DOE–LM/1383–2006

Data Validation Package

September 2006
Shiprock, New Mexico, Disposal Site

December 2006

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: September 11-14, 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 the *Environmental Procedures Catalog* (STO 6). Monitoring of terrace locations is performed to determine the effectiveness of active remediation and to confirm that milling-related constituents do not affect the current beneficial, limited use of the ground water. Monitoring of floodplain locations is performed to determine the progress of the natural flushing process and the effectiveness of ground water removal to prevent contaminants from reaching the San Juan River.

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

Floodplain surface water analyte concentrations were compared to statistical benchmark values derived using data from 16 samplings of location 0898, which is upstream of the site on the San Juan River. Benchmark values were not exceeded for the point-of-exposure river locations adjacent to or downstream from the site.

San Juan River downgradient locations 0957 and 0965 are sampled to determine if COCs from the floodplain contaminant plume are entering the river. These are 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.

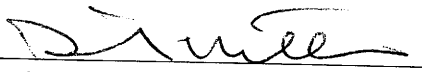
Table 1. Shiprock Locations that Exceed Standards

Analyte	Standard[a]	Proposed ACL[b]	Site Code	Location	Concentration
Nitrate as Nitrogen	10		SHP01	0608	550
				0614	890
				0615	980
				0618	250
				0735	400
				1008	160
				1089	46
				1104	100
Selenium	0.01	0.05	SHP01	0614	0.14
				0615	0.46
				0618	0.26
				0735	0.037
				1008	0.036
				1089	0.034
				1104	0.029
Uranium	0.044		SHP01	0608	1.9
				0614	3
				0615	4.8
				0618	2.9
				0619	0.47
				0735	0.2
				0736	0.24
				0850	0.068
				1008	3
				1089	1.5
				1104	2
Nitrate as Nitrogen	10		SHP02	0730	150
				0817	500
				0818	1700
				0830	130
				0835	53
				0838	76
				0839	460
				0841	660
				0846	15
				1070	680
				1071	680
				1078	640
				1079	35
				1091	1800
				1092	1400
				1093	2500
				1095	1500
				1096	700
Selenium	0.01		SHP02	0830	0.033
				0835	0.16
				0836	0.035
				0838	0.41
				0841	3.4
				0846	0.15
				1071	2.9
				1078	2.9
				1079	0.21
				1096	2.8

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard[a]	Proposed ACL[b]	Site Code	Location	Concentration
Uranium	0.044		SHP02	0817	7.6
				0818	0.14
				0835	0.054
				0836	0.069
				0839	0.41
				0841	0.12
				1070	0.12
				1071	0.14
				1078	0.14
				1091	0.12
				1092	0.13
				1093	0.079
				1095	0.069
				1096	0.12

