MAR-06	14:22:00			D
1067		4930.77	09-MAR-06	13:00:00			D
1068		4927.97	09-MAR-06	13:20:00	7.38	4920.59	
1069		4922.62	09-MAR-06	13:15:00			D
1073		4991.43	08-MAR-06	10:55:00	49.91	4941.52	
1079		4925.22	08-MAR-06	08:45:00	16.17	4909.05	
1079		4925.22	08-MAR-06	11:23:00	16.05	4909.17	
DM7		4974.44	07-MAR-06		48.96	4925.48	
DM7		4974.44	07-MAR-06		48.96	4925.48	

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

WATER LEVEL FLAGS: D Dry

Equipment Blank Data

BLANKS REPORT
LAB: PARAGON (Fort Collins, CO)
RIN: 06020313
Report Date: 4/28/2006

Parameter	Site Code	Location ID	Sample Date	ID	Units	Result	Qualifiers Lab	Qualifiers Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	SHP02	0999	03/16/2006	0001	mg/L	.1	U		.1		E
Calcium	SHP02	0999	03/16/2006	0001	mg/L	.093	B	U	.00078		E
Chloride	SHP02	0999	03/16/2006	0001	mg/L	.2	U		.2		E
Magnesium	SHP02	0999	03/16/2006	0001	mg/L	.0038	U		.0038		E
Manganese	SHP02	0999	03/16/2006	0001	mg/L	.000054	U		.000054		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	03/16/2006	0001	mg/L	.01	U		.01		E
Potassium	SHP02	0999	03/16/2006	0001	mg/L	.64	B	U	.039		E
Selenium	SHP02	0999	03/16/2006	0001	mg/L	.000033	U		.000033		E
Sodium	SHP02	0999	03/16/2006	0001	mg/L	.14	B	U	.0017		E
Strontium	SHP02	0999	03/16/2006	0001	mg/L	.00035	B		.00024		E
Sulfate	SHP02	0999	03/16/2006	0001	mg/L	.5	U		.5		E
Uranium	SHP02	0999	03/16/2006	0001	mg/L	.000058	B	U	.0000024		E
Uranium	SHP02	0999	03/16/2006	0001	mg/L	.000058	B	U	.0000024		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:

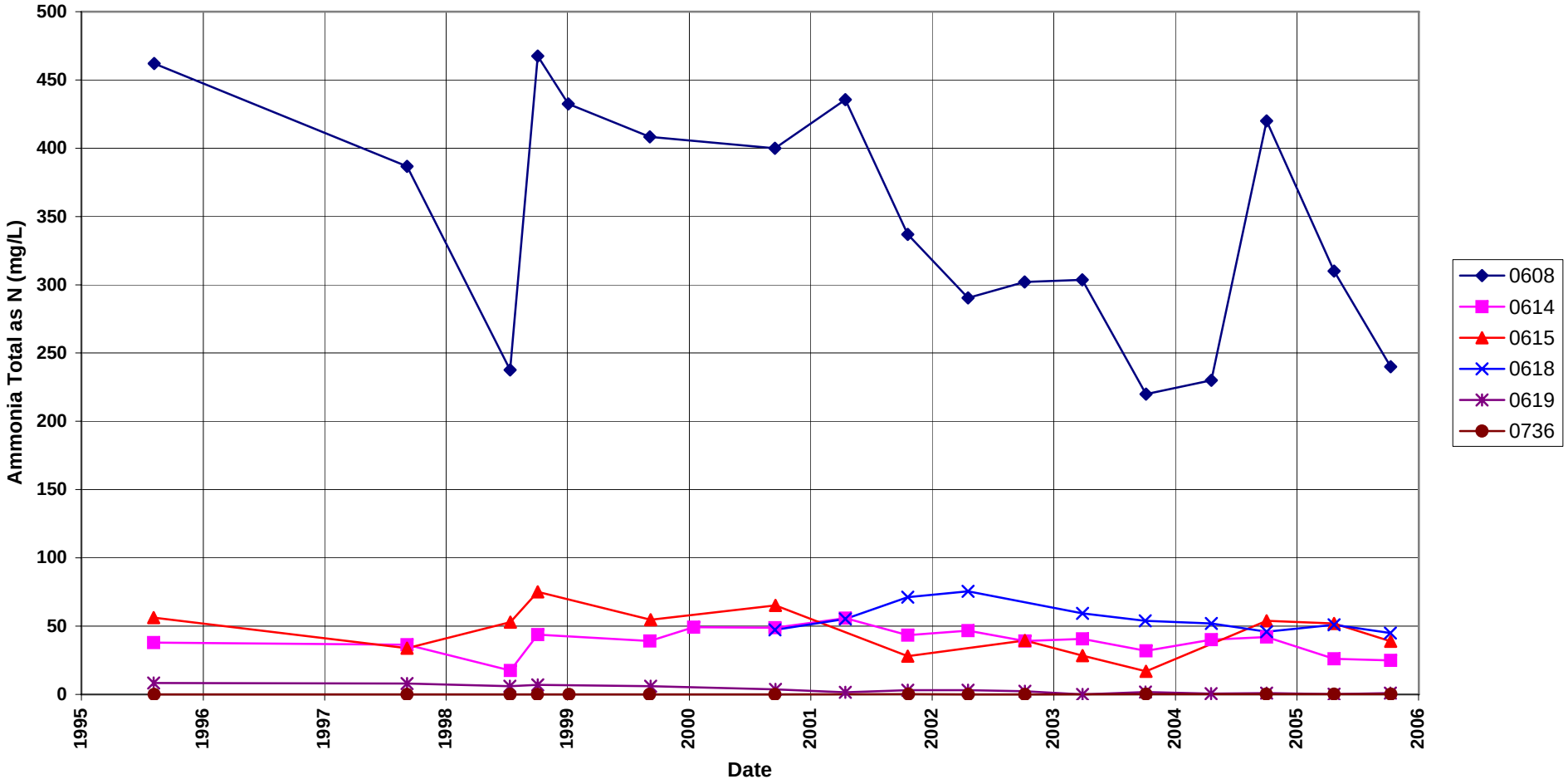
F	Low flow sampling method used.	G	Possible grout contamination, pH > 9.	J	Estimated value.
L	Less than 3 bore volumes purged prior to sampling.	Q	Qualitative result due to sampling technique.	R	Unusable result.
U	Parameter analyzed for but was not detected.	X	Location is undefined.		

SAMPLE TYPES:

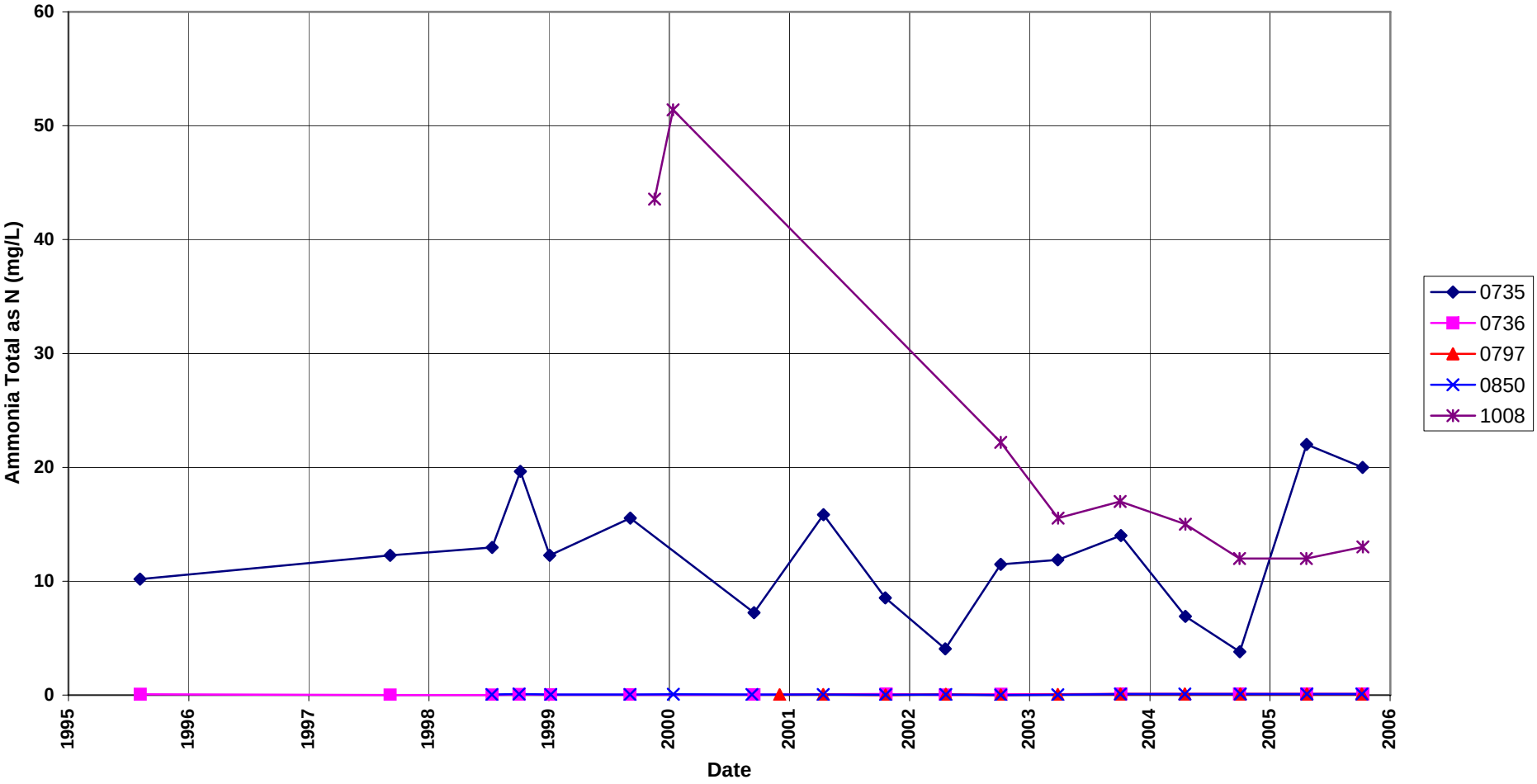
E	Equipment Blank.

Time Versus Concentration Graphs
Floodplain Locations

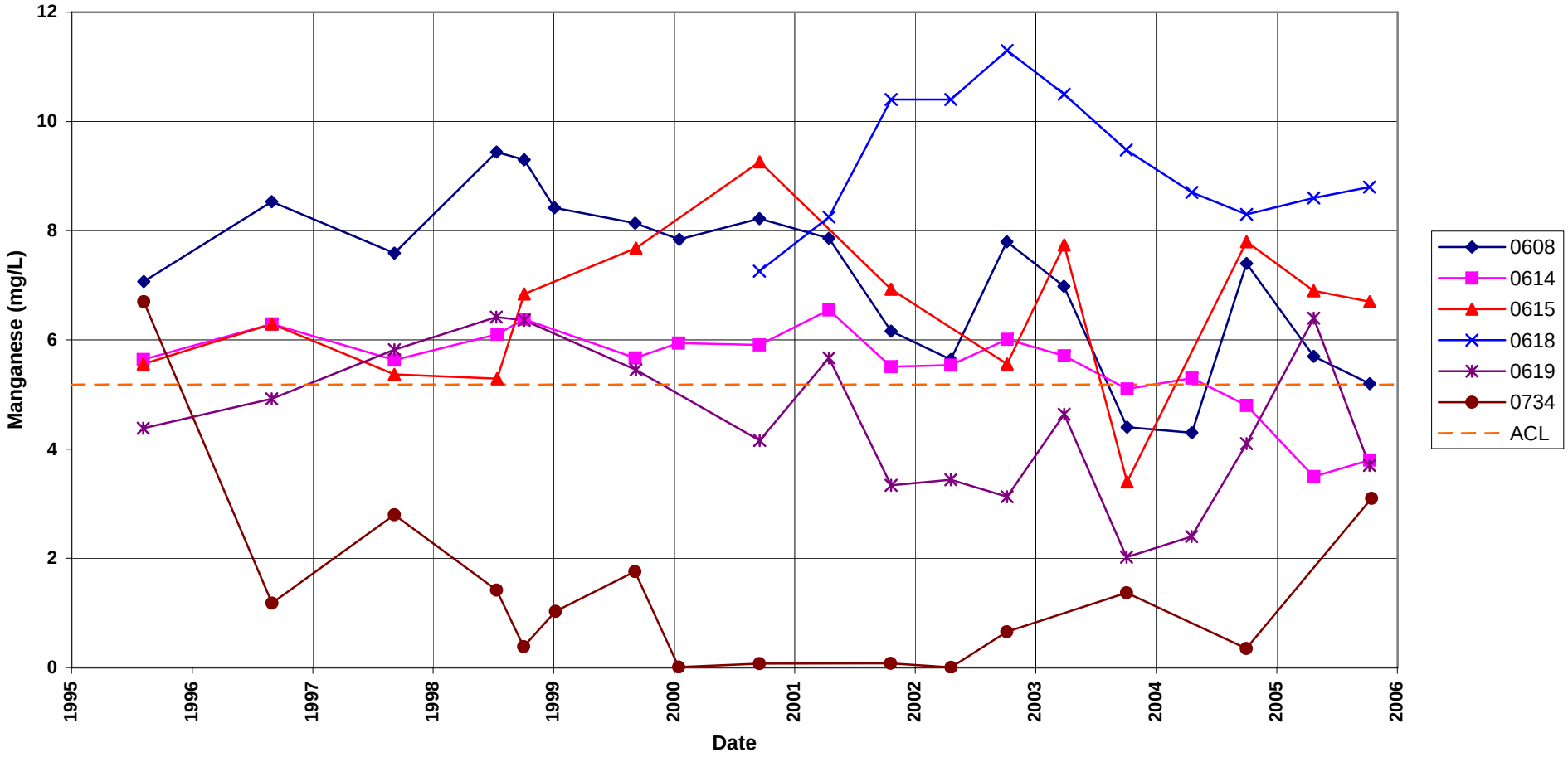
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



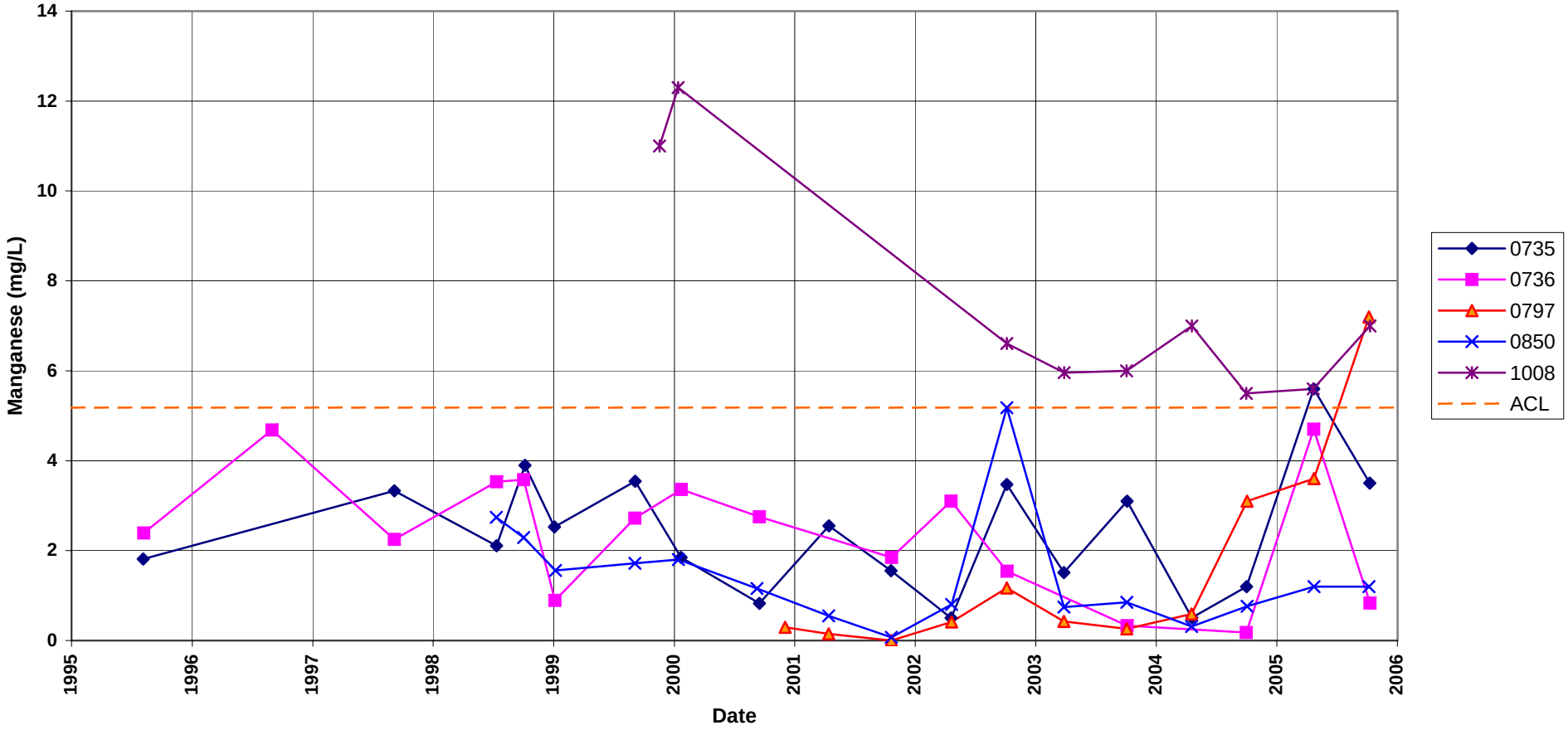
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



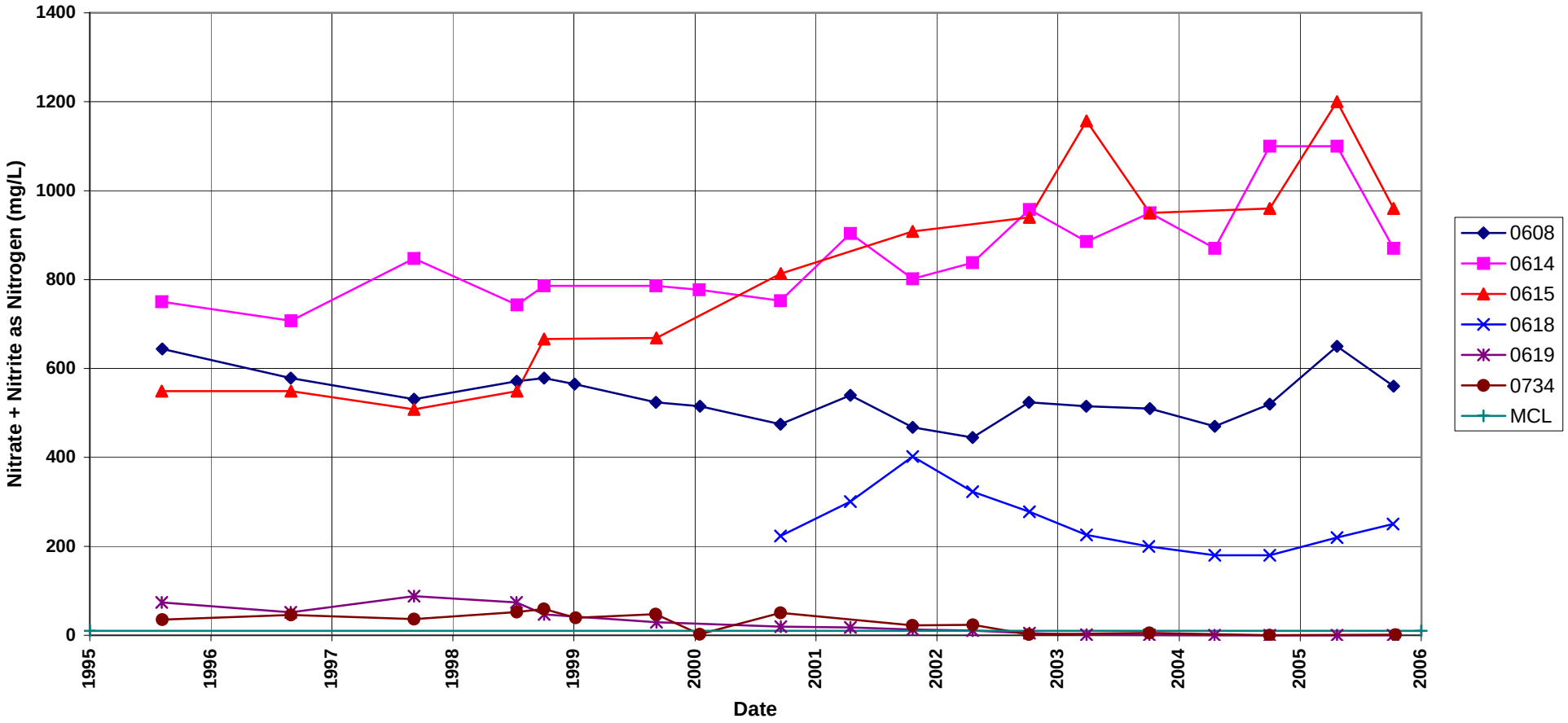
Shiprock Disposal Site (Floodplain)
Manganese Concentration
ACL = 5.18 mg/L



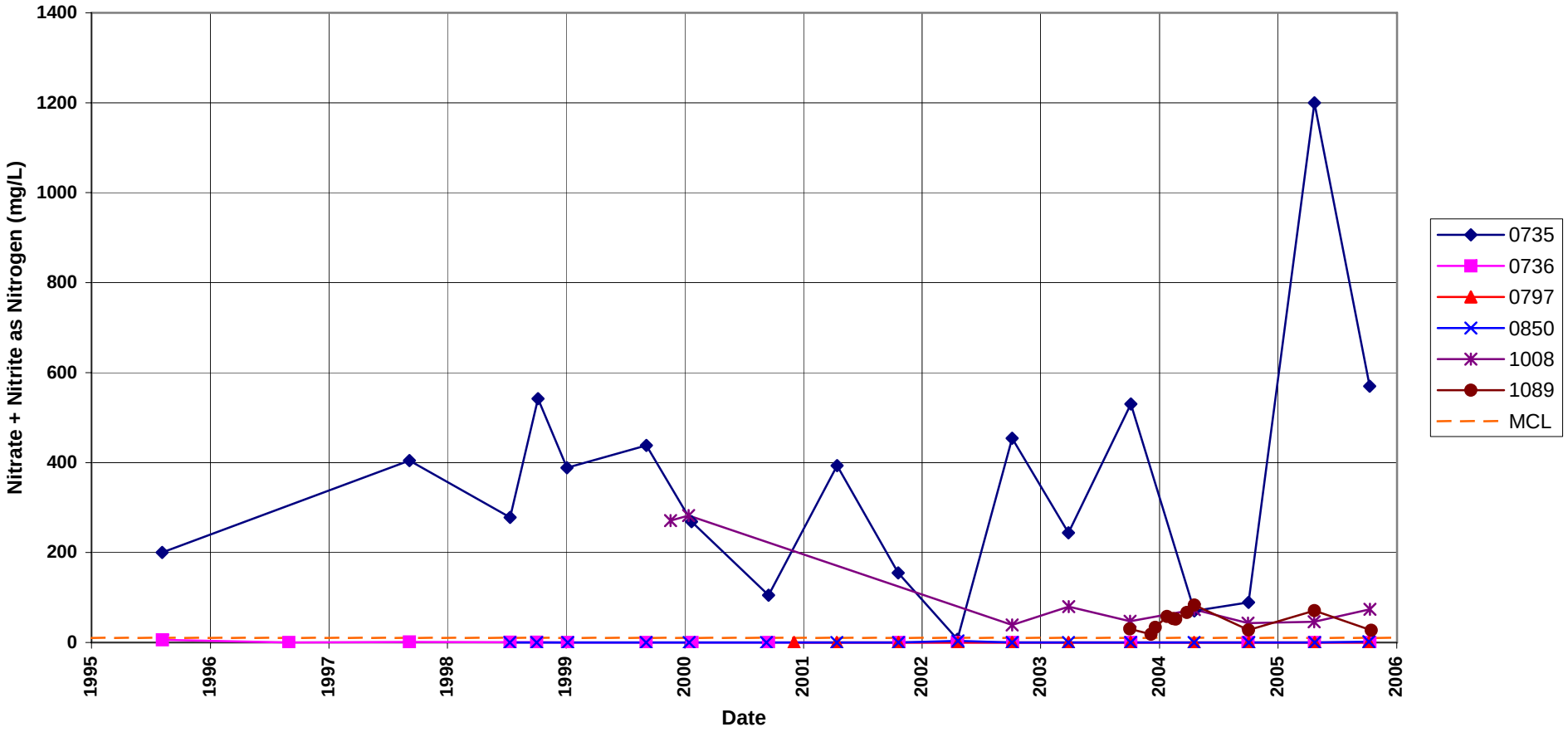
Shiprock Disposal Site (Floodplain)
Manganese Concentration
ACL = 5.18 mg/L



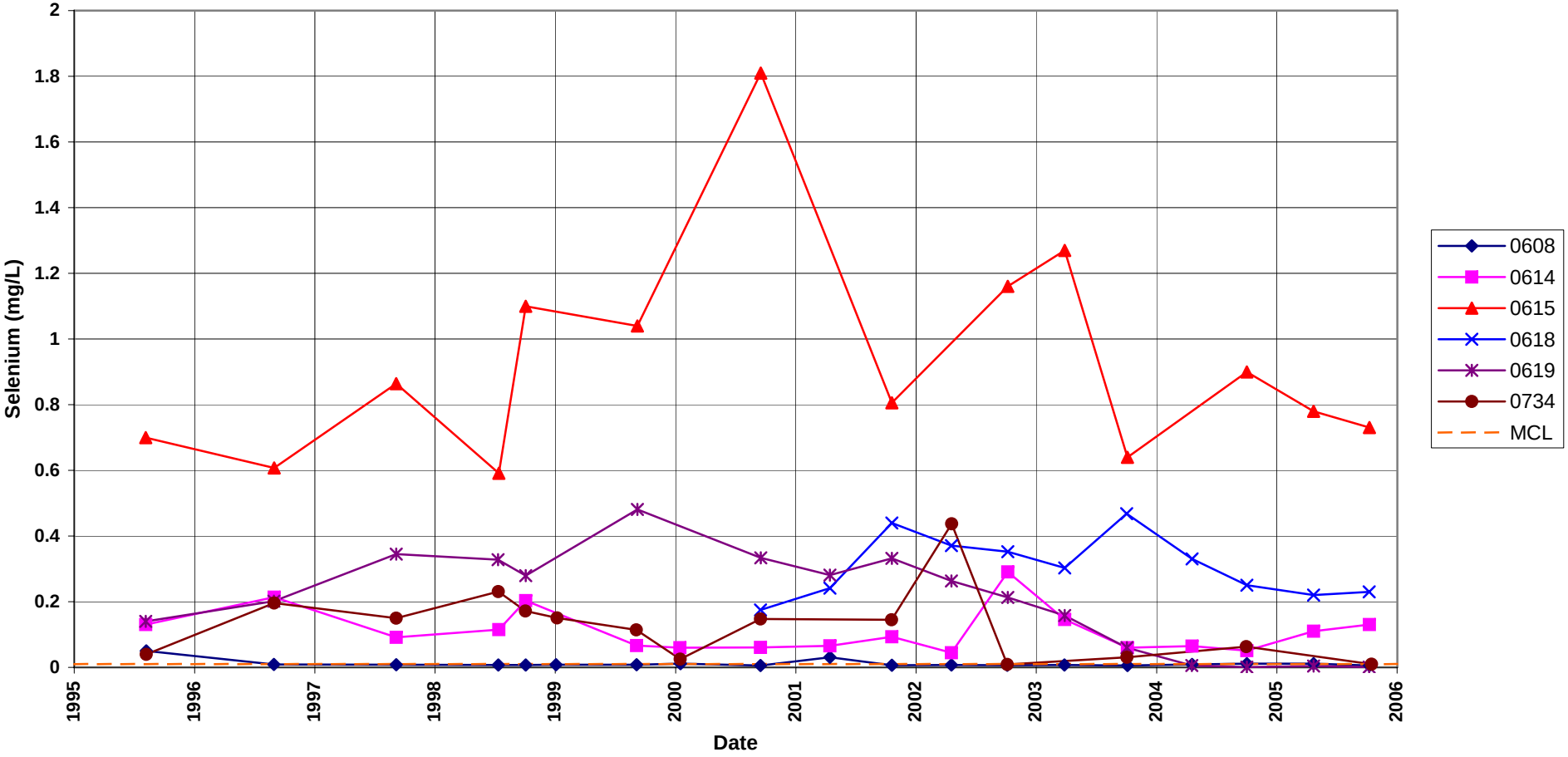
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



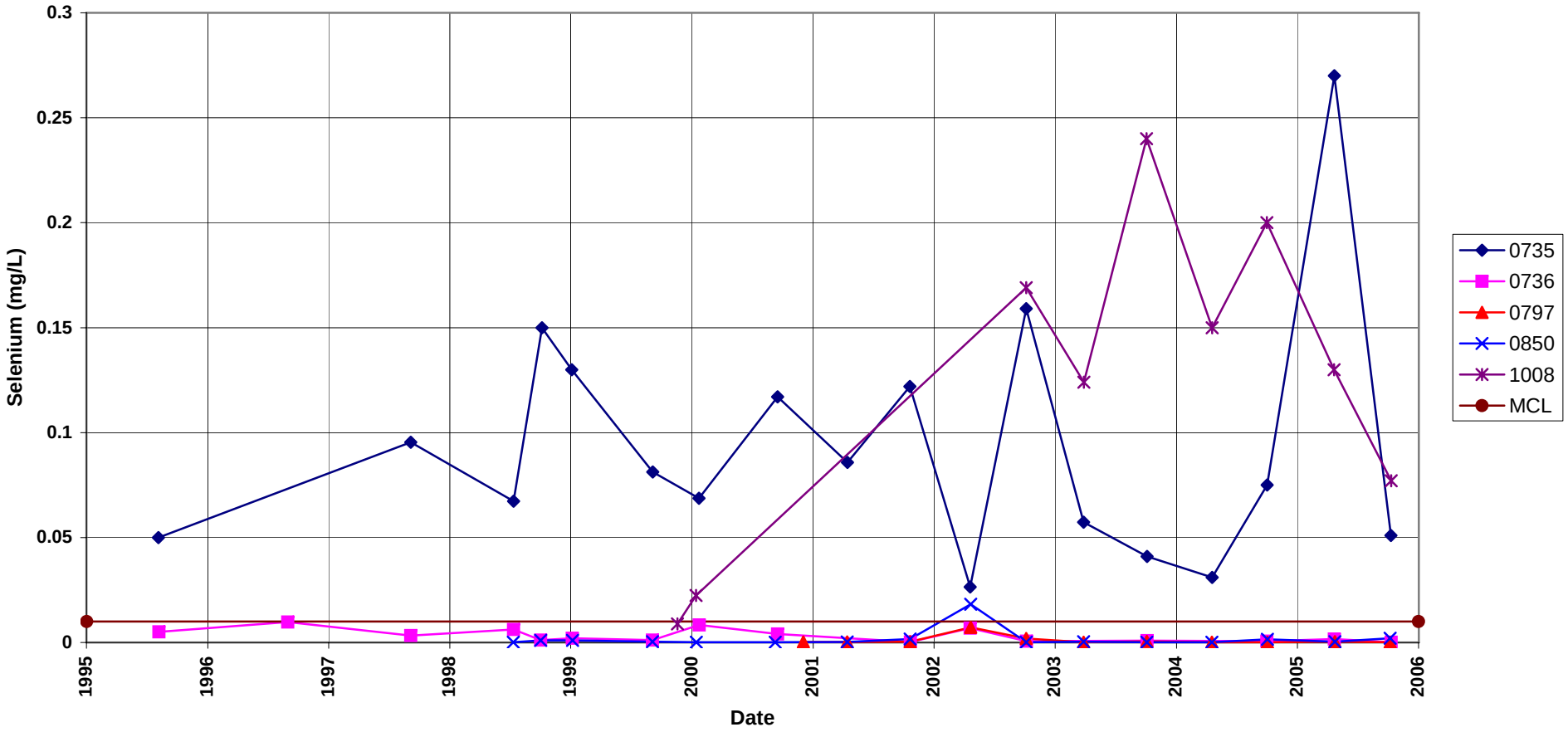
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L