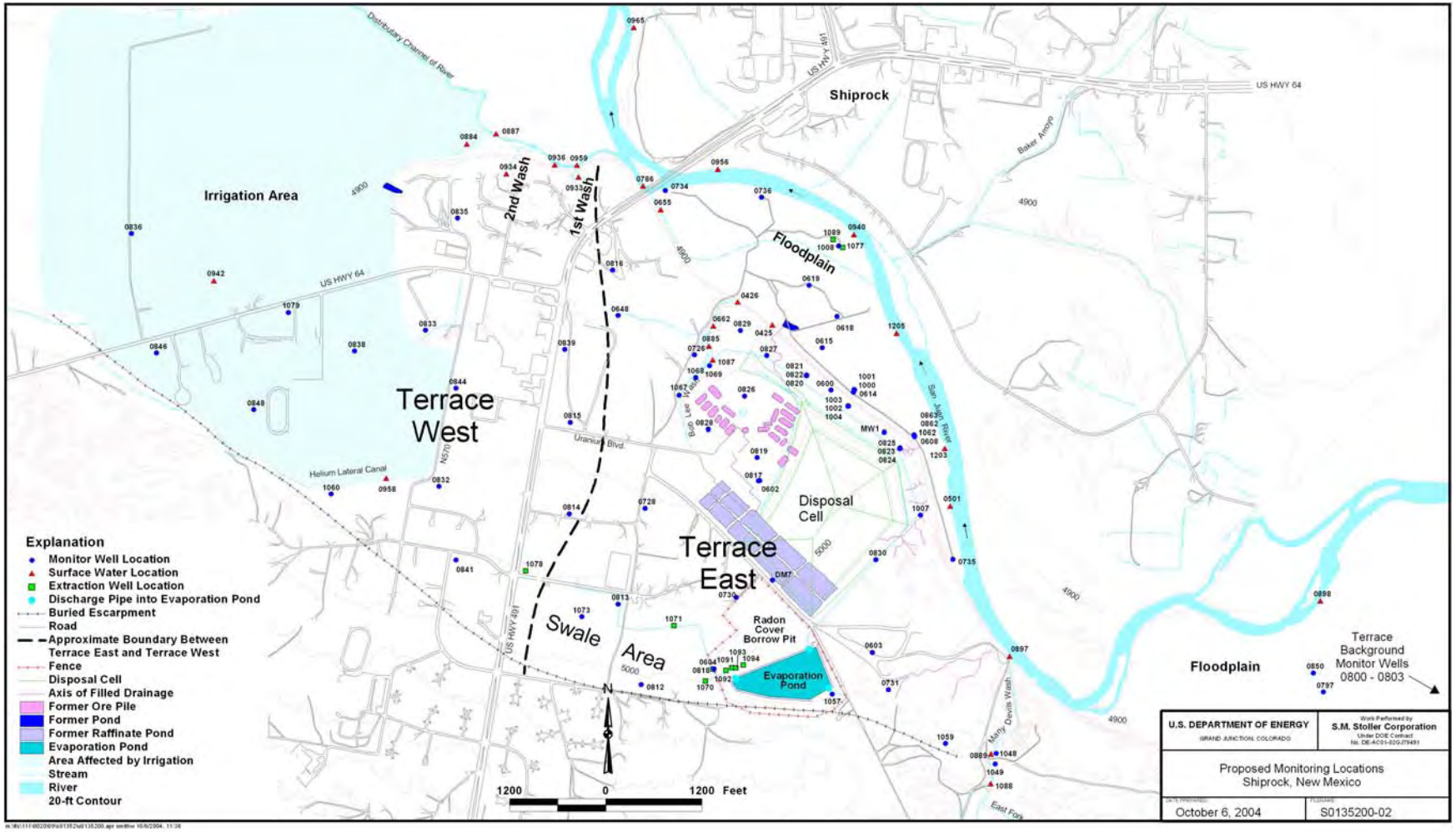
[a] Standards are listed in 40 CFR 192.02 Table 1 to Subpart A; units are in mg/L.
[b] Proposed alternate concentration limit.



David Miller
Site Lead, S.M. Stoller

12/7/06

Date



Shiprock, New Mexico, Disposal Site, Sample Location Map

Data Assessment Summary

Water Sampling Field Activities Verification Checklist

Project	Shiprock, New Mexico	**Date(s) of Water Sampling**	September 11-14, 2006
Date(s) of Verification	November 22, 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 August 8, 2006.
2. Were the sampling locations specified in the planning documents sampled?	No	See trip report for a description of locations not sampled.
3. Was a pre-trip calibration conducted as specified in the above named documents?	Yes	Pre-trip calibrations performed on September 8, 2006 and September 11, 2006.
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	Alkalinity was not measured at wells 0730 and 0734, see trip report.
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?		
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?	No	See trip report.

Laboratory Performance Assessment

General Information

Report Number (RIN): 06080459
Sample Event: September 11-14, 2006
Site(s): Shiprock, New Mexico
Laboratory: Paragon Analytics, Fort Collins, Colorado
Work Order No.: 0609085
Analysis: Metals, Inorganics
Validator: Steve Donivan
Review Date: November 16, 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 58 water samples on September 13, 2006, and September 16, 2006, accompanied by Chain of Custody (COC) forms. The COC forms were checked to confirm that all of the samples were listed on the forms and signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents including the COC forms and the sample tickets, had no errors or omissions with the following exceptions: sample from location 1076 was received, but not listed on the COC form.

Preservation and Holding Times

The sample shipments were received cool and intact with the temperature within the chilled coolers of 0.8 °C, 5.6 °C, and 1.2 °C, which complies with requirements. All samples were received in the correct container types and were preserved correctly for the requested analyses and all samples were analyzed within the applicable holding times.

Data Qualifier Summary

The analytical results were qualified as listed in Table 3.