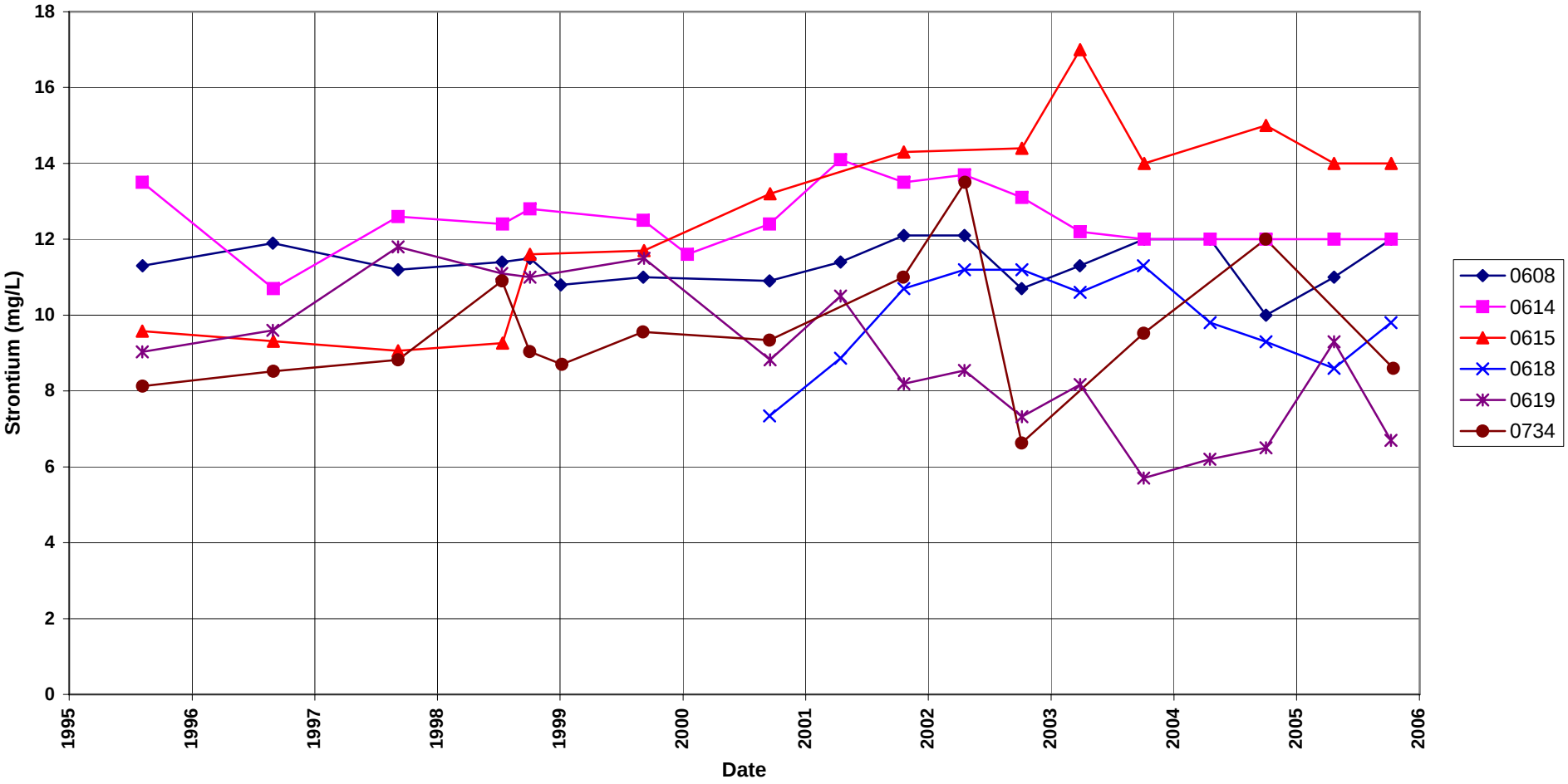


Shiprock Disposal Site (Floodplain)
Selenium Concentration
MCL = 0.01 mg/L



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




Shiprock Disposal Site (Floodplain)
Strontium Concentration
Strontium (mg/L)
0
2
4
6
8
10
12
14
16
18
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
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Date
0608
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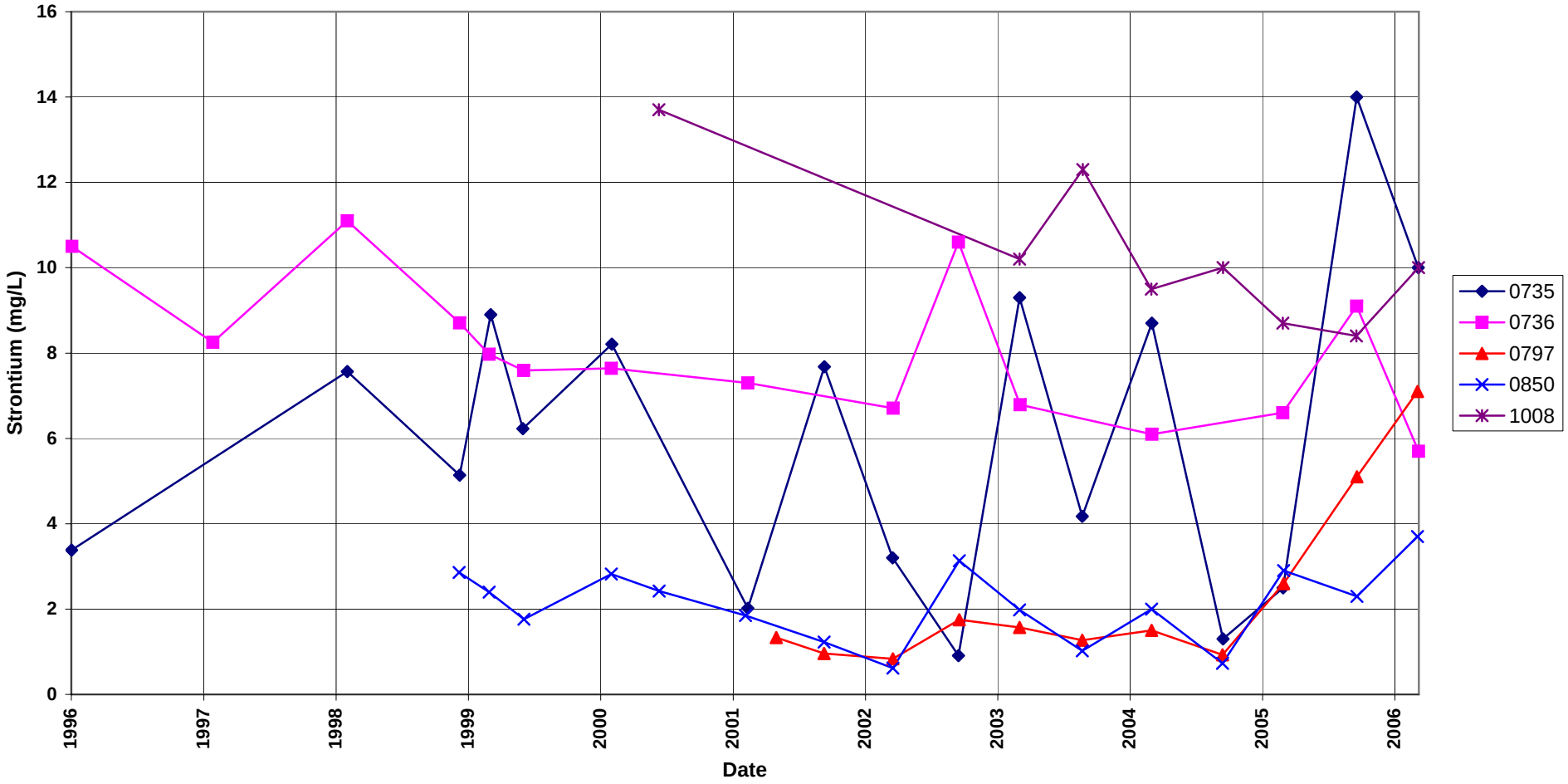
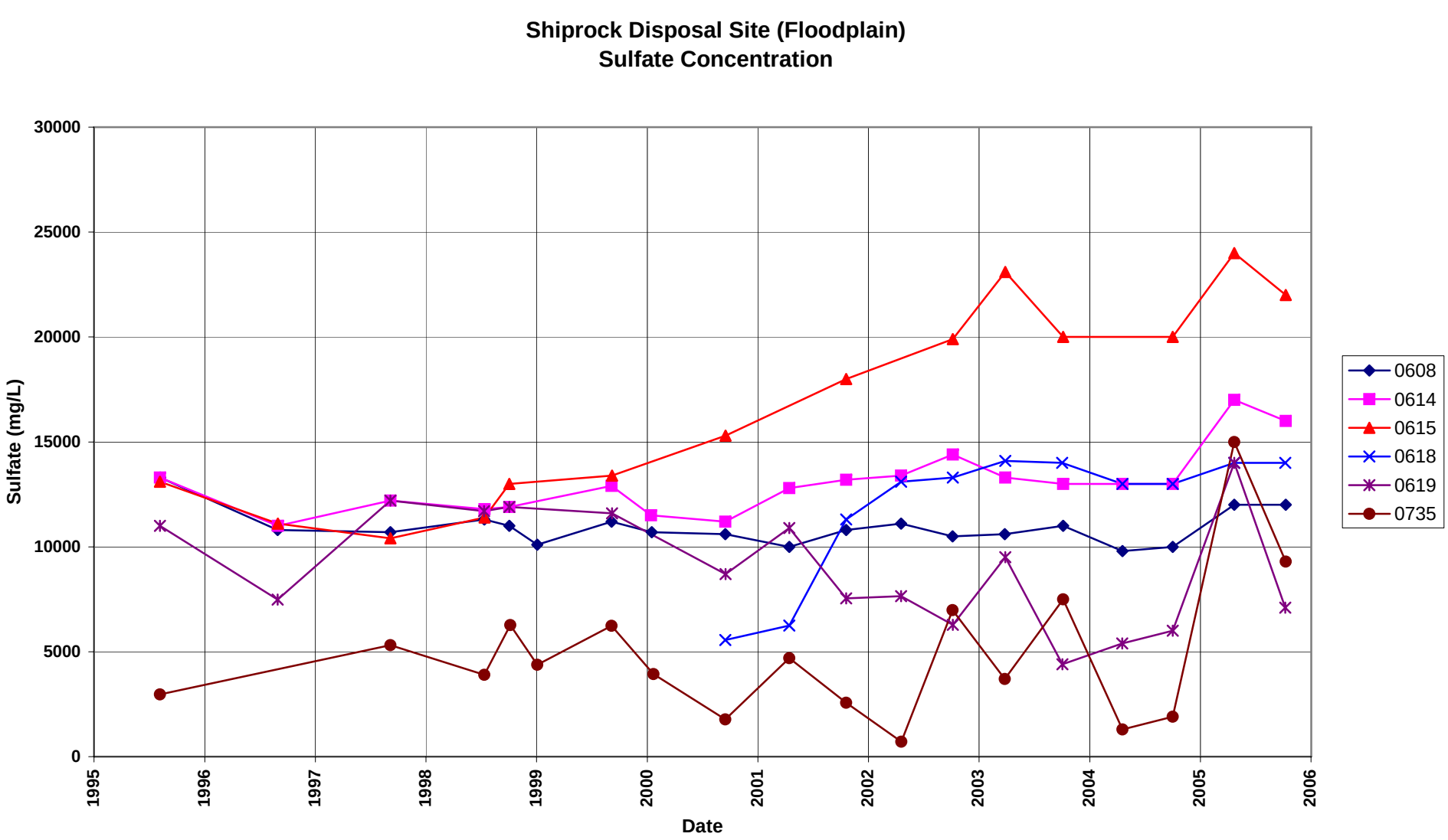
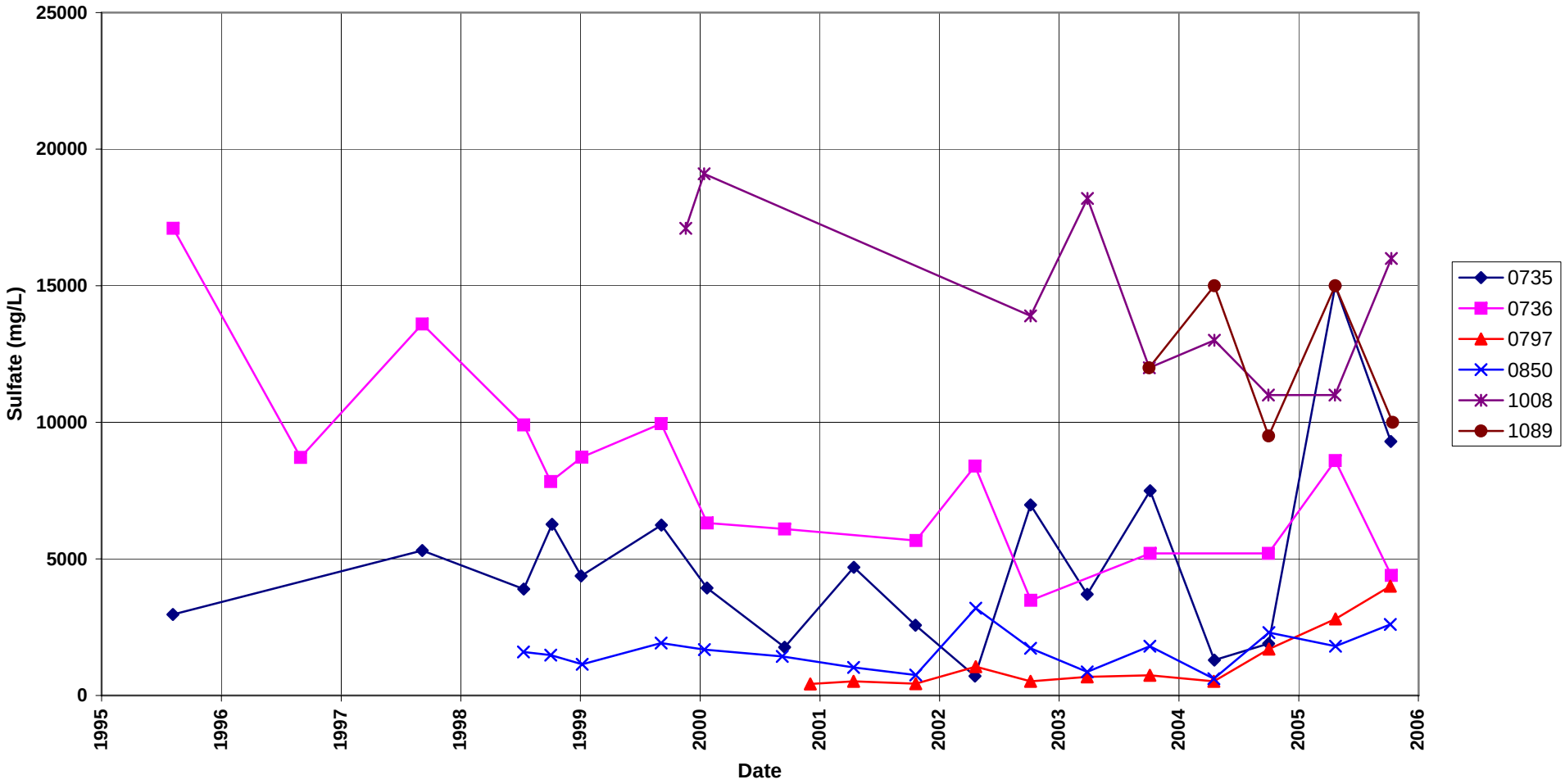
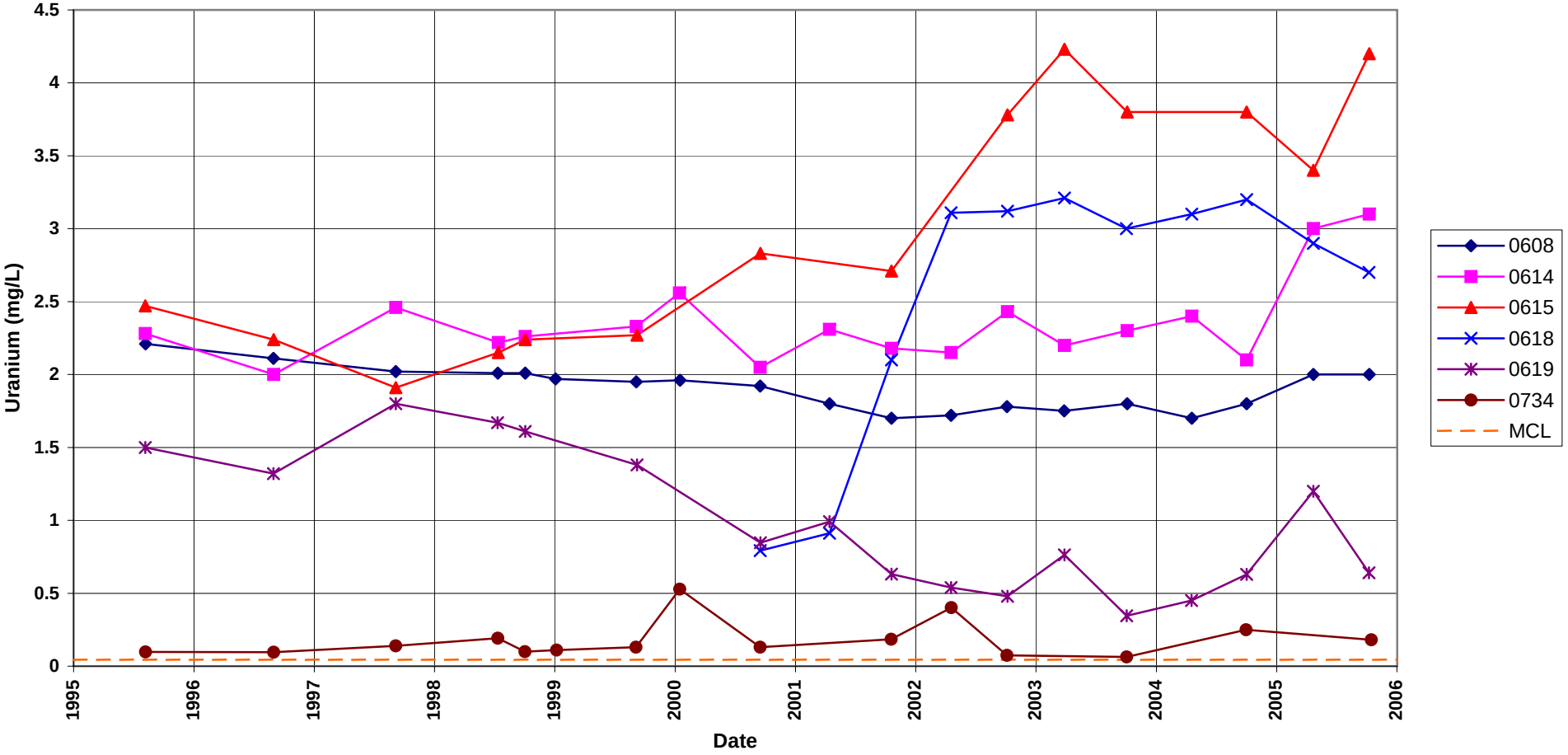
0615
0618
0619
0734


Shiprock Disposal Site (Floodplain)
Strontium Concentration
Strontium (mg/L)
16
14
12
10
8
6
4
2
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Date
0735
0736
0797
0850
1008

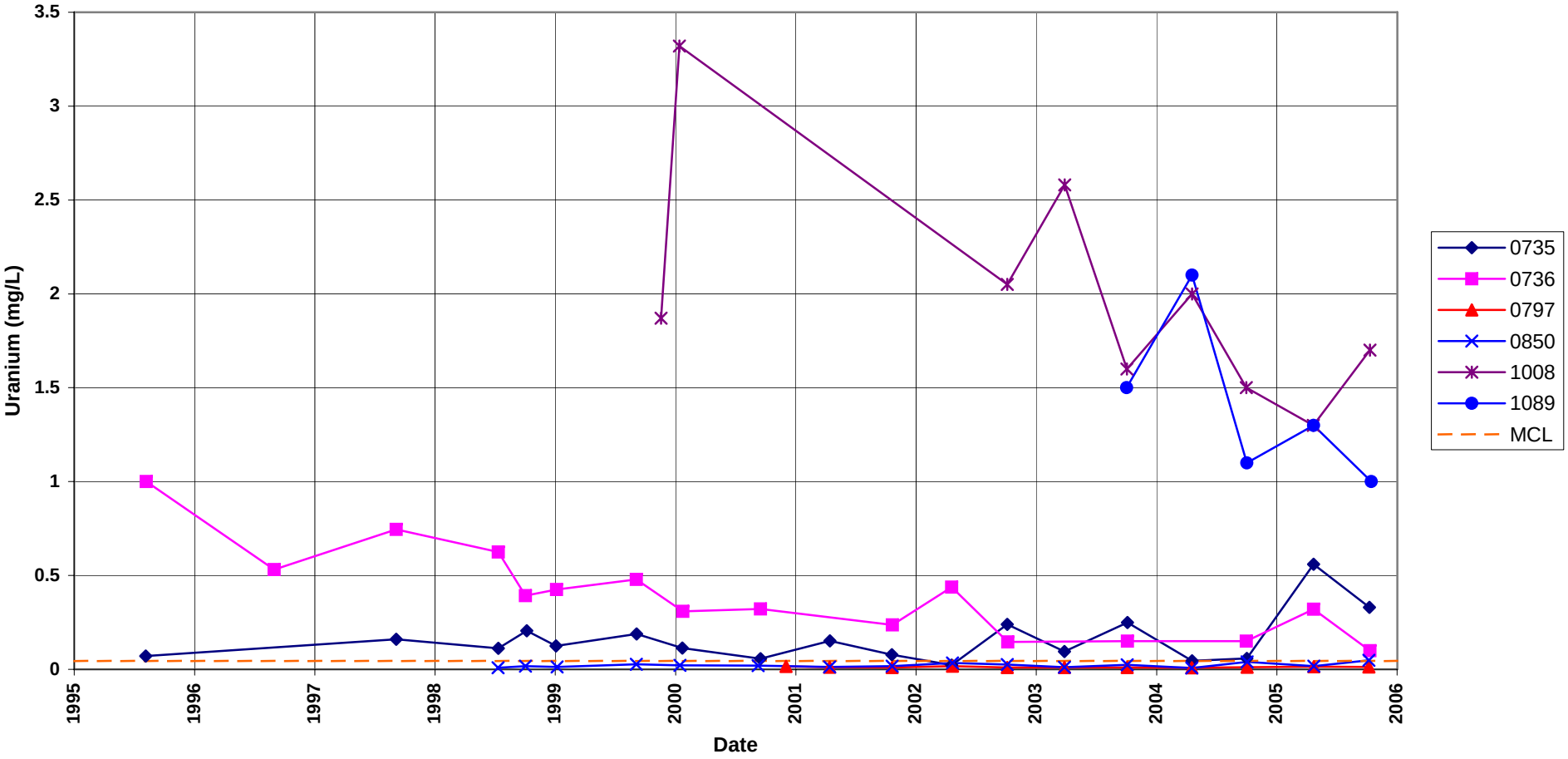

Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Sulfate (mg/L)
30000
25000
20000
15000
10000
5000
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Date
0608
0614
0615
0618
0619
0735


Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Sulfate (mg/L)
25000
20000
15000
10000
5000
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Date
0735
0736
0797
0850
1008
1089

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

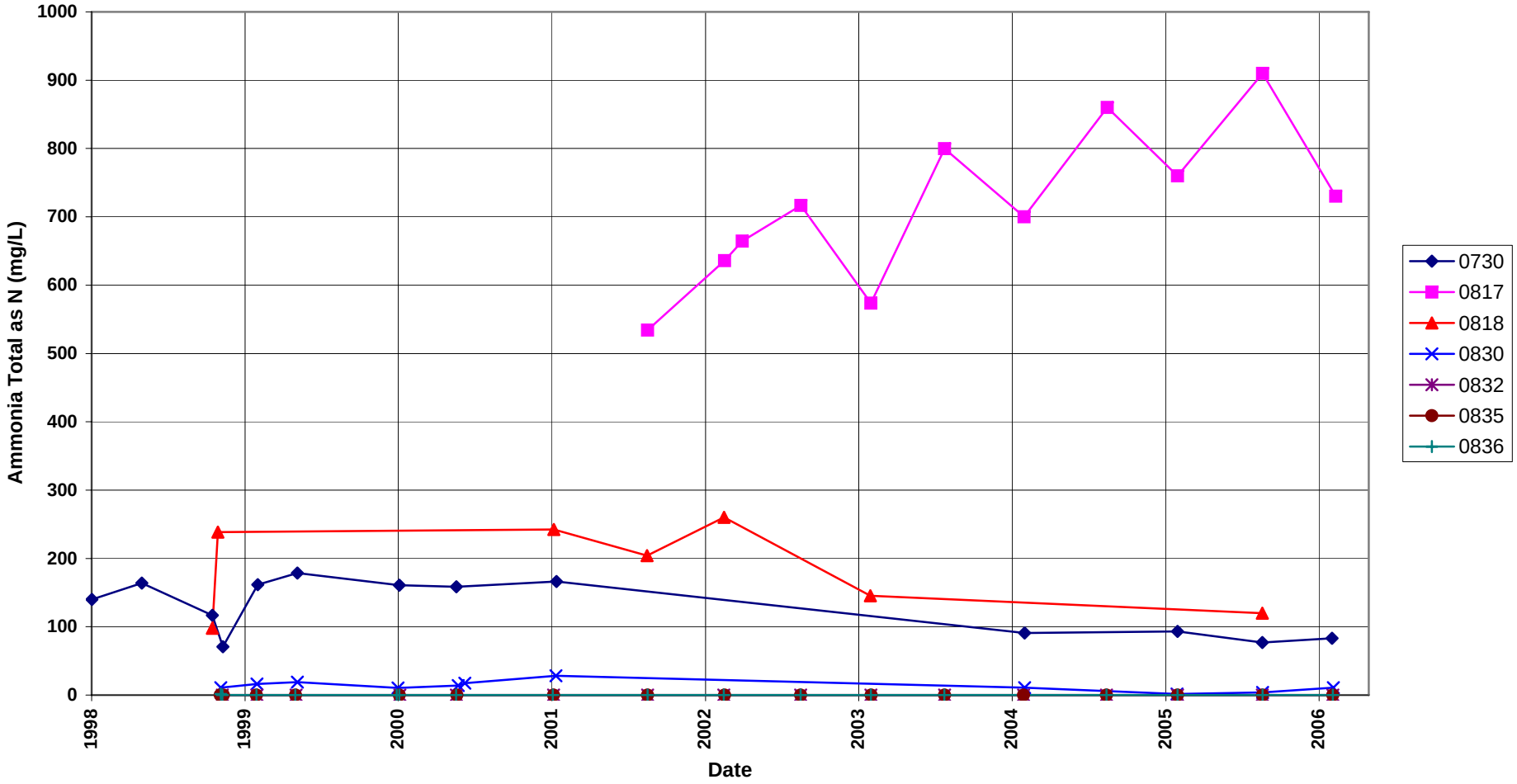


Shiprock Disposal Site (Floodplain)
Uranium Concentration
MCL = 0.044 mg/L

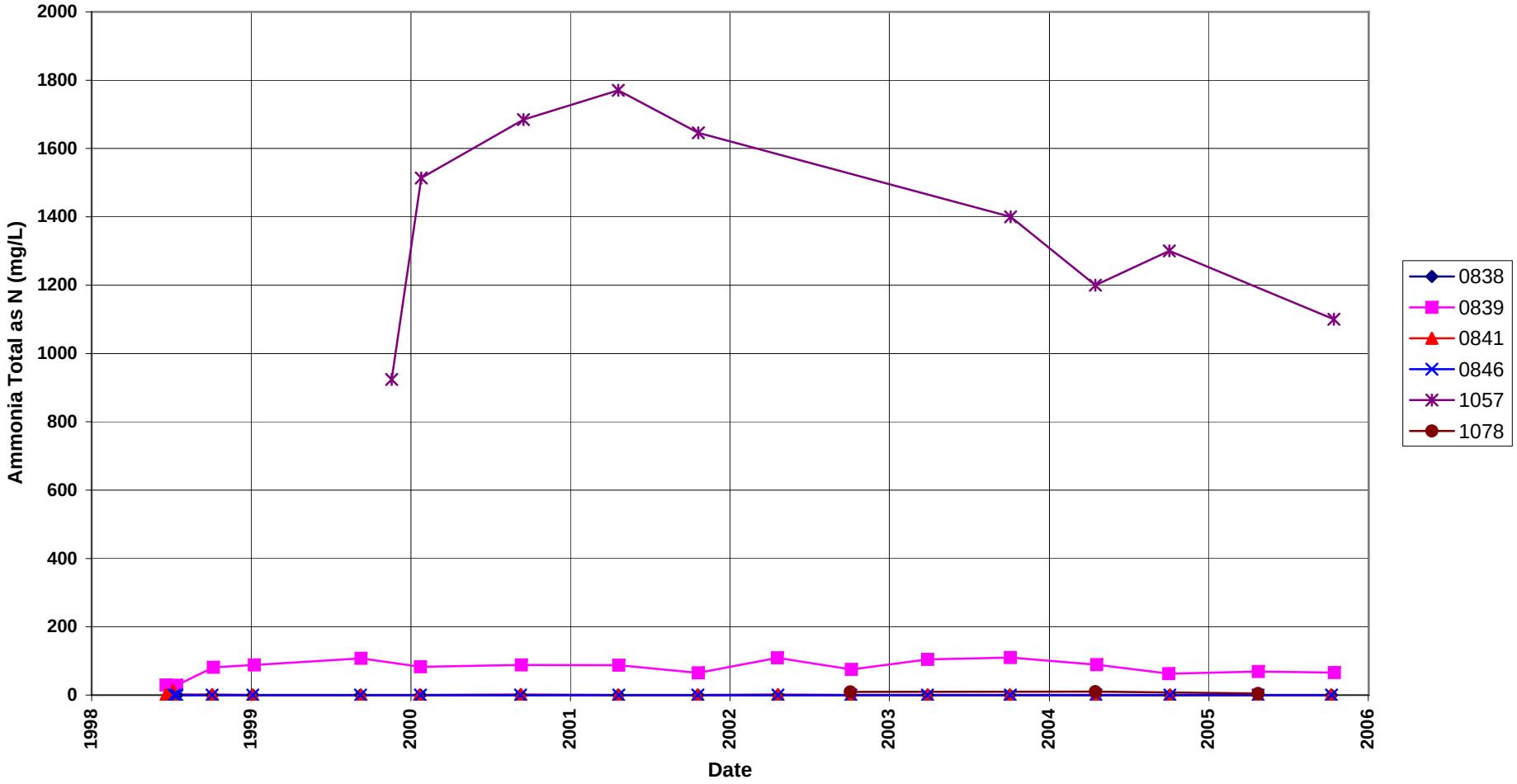


Time Versus Concentration Graphs
Terrace Locations

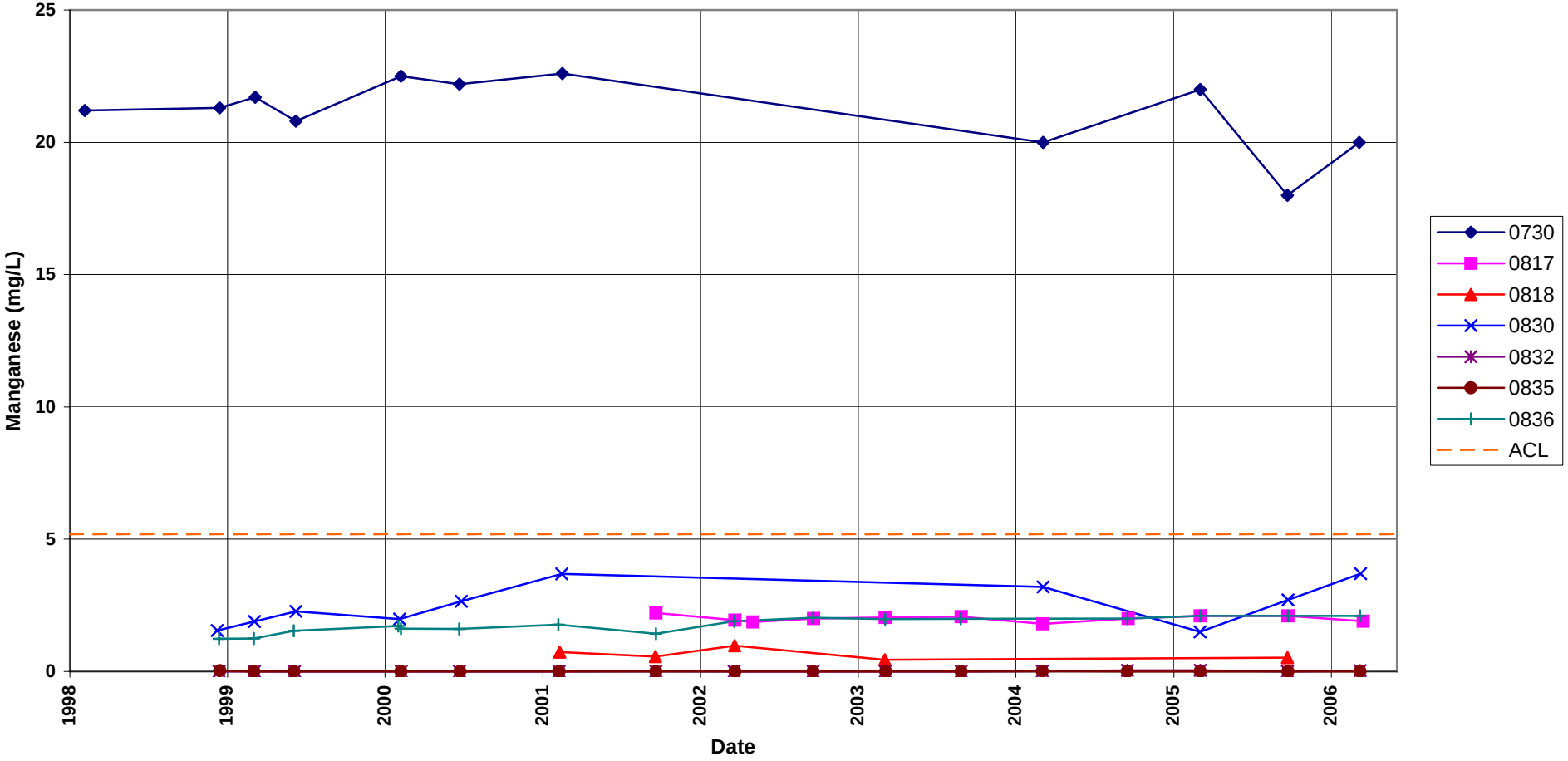
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration



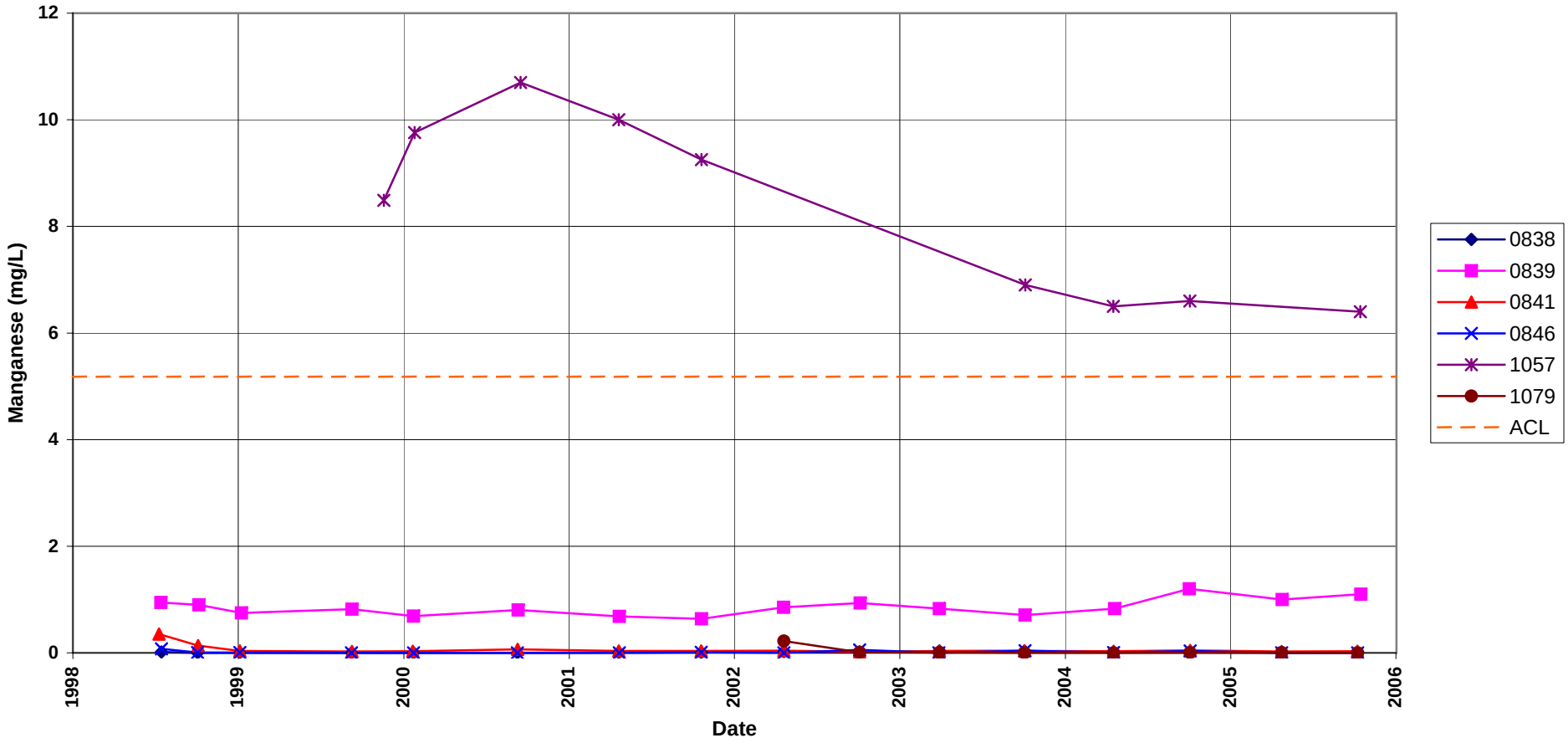
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration



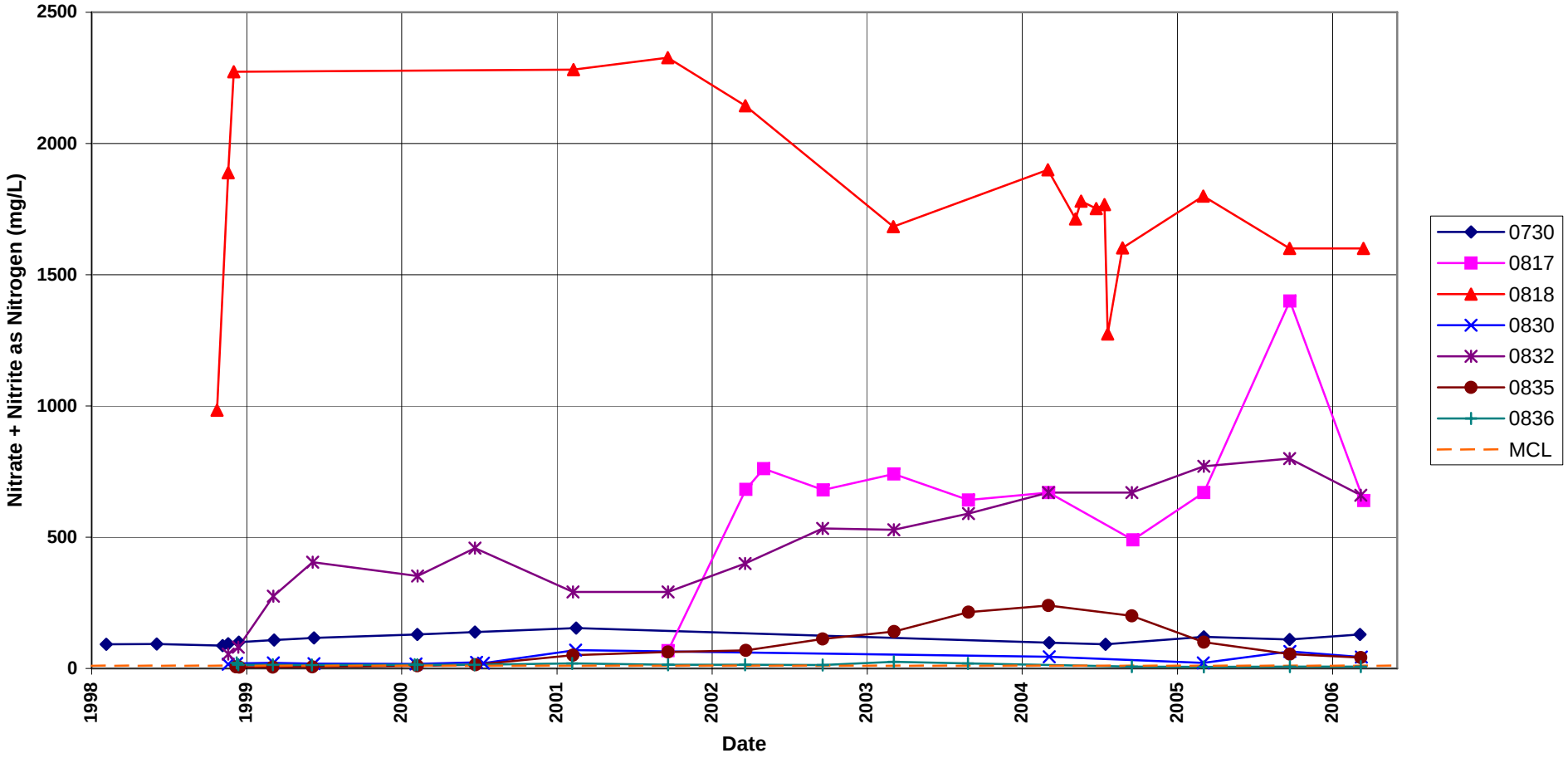
Shiprock Disposal Site (Terrace)
Manganese Concentration
ACL = 5.18 mg/L



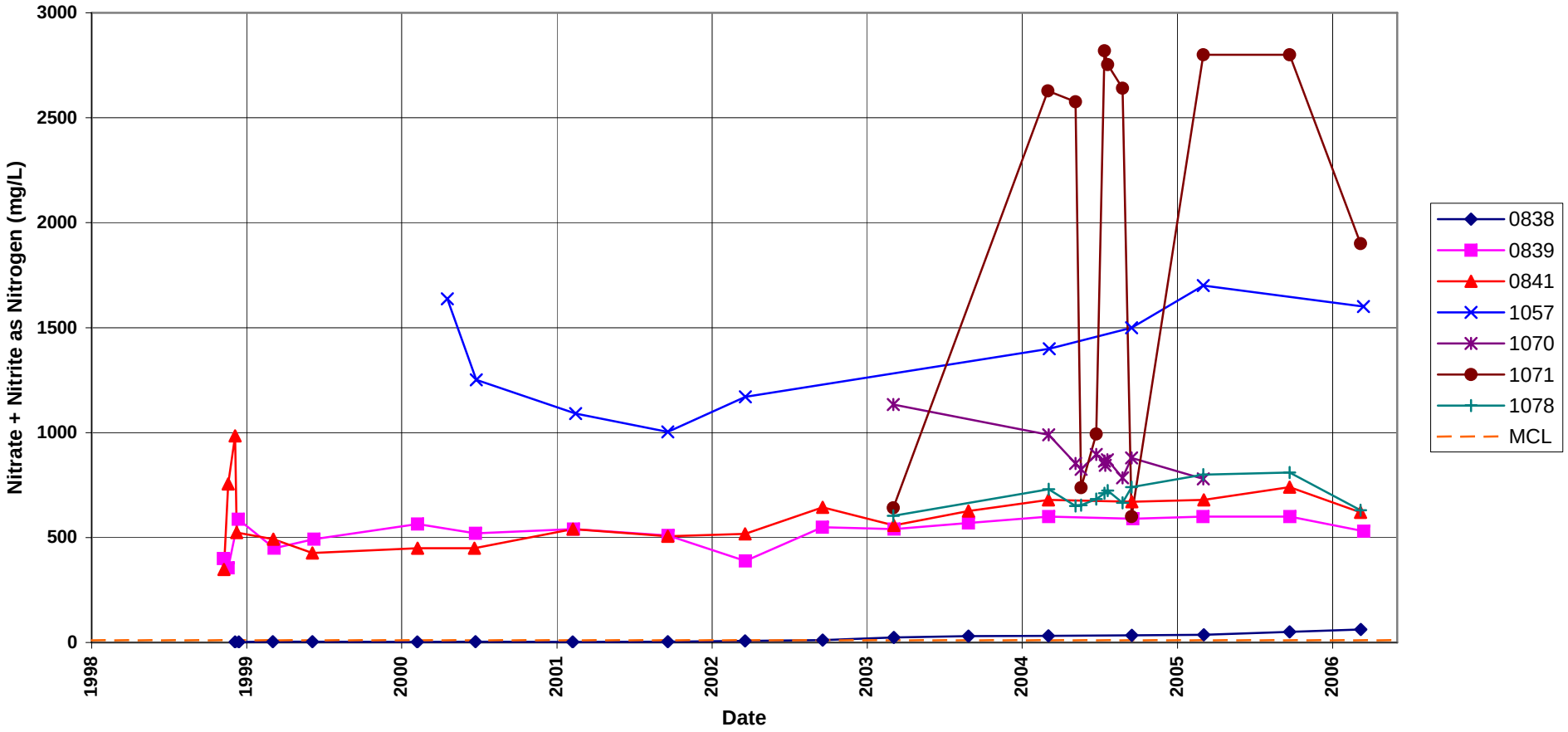
Shiprock Disposal Site (Terrace)
Manganese Concentration
ACL = 5.18 mg/L



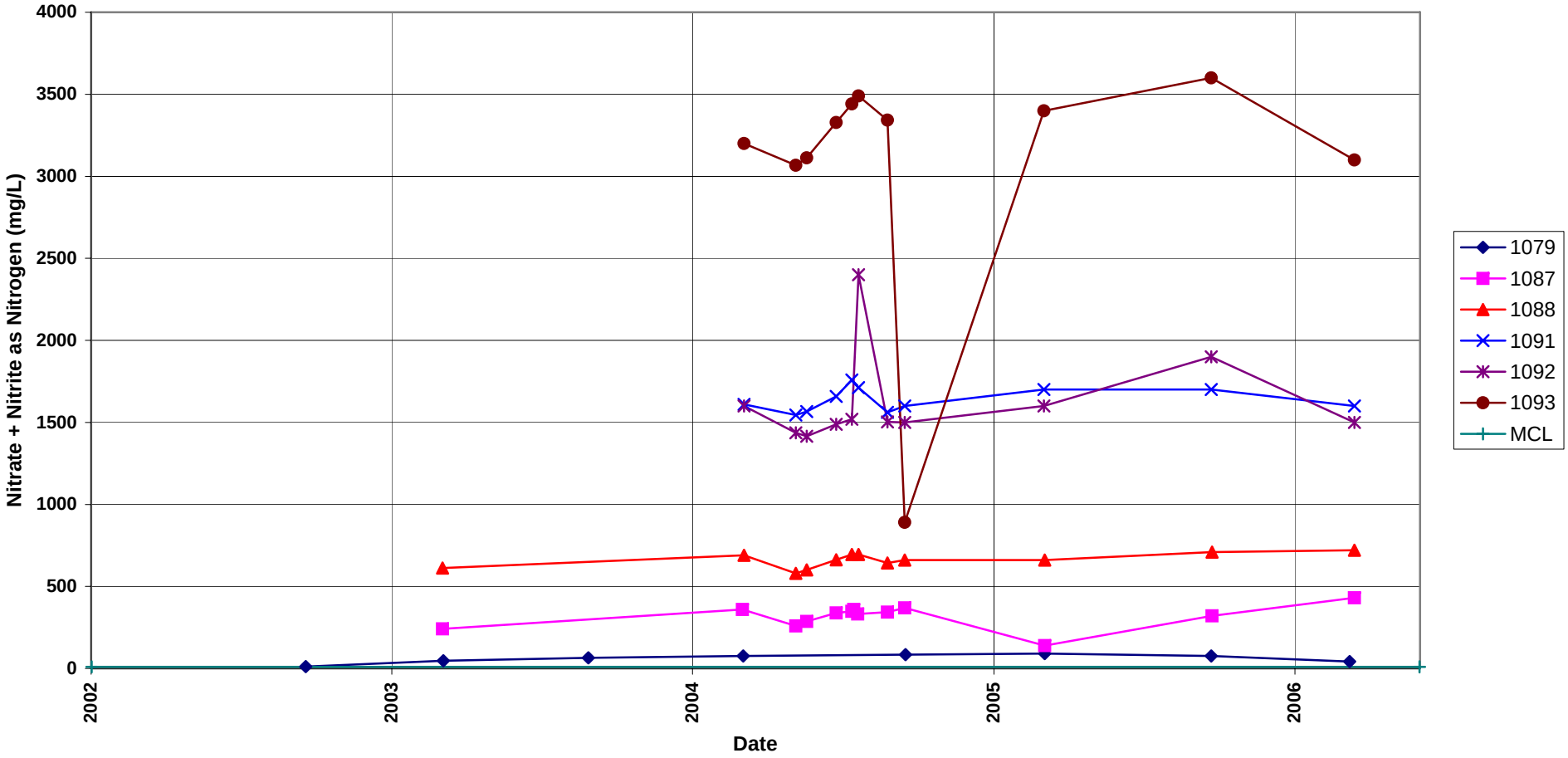
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



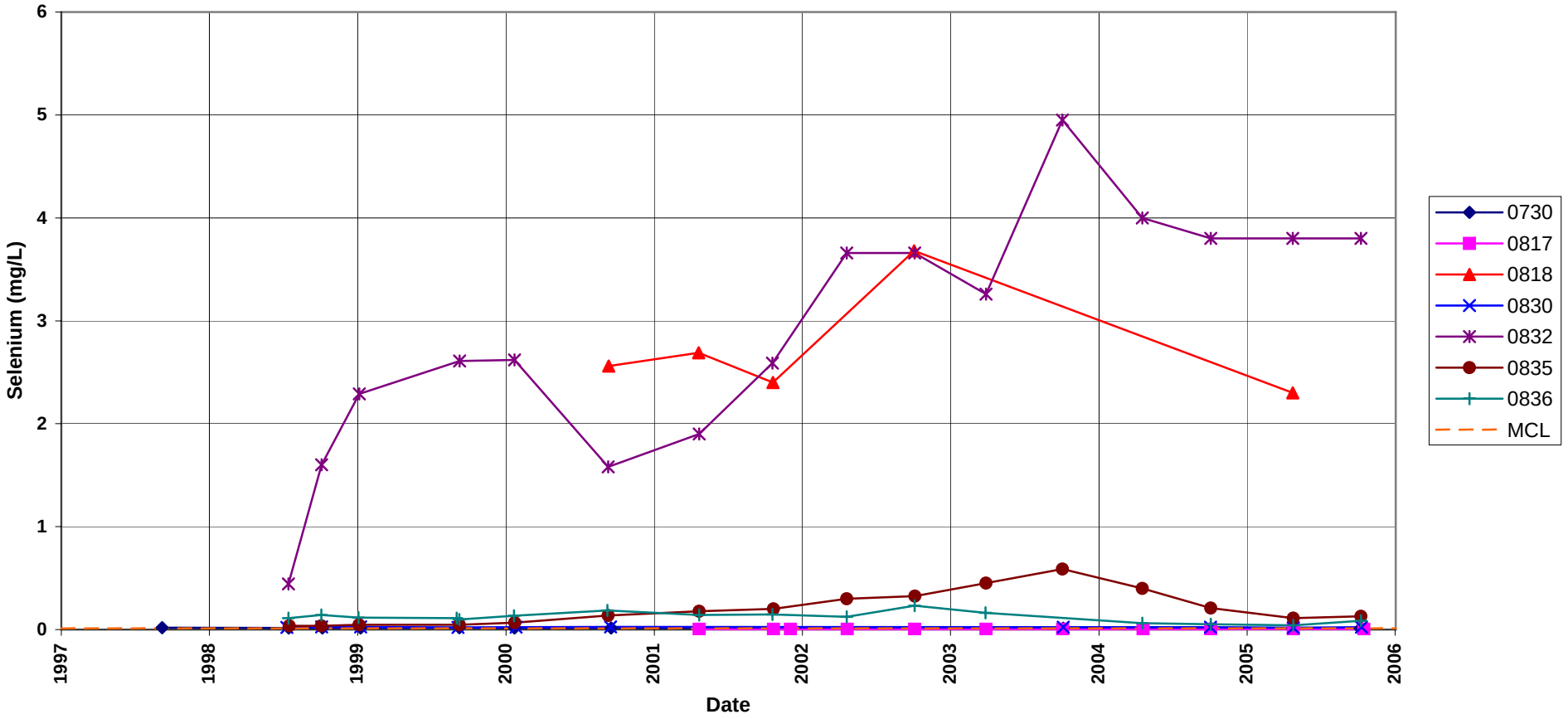
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