Table 3. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0609085-1	0501	Mn	U	Less than 5 times the calibration blank
0609085-13	0736	Fe	U	Less than 5 times the calibration blank
0609085-14	0797	Se	U	Less than 5 times the calibration blank
0609085-29	2605 (Equip Blank)	Ca	U	Less than 5 times the calibration blank
0609085-29	2605 (Equip Blank)	Mg	U	Less than 5 times the calibration blank
0609085-29	2605 (Equip Blank)	Mn	U	Less than 5 times the calibration blank
0609085-29	2605 (Equip Blank)	K	U	Less than 5 times the calibration blank
0609085-29	2605 (Equip Blank)	Na	U	Less than 5 times the calibration blank
0609085-29	2605 (Equip Blank)	Sr	U	Less than 5 times the calibration blank
0609085-29	2605 (Equip Blank)	U	U	Less than 5 times the method blank
0609085-32	2609 (0841 Dup)	Mn	U	Less than 5 times the calibration blank
0609085-33	0662	Mn	U	Less than 5 times the calibration blank
0609085-33	0662	U	U	Less than 5 times the calibration blank
0609085-34	0730	Fe	U	Less than 5 times the calibration blank
0609085-37	0830	Fe	U	Less than 5 times the calibration blank
0609085-43	0846	Mn	U	Less than 5 times the calibration blank
0609085-50	1079	Mn	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 October 3, 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 verification (CCV) checks were made at the required frequency, resulting in 12 CCVs. All initial and CCV results were within the acceptance range.

Method SW-846 6010B
Calibrations for calcium, iron, magnesium, manganese, potassium, sodium, and strontium were performed on September 25, 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 method detection limit (MDL). Calibration and laboratory spike standards were prepared from independent sources. Initial and CCV checks were made at the required frequency resulting in 24 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 August 21, 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 CCV checks were made at the required frequency resulting in 27 CCVs. All initial and CCV results were within the acceptance range.

Method SW-846 6020A
Calibrations were performed for selenium on September 27, 2006, and October 2, 2006, and for uranium on September 25-26, 2006, and September 28, 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 CCV checks were made at the required frequency resulting in 11 CCVs for selenium and 20 CCVs for uranium. All initial and CCV 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 with the exception of selenium on October 2, 2006. None of the associated results were less than five times the reporting limit. 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 performed October 2, 2006, using seven calibration standards. The resulting calibration curve had an r^2 value greater than 0.995 and an intercept less than three times the MDL. Initial and CCV checks were made at the required frequency, resulting in nine CCVs. All initial and CCV 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 May 12, 2006, 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 CCV checks were made at the required frequency, resulting in eight CCVs. All initial and CCV 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 method 6010B and 6020A analytes. 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 5 times the blank concentration. The method blank results for NH_3-N, chloride, NO_x-N, sulfate, TDS, and TOC were below the MDL with the exception of CCB5 for ammonia. Samples associated with the CCB were reanalyzed with an acceptable CCB.

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

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

Matrix Spike Analysis

Matrix spike and matrix spike duplicate (MS/MSD) pairs were analyzed for all analytes as a measure of method performance in the sample matrix. 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 potassium, location 1076, failed to meet the acceptance criteria. The sample result was qualified with a "J" flag as an estimated value.

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. Serial dilution data were not evaluated when the concentration of the undiluted sample was less than fifty times the practical quantitation limit. The acceptance criteria were met for all results evaluated.

Detection Limits/Dilutions

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

Completeness

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

Chromatography Peak Integration

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

Electronic Data Deliverable (EDD) File

The EDD file arrived on October 18, 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 reflected 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	5.12	4.96	1.59
SHP01	0608	254.09	298.79	8.08