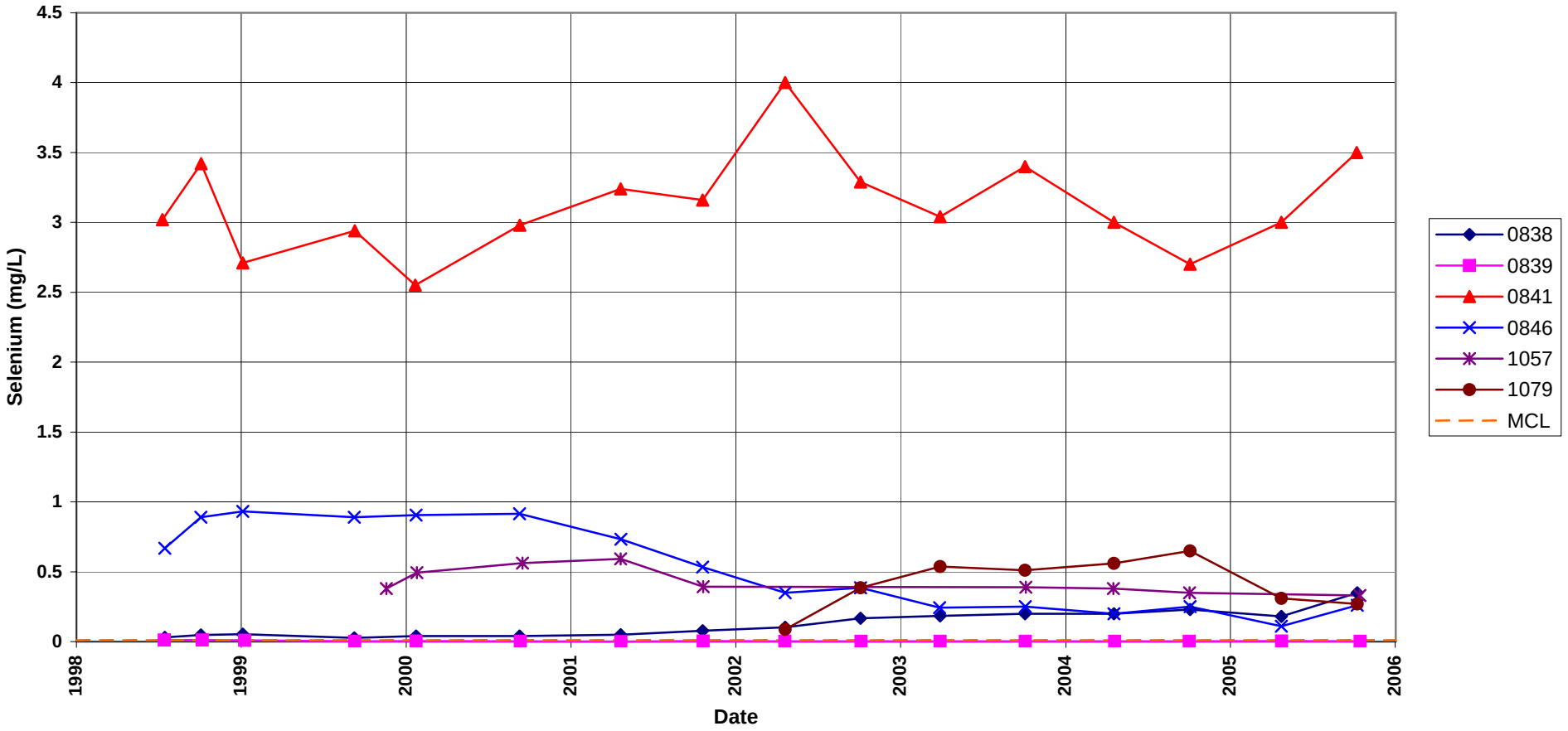
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



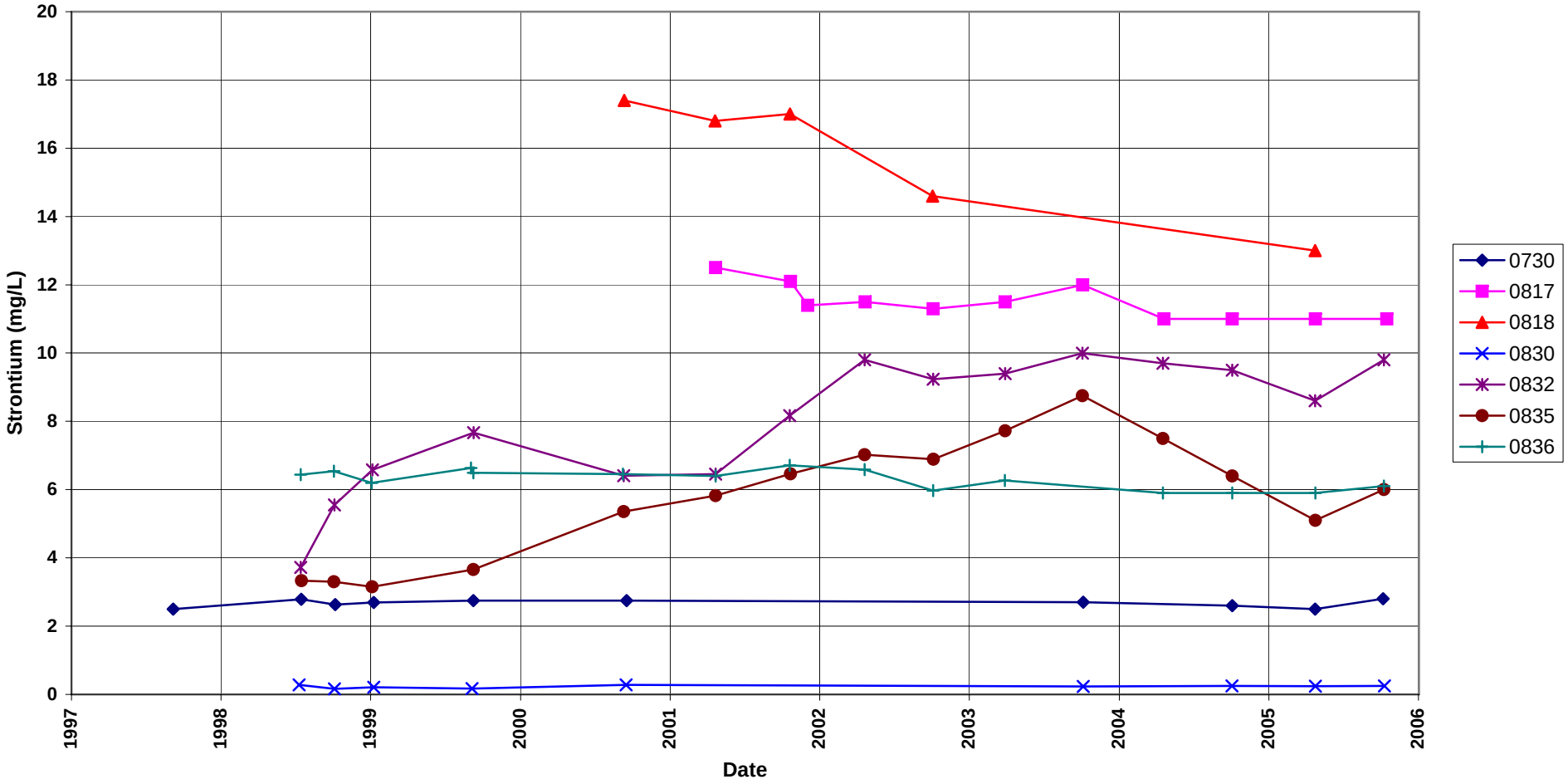
Shiprock Disposal Site (Terrace)
Selenium Concentration
MCL = 0.01 mg/L

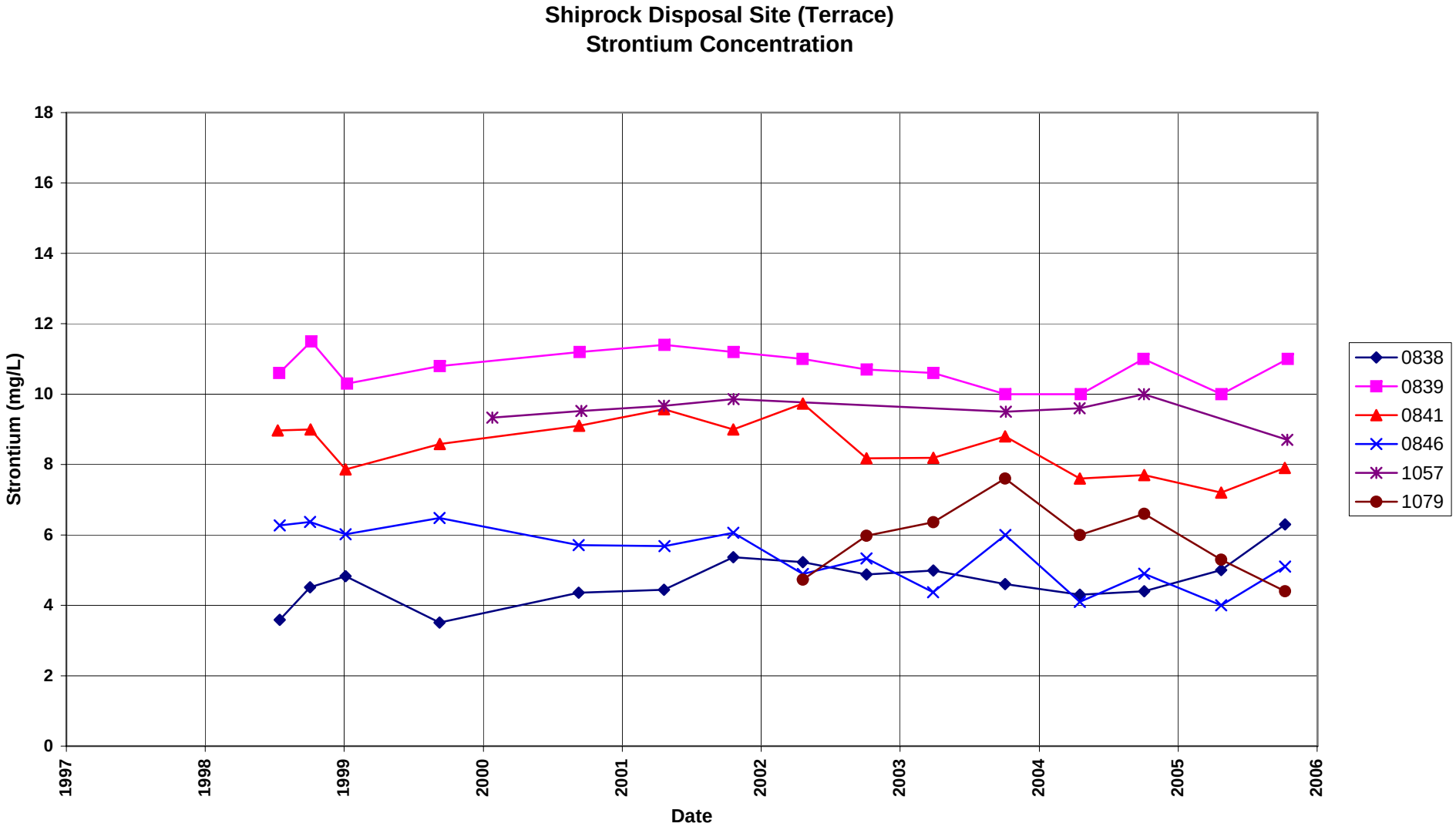


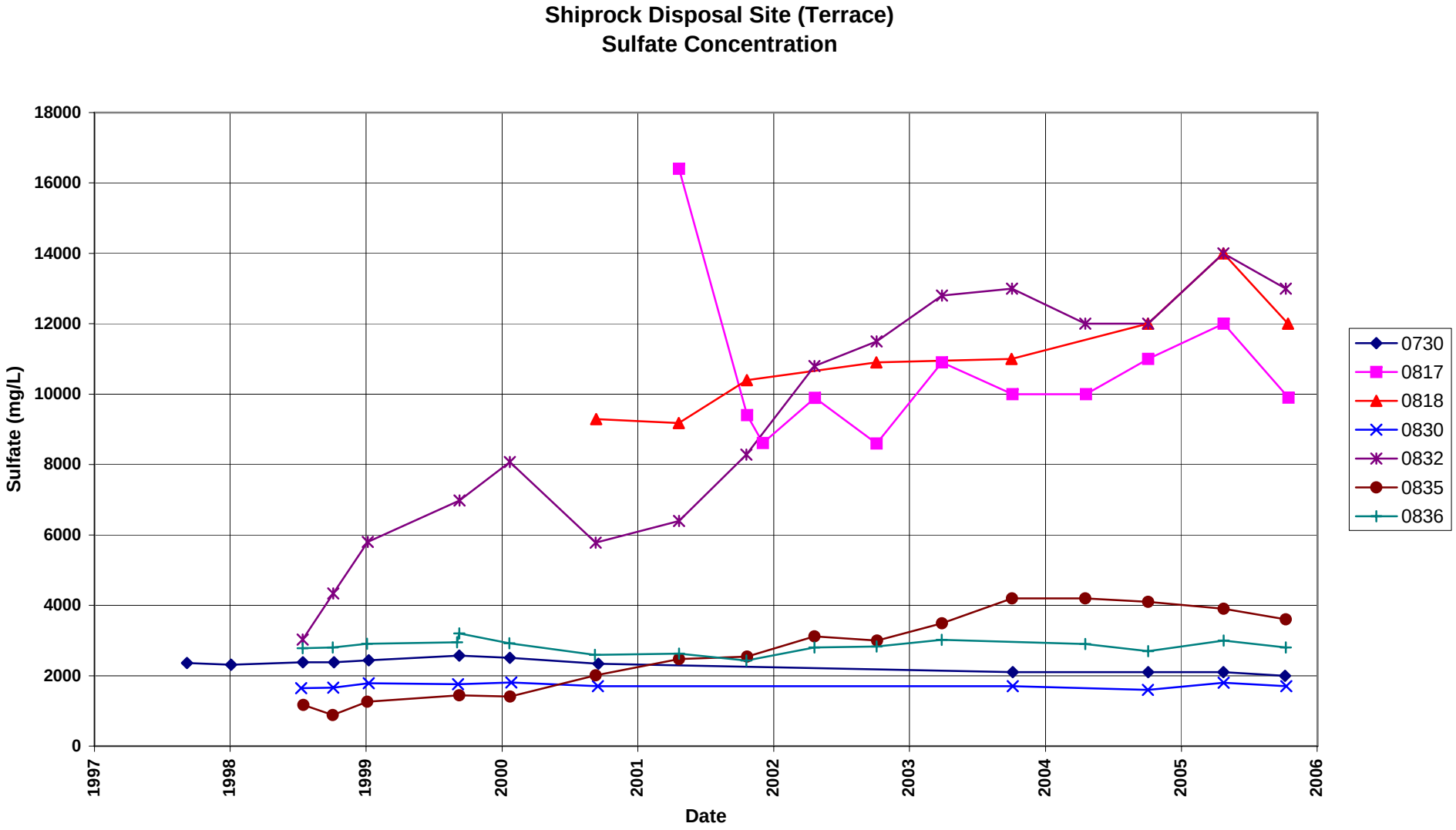
Shiprock Disposal Site (Terrace)
Selenium Concentration
MCL = 0.01 mg/L



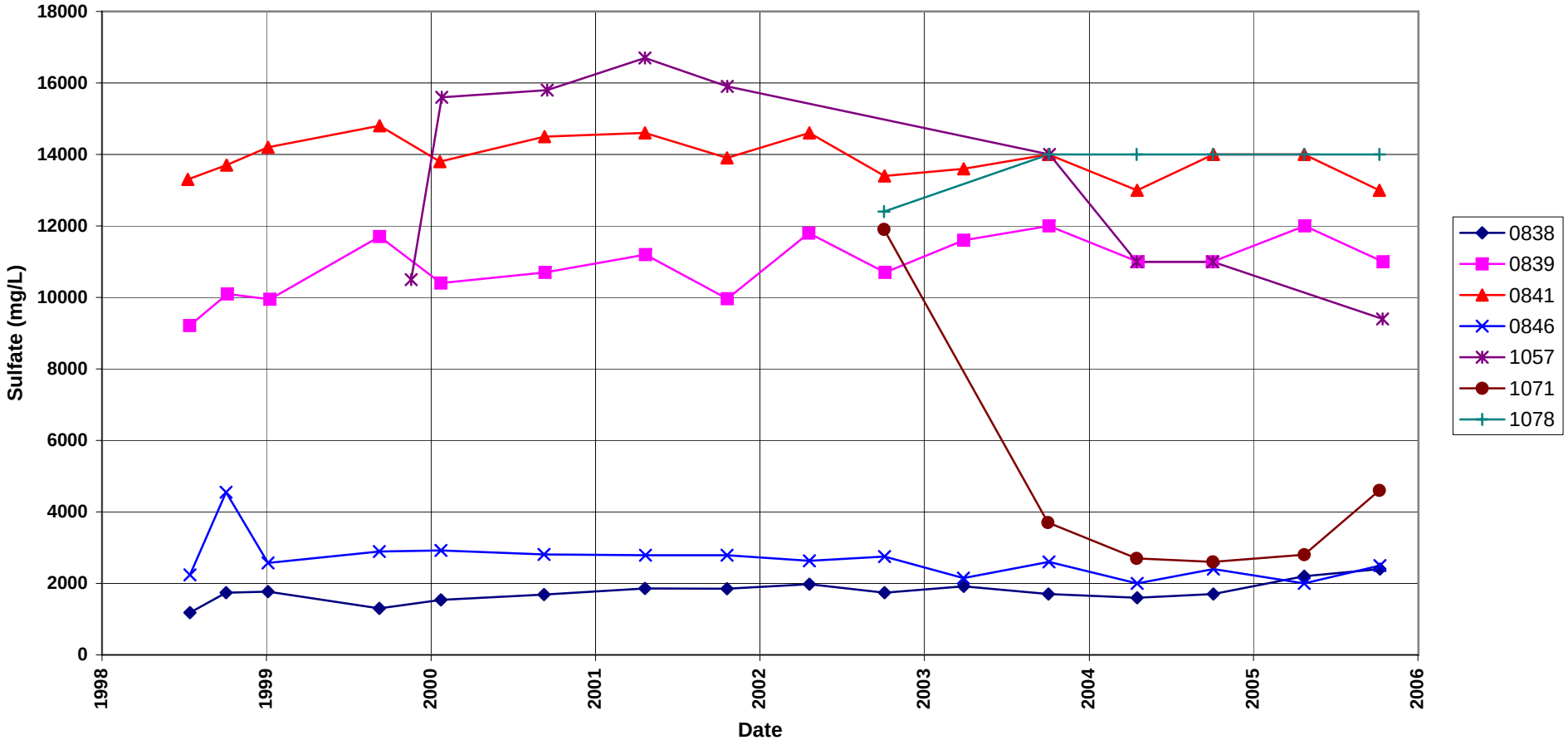
Shiprock Disposal Site (Terrace)
Strontium Concentration

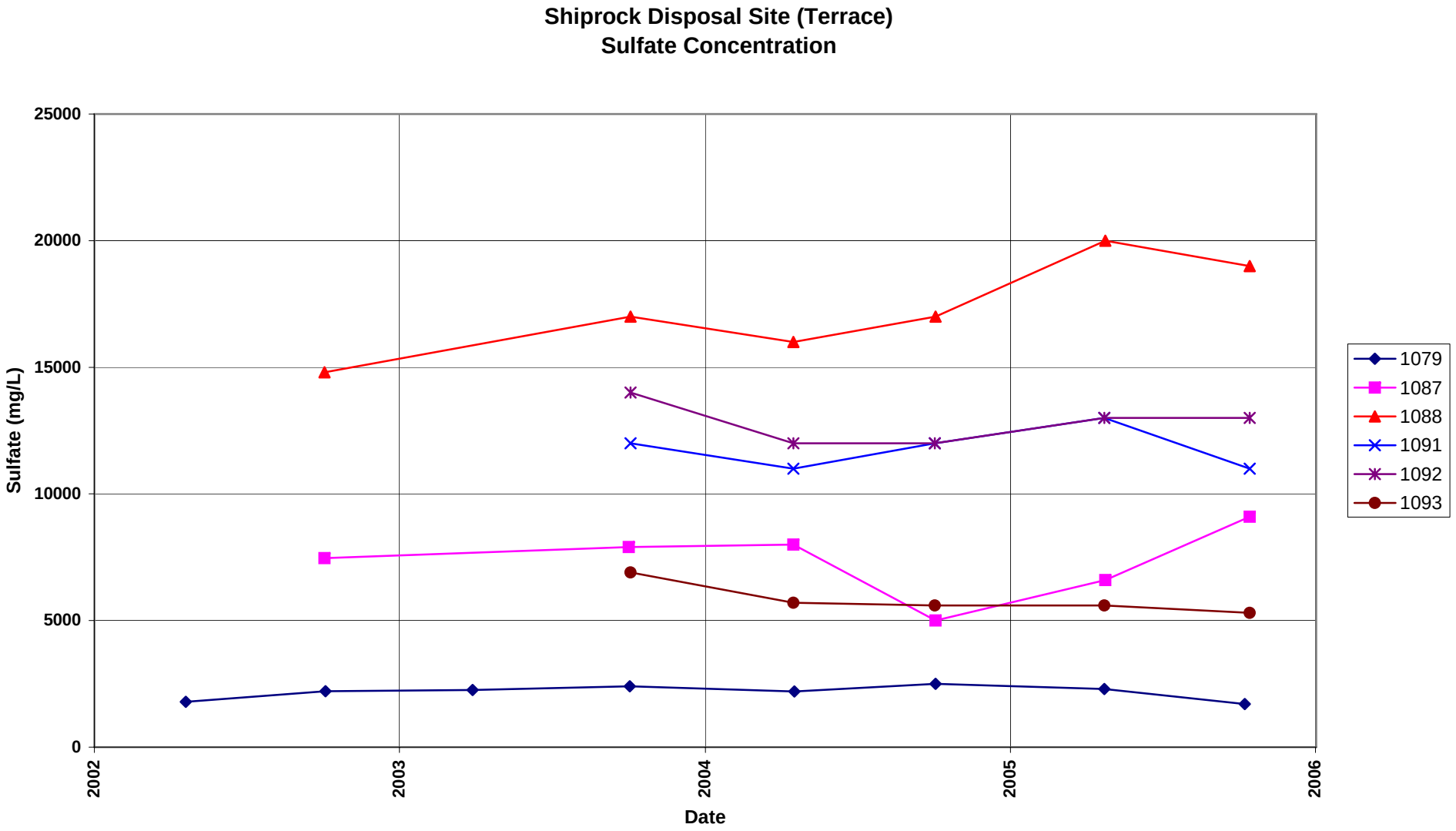



Shiprock Disposal Site (Terrace)
Strontium Concentration
Strontium (mg/L)
18
16
14
12
10
8
6
4
2
0
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Date
0838
0839
0841
0846
1057
1079

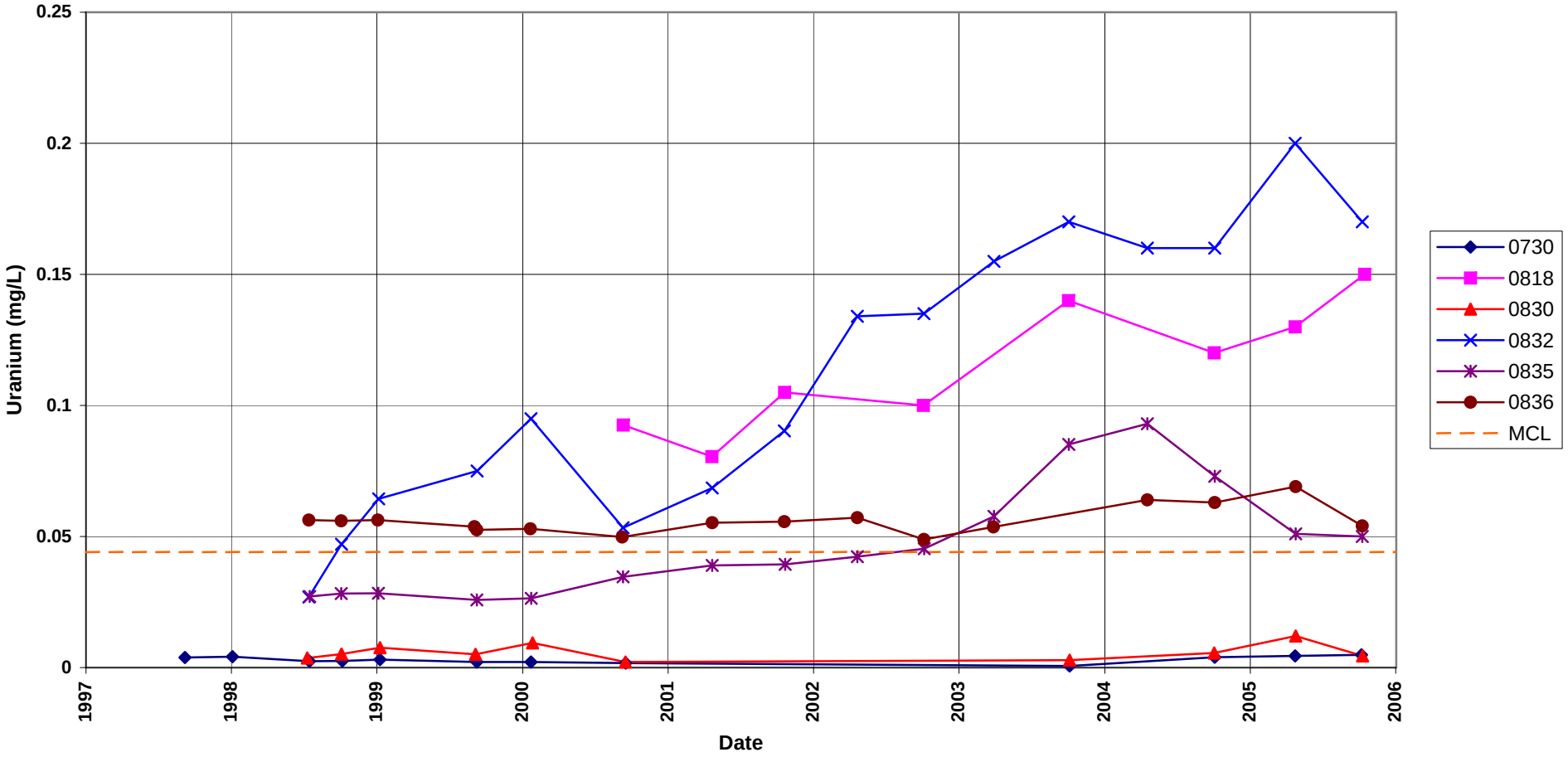

Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Date
0730
0817
0818
0830
0832
0835
0836

Shiprock Disposal Site (Terrace)
Sulfate Concentration

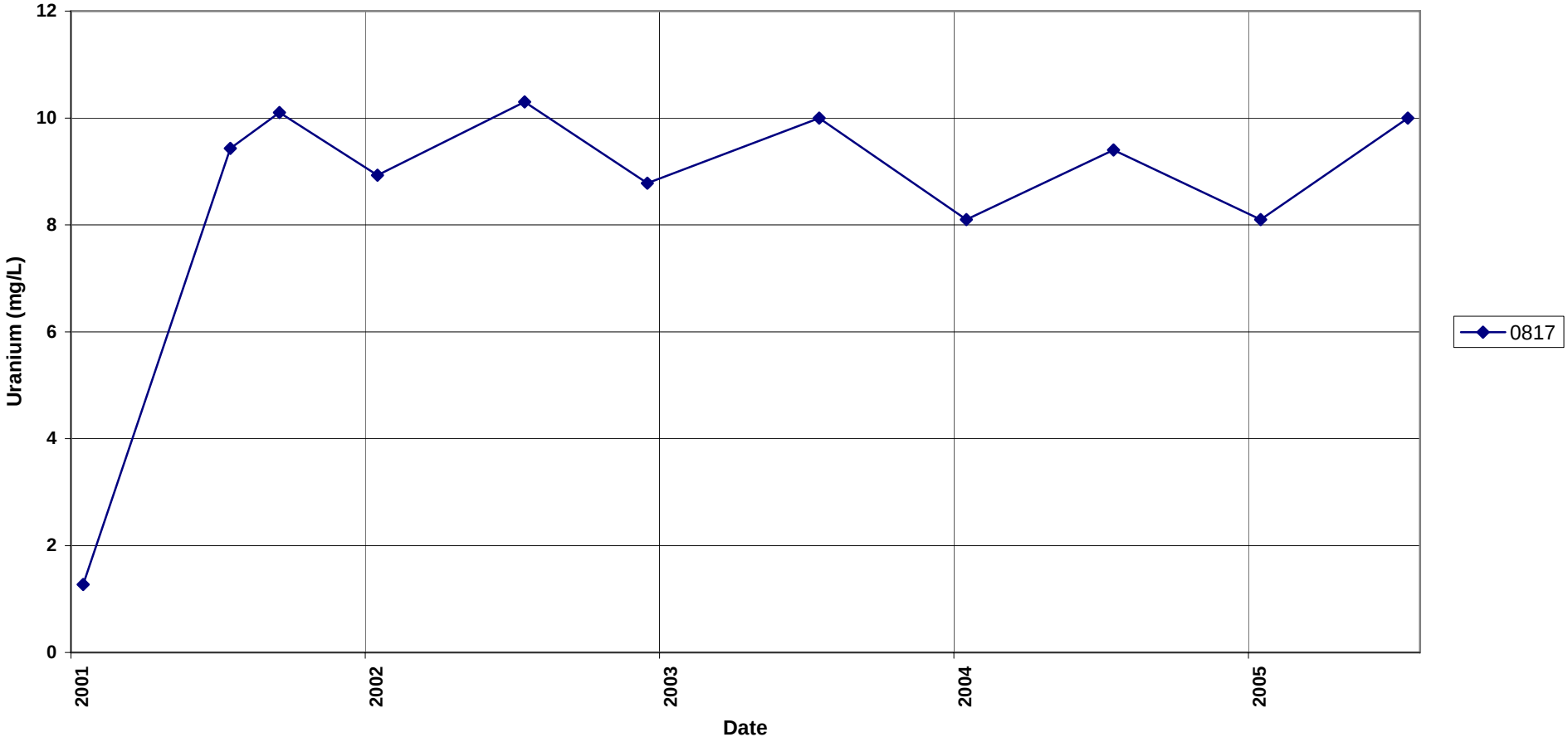



Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
25000
20000
15000
10000
5000
0
2002
2003
2004
2005
2006
Date
1079
1087
1088
1091
1092
1093