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP01	0614	363.19	405.49	5.50
SHP01	0615	494.61	524.42	2.93
SHP01	0618	303.52	346.77	6.65
SHP01	0619	119.03	129.69	4.29
SHP01	0735	172.36	184.66	3.45
SHP01	0736	136.22	157.78	7.33
SHP01	0797	87.10	99.88	6.83
SHP01	0850	33.42	40.59	9.68
SHP01	0897	5.42	7.08	13.28
SHP01	0898	5.34	5.30	0.41
SHP01	0937	6.13	5.97	1.32
SHP01	0939	6.68	6.47	1.56
SHP01	0940	5.31	5.23	0.76
SHP01	0956	5.36	5.20	1.52
SHP01	0957	5.21	5.29	0.70
SHP01	0959	6.43	6.48	0.34
SHP01	0965	5.36	5.34	0.10
SHP01	1008	406.36	429.09	2.72
SHP01	1089	258.75	281.35	4.18
SHP01	1104	313.93	443.60	17.12
SHP01	1109	51.32	54.03	2.57
SHP01	1110	329.96	330.26	0.04
SHP01	1118	99.56	117.10	8.09
SHP01	1203	5.36	4.95	4.01
SHP01	1205	5.18	5.01	1.74

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

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP02	0662	39.72	44.31	5.47
SHP02	0730	45.38	52.77	7.53

SHP02	0817	250.32	310.62	10.75
SHP02	0830	46.86	49.19	2.42
SHP02	0835	73.19	80.15	4.54
SHP02	0836	62.31	67.35	3.88
SHP02	0838	62.97	66.40	2.66
SHP02	0839	276.48	293.71	3.02
SHP02	0841	321.22	381.24	8.54
SHP02	0846	52.47	54.30	1.72
SHP02	0889	246.55	288.61	7.86
SHP02	0936	80.62	86.86	3.72
SHP02	0942	48.23	53.14	4.84
SHP02	1071	354.63	357.84	0.45
SHP02	1078	356.22	358.35	0.30
SHP02	1079	43.98	43.29	0.79
SHP02	1087	242.56	269.73	5.30
SHP02	1088	367.86	391.41	3.10
SHP02	1096	356.36	385.67	3.95

The charge balance differences for wells 0817, 0897, and 1104 are greater that 10 percent. No errors were found after further review of the data and the results are considered acceptable as qualified.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Worksheet

RIN: 6080459 Lab Code: PAR Validator: Steve Donivan Validation Date: 11/16/2006

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

# of Samples: 58 Matrix: WATER Requested Analysis Completed: Yes

Chain of Custody

Present: OK Signed: OK Dated: OK

Sample

Integrity: OK Preservation: OK Temperature: OK

Exceptions

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

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

SAMPLE MANAGEMENT SYSTEM

Inorganics Data Validation Worksheet

RIN: 06080459 **Lab Code:** PAR **Date Due:** 10/14/2006

Matrix: Water **Site Code:** SHP **Date Completed:** 10/19/2006

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 Organic Carbon	09/20/2006	0	0.9999	OK	OK	OK	OK	OK	93.0	95.0	95.0	0	
Total Organic Carbon	09/20/2006								94.0			0	
Total Organic Carbon	09/21/2006				OK		OK	OK	98.0	105.0	103.0	2.00	
Total Organic Carbon	09/21/2006								97.0			1.00	

Comments: _____

Sampling Quality Control Assessment

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

Sampling Protocol

Wells 1070, 1071, 1078, 1079, 1087, 1088, 1089, 1091, 1092, 1093, 1095, 1096, 1104, 1109, 1110, and 1118 are Category IV extraction wells. All Category I 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 wells 0730, 0734, and 0736 were qualified with a "Q" flag indicating the data are qualitative because these wells are Category II based on water level drawdown or other factors.

Equipment Blank Assessment

The results for the equipment blanks collected during this sampling event were all below the MDLs with the following exception: the chloride, potassium, and sodium results for one of the blanks were slightly above the MDLs, 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 0618, 0841, 0846, and Seep Vault. The duplicate results met the U.S. Environmental Protection Agency (EPA) 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 — Date: 12-5-2006

Steve Donivan — Date

Data Validation Lead: Steve Donivan — Date: 12-5-2006

Steve Donivan — Date

Attachment 1
Assessment of Anomalous Data

Minimums and Maximums Report

Minimums and Maximums Report

The Minimums and Maximums Report is generated by a data validation application 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.