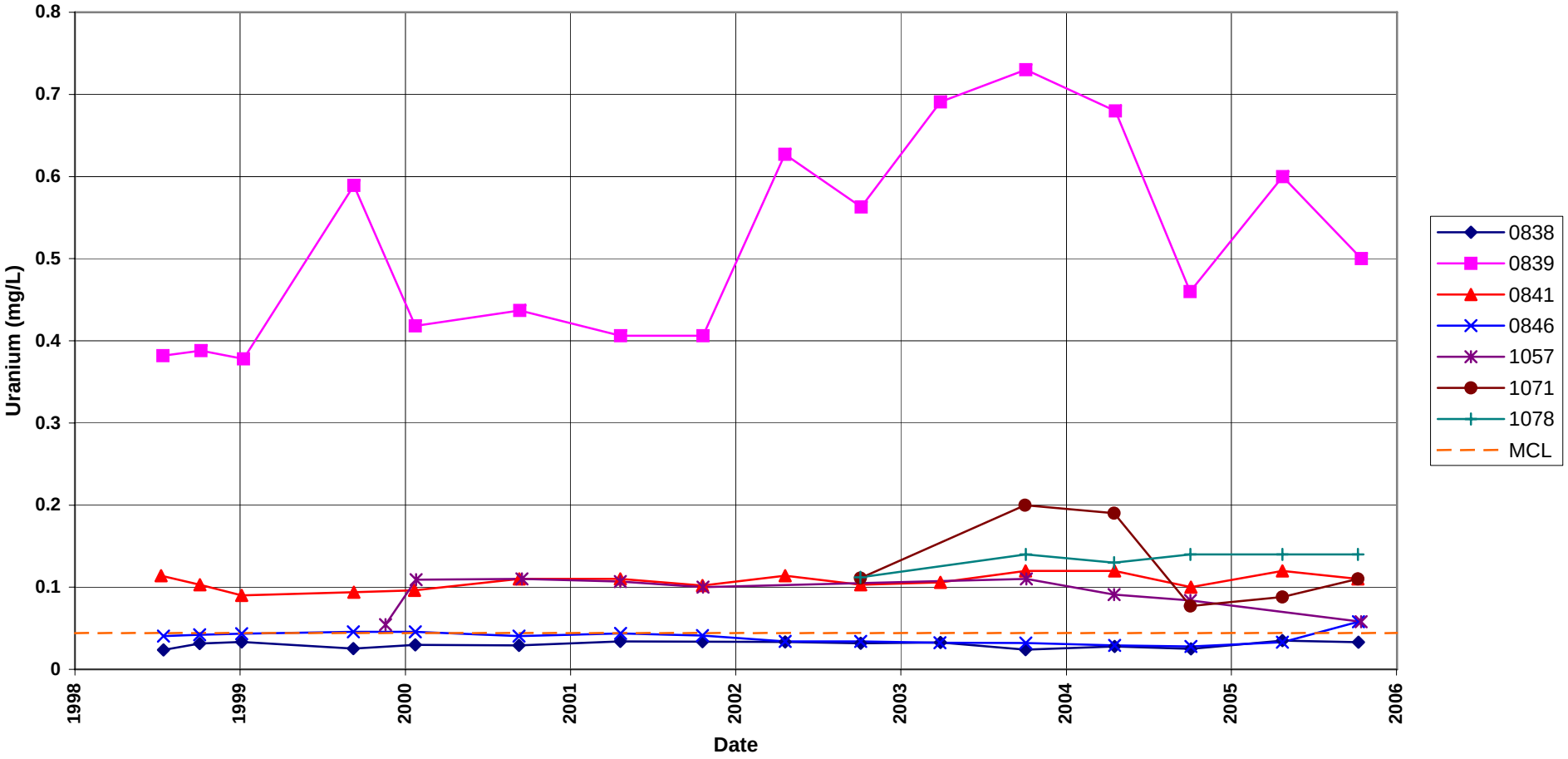
Shiprock Disposal Site (Terrace)
Uranium Concentration
MCL = 0.044 mg/L



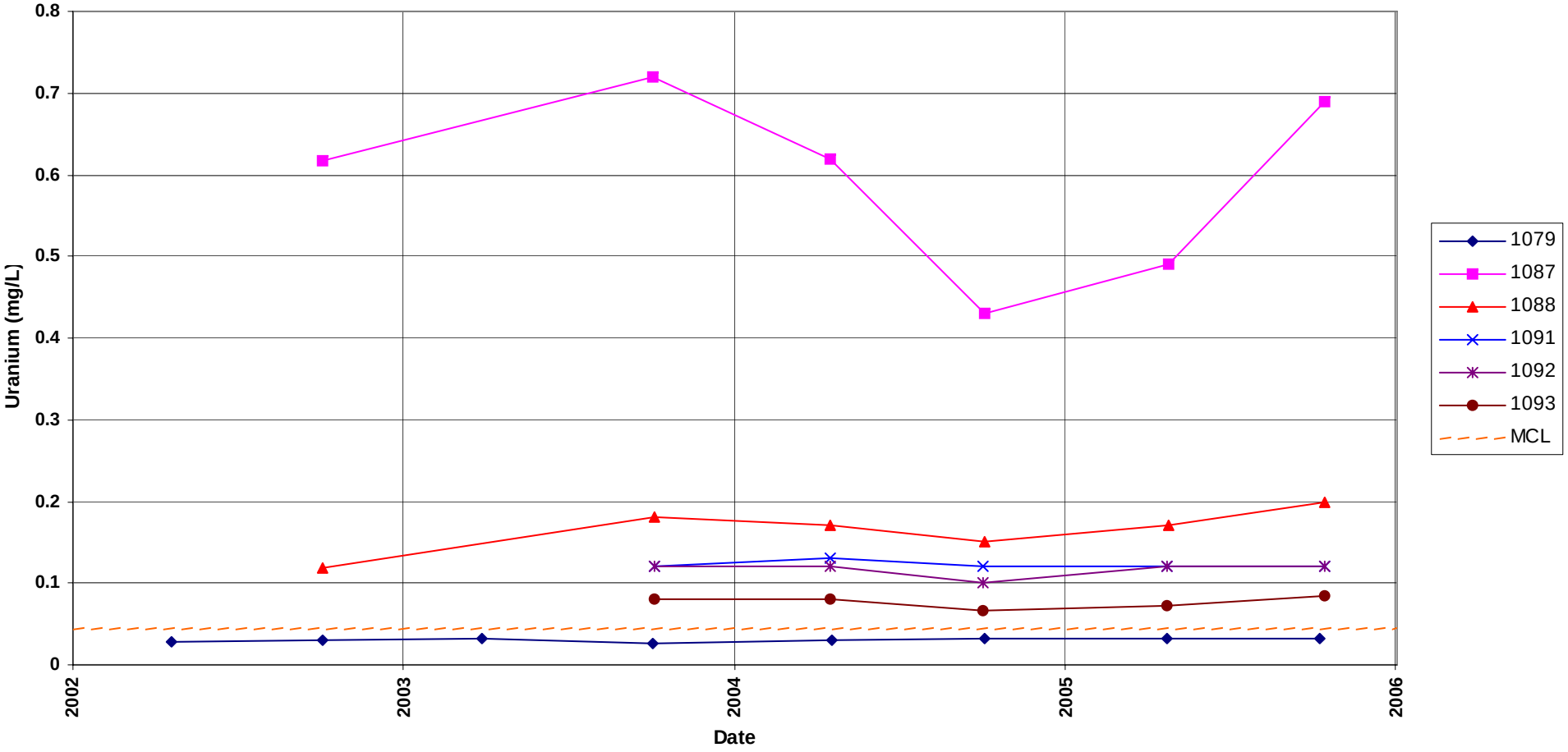
Shiprock Disposal Site (Terrace)
Uranium Concentration
MCL = 0.044 mg/L



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



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



Attachment 3
Sampling and Analysis Work Order

Stoller

established 1959

Task Order ST06-100
Control Number 1000-T06-0738

February 13, 2006

Richard P. Bush
Program Manager
U.S. Department of Energy
Grand Junction Office
2597 B ¾ Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AC01-02GJ79491, Stoller
March 2006 Environmental Sampling at Shiprock, New Mexico

Reference: FY 2006 LM Task Order No. ST06-100-06

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 March 6, 2006.

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	1057 Al	1071 Al	1087 Nr	1092 Nr
818 Al	836 Al	841 Al	1060 Al	1078 Al	1088 Nr	1093 Nr
830 Km						

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

Surface Water (filtered)

SHP01						
501	897	937	939	956	959	1203
655	898	938	940	957	965	1205
887						

Surface Water (filtered) (continued)

SHP02							
425		786		889	933	935	936	942
426	884	932	934					
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/at
Enclosures (3)

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

cc w/o enclosures:
Correspondence Control File (Thru B. Bonnett)

Site	Shiprock	
Analyte	Ground Water	Surface Water
Approx. No. Samples/yr	73	57
Field Measurements		
Alkalinity	X	X
Dissolved Oxygen	X	
Redox Potential	X	X
pH	X	X
Specific Conductance	X	X
Turbidity	X	
Temperature	X	X
Laboratory Measurements		
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

Analyte	Ground Water	Surface Water
Radium-226		
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

Stoller established 1959
Grand Junction Office

Memorandum

Control Number N/A

DATE: April 11, 2006

TO: David E. Miller

FROM: Emile A. Bettez

SUBJECT: Routine Sampling Trip Report

Site: Shiprock, New Mexico

Dates of Sampling Event: March 6-10 and March 14-16, 2006

Team Members: Dave Traub and Emile Bettez

Number of Locations Sampled: Water samples for 23 monitor wells, 10 extraction wells, and 23 surface locations were collected. In addition, 3 duplicate samples and 1 equipment blank were collected for QA/QC purposes.

Locations Not Sampled/Reason: Well 1094 is out of service. Well 1060 was dry. Surface locations 0884, 0885, 0932, 0938, and 0942 were dry at the time of sampling.

Location Specific Information:

Ticket Number	Location	Sample Date	Description	Data Logger
NDV 617	0730	3/6/2006	Cat. I. WL below pump.	
NDV 618	0797	3/7/2006	Cat. I.	
NDV 619	0850	3/7/2006	Cat. I. Pumped first 2 L out to clear turbid water.	
NDV 620	0898	3/7/2006	SW location. 12" deep, 16" off bank. Strong river flow.	
NDV 621	0957	3/7/2006	SW location. 8" deep, 2 ft. off bank.	
NDV 622	0939	3/7/2006	SW location. Placed intake where clear water was flowing.	
NDV 623	0887	3/7/2006	SW location. Intake 2" deep, where water was flowing.	
NA	0932	3/7/2006	SW location. Dry.	
NA	0942	3/7/2006	SW location. Seep was dry.	
NDV 625	1071	3/7/2006	Cat. IV. Extraction well.	
NFK 351	1078	3/7/2006	Cat. IV. Extraction well.	
NFK 352	0841	3/7/2006	Cat. I.	Y (86%)
NA	0884	3/7/2006	SW location. Dry.	
NFK 353	0835	3/8/2006	Cat. I. Slow well.	
NFK 354	0836	3/8/2006	Cat. I.	Y
NFK 355	0846	3/8/2006	Cat. I. Collected duplicate at this well.	Y
NFK 356	1079	3/8/2006	Cat. I.	
NFK 357	0838	3/8/2006	Cat. I.	
NFK 358	2604	3/8/2006	Duplicate sample from 0846.	
NA	1060	3/8/2006	Well was dry.	Y

Ticket Number	Location	Sample Date	Description	Data Logger
NFK 360	0832	3/8/2006	Cat. I.	
NFK 361	0619	3/8/2006	Cat. I.	
NFK 362	0618	3/8/2006	Cat. I.	
NFK 363	0830	3/9/2006	Cat. I. Whitish water, with soft clumps of precipitate.	Y (mini)
NFK 364	0897	3/9/2006	SW location. 6" deep, 3 ft. from bank.	
NFK 365	0889	3/9/2006	SW location. Seep had slow steady flow.	
NFK 366	0735	3/9/2006	Cat. I. Organics and roots in water.	
NFK 367	0501	3/9/2006	SW location. 12" deep, 3 ft. off bank. Steep.	
NFK 368	0608	3/9/2006	Cat. I.	
NFK 369	1203	3/9/2006	SW location.	
NFK 370	0614	3/9/2006	Cat. I.	
NFK 371	0615	3/9/2006	Cat. I.	
NFK 372	1205	3/9/2006	SW location. 12" deep, 2 ft. off concrete.	
NFK 373	0736	3/10/2006	Cat. I. Organics and roots in water.	Y
NFK 374	1008	3/10/2006	Cat. I.	Y
NFK 375	1057	3/14/2006	Cat. I.	
NFA 502	0818	3/14/2006	Cat. IV. Extraction well. Well cycles too often.	
NFA 503	0662	3/14/2006	SW location. Could not estimate flow rate.	
NFA 504	0940	3/14/2006	SW location. 100 ft. N of bank, 4" deep, 3 ft. from edge.	
NFA 506	1104	3/14/2006	Cat IV. Extraction well. Replaces well 1077. Sampled from tube in 1089 vault, east wall.	
NFA 507	1089	3/14/2006	Cat. IV. Extraction well.	
NFA 508	0425	3/14/2006	SW location. Flowing 300 mL/ min.	
NFA 509	0426	3/14/2006	SW location. 4"PVC is 0.5 "below pool level. No flow rate.	
NFA 501	1092	3/14/2006	Cat. IV. Extraction well.	
NFA 510	1091	3/14/2006	Cat. IV. Extraction well.	
NFA 511	1093	3/14/2006	Cat. IV. Extraction well.	
NA	1094	3/14/2006	Inactive abandoned extraction well.	
NFA 512	1088	3/14/2006	Cat. IV. Extraction well. Many Devils sump.	
NFA 513	1087	3/14/2006	Cat. IV. Extraction well. Not on map, not labeled w/ number.	
NA	0885	3/14/2006	SW location. Dry.	
NFA 514	0839	3/15/2006	Unknown Cat. Dewatered at the end of purge.	
NFA 515	0817	3/15/2006	Cat. II.	
NFA 516	0734	3/15/2006	Cat. II. Slow recharge, goes dry.	
NFA 517	0655	3/15/2006	SW location. No flowing water.	
NFA 518	0786	3/15/2006	SW location. Steady drip off of shale. Flow rate is 0.5 L/min.	
NFA 522	0959	3/15/2006	SW location. Stagnant water. Pool was 8-10" deep, 30 x 8ft.	
NFA 521	0936	3/15/2006	SW location. Not much water.	
NFA 519	0933	3/15/2006	SW location. Flow rate is 0.5 L/min. at knick point.	
NFA 520	0935	3/15/2006	SW location. INSW for parameters, filled 3-125 ml bottles. No flow; dug hole for ponded water.	
NA	0938	3/15/2006	SW location. Dry.	
NFA 523	0965	3/16/2006	SW location.	
NFA 524	0934	3/16/2006	SW location. Slow flow from seep.	
NFA 525	2606	3/16/2006	Duplicate samples from location 0965.	
NFA 576	2608	3/16/2006	Duplicate samples from location 0934.	
NFA 577	0937	3/16/2006	SW location. Slow flow in channel.	
NFA 578	0956	3/16/2006	SW location. River level was higher than prior day.	
NFA 579	2609	3/16/2006	Equipment blank collected after sampling location 0956.	

Field Variance: N/A

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

False ID	True ID	Sample Type	Associated Matrix	Ticket Number
2604	0846	Duplicate	Ground water	NFK 358
2606	0965	Duplicate	Surface water	NFA 525
2608	0934	Duplicate	Surface water	NFA 576
2609	NA	Equip. Blank	DI	NFA 579

Quality control location numbers 2605 and 2607 were not used.

Requisition Numbers Assigned: All samples were assigned to RIN 06020313.

Sample Shipment: Samples that were collected up to March 8, 2006, were shipped FedEx to Paragon Analytical from Farmington, New Mexico on March 9, 2006, with waybill 852758478790. A second shipment to Paragon Analytical was prepared at the Grand Junction Office and sent via FedEx on March 13, 2006, with waybill 852758477955. All remaining samples were shipped FedEx to Paragon Analytical on March 17, 2006, from the Grand Junction Office.

Water Level Measurements: Water levels were collected in all sampled wells, with the exception of the 10 extraction wells. Water level data are provided in the table below. These data represent depth to water (ft btoc) measurements:

Well	Date	Depth to water (ft.)
0797	3/7/2006	8.23
0850	3/7/2006	8.00
0841	3/7/2006	45.22
0835	3/8/2006	19.50
0836	3/8/2006	24.68
0846	3/8/2006	25.01
1079	3/8/2006	16.05
0838	3/8/2006	26.59
1060	3/8/2006	Dry
0832	3/8/2006	Below pump
0619	3/8/2006	7.18
0618	3/8/2006	6.88
0830	3/9/2006	17.32
0735	3/9/2006	6.72
0608	3/9/2006	6.05
0614	3/9/2006	7.27
0615	3/9/2006	7.29
0736	3/10/2006	6.09
1008	3/10/2006	8.52
1057	3/14/2006	38.42
0839	3/15/2006	Below pump
0817	3/15/2006	18.90
0734	3/15/2006	6.67

Well Inspection Summary: Well inspections were conducted at all sampled wells; all sampled wells were in good condition. Well 1094 appears abandoned and we confirmed that it is out of service. Well 1077 is now out of service, substituted with well 1104.

Equipment: Wells were sampled using the low-flow procedure with dedicated bladder pumps and dedicated tubing, or with the peristaltic pump if needed. Extraction wells were sampled using the installed pumps. These pumps are activated by sensing the water level in the well. To sample, we had to close the main valve exiting the vault, and unplug the main power to the pump, to allow the water level to build up. After some time, re-plug the main power, and the pump will activate building up pressure in the system. Then you can sample using the sampling port. Once finished remember to open the main valve! Surface water samples were collected with a portable peristaltic pump.

Institutional Controls

Fences, Gates, Locks:
Signs:
Trespassing/Site Disturbances:

Site Issues: Extraction well 1094 was out of service and not active at the time of sampling. Wells 1104 and 1089 are now culvert wells with pumps installed in them. The sampling access points for these wells are located in the vault for 1089. Each sampling port is labeled. If in the future there is a need to sample this well and the pumps are inactive, they can still be sampled with a peristaltic pump at the location of the well.

Disposal Cell/Drainage Structure Integrity:
Vegetation/Noxious Weed Concerns:
Maintenance Requirements: The pump installed in extraction well 0818 seems to be cycling way too often. This may ruin the pump. Well 1087 was not on map, and the vault was unlabeled. We did paint a label inside the vault cover. Some of the netting covering the seeps on the flood plain needs maintenance. There are rocks and dirt weighting them down.

Corrective Action Taken: N/A

(EAB/lcg)

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