Eleven 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 March 2006 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: 06080459
Comparison: All Historical Data
Report Date: 11/22/2006

				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	0501	09/12/2006	Magnesium	7.6			16			8.52			5	0
SHP01	0501	09/12/2006	Selenium	0.00028			0.005	U		0.00068			5	1
SHP01	0614	09/12/2006	Manganese	3.1		F	6.55			3.5		F	28	0
SHP01	0615	09/12/2006	Ammonia Total as N	3.8		F	54		JF	17		JF	5	0
SHP01	0615	09/12/2006	Manganese	0.68		F	9.75			3.4		F	27	0
SHP01	0615	09/12/2006	Uranium	4.8		F	4.23		F	1.64			27	0
SHP01	0618	09/13/2006	Total Dissolved Solids	25000		F	24000		F	5930			11	0
SHP01	0619	09/13/2006	Calcium	260		F	490			300		F	36	0
SHP01	0619	09/13/2006	Selenium	0.00041		F	0.481			0.00053		F	36	1
SHP01	0619	09/13/2006	Total Organic Carbon	5.5		F	210			5.7		F	9	0
SHP01	0736	09/13/2006	Calcium	610		FQ	540		F	310		F	19	0
SHP01	0797	09/13/2006	Nitrate + Nitrite as Nitrogen	0.01			0.027		FQ	0.012		F	5	0
SHP01	0797	09/13/2006	Sodium	1300			1200		F	240		QF	11	0
SHP01	0850	09/13/2006	Uranium	0.068		F	0.048		F	0.0069		F	17	0
SHP01	0897	09/13/2006	Selenium	0.00027			0.0021	B		0.0003	U		19	3
SHP01	0898	09/13/2006	Manganese	0.0015	B		0.0396			0.0016	B		18	0
SHP01	0957	09/12/2006	Chloride	11			19			11.5			13	0
SHP01	0957	09/12/2006	Magnesium	7.7			16			9.84			13	0
SHP01	0957	09/12/2006	Sulfate	110			190			119			13	0
SHP01	0959	09/12/2006	Calcium	51			550			401			8	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06080459
Comparison: All Historical Data
Report Date: 11/22/2006

				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	0959	09/12/2006	Magnesium	5.4			556			310			8	0
SHP01	0959	09/12/2006	Potassium	4.9			20			16.2			8	0
SHP01	0959	09/12/2006	Sodium	76			1110			260			8	0
SHP01	0959	09/12/2006	Strontium	0.62			7.81			5.8			8	0
SHP01	0965	09/13/2006	Calcium	63			87			69.3			9	0
SHP01	0965	09/13/2006	Chloride	12			33.5			14			9	0
SHP01	0965	09/13/2006	Magnesium	8.7			25.6			11.6			9	0
SHP01	0965	09/13/2006	Manganese	0.0043	B		0.061			0.005			9	0
SHP01	0965	09/13/2006	Selenium	0.00024			0.0018	B		0.00054	B		9	0
SHP01	0965	09/13/2006	Sodium	32			102			38			9	0
SHP01	0965	09/13/2006	Strontium	0.73			1.23			0.85			9	0
SHP01	0965	09/13/2006	Sulfate	120			357			150			9	0
SHP01	1008	09/13/2006	Nitrate + Nitrite as Nitrogen	160		F	74		F	43		F	5	0
SHP01	1008	09/13/2006	Potassium	160		F	130		F	76		JF	8	0
SHP01	1089	09/13/2006	Chloride	480			690		F	502			9	0
SHP01	1203	09/12/2006	Chloride	11			18			13.8			7	0
SHP01	1203	09/12/2006	Magnesium	7.8			15			10.3			7	0
SHP01	1203	09/12/2006	Sodium	36			59.5			38.8			7	0
SHP01	1203	09/12/2006	Strontium	0.71			1			0.768			7	0
SHP01	1203	09/12/2006	Sulfate	110			209			136			9	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06080459
Comparison: All Historical Data
Report Date: 11/22/2006

				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	1203	09/12/2006	Uranium	0.0016			0.0031			0.0018			9	0
SHP01	1205	09/12/2006	Chloride	11			27			11.8			15	0
SHP01	1205	09/12/2006	Magnesium	7.8			15			9.75			15	0
SHP01	1205	09/12/2006	Sodium	32			67.5			32.6			15	0
SHP01	1205	09/12/2006	Sulfate	110			235			124			17	0
SHP02	0662	09/13/2006	Nitrate + Nitrite as Nitrogen	0.099			0.47			0.1			5	0
SHP02	0730	09/14/2006	Selenium	0.0092		FQ	0.0175		L	0.0097		F	11	0
SHP02	0730	09/14/2006	Sodium	64		FQ	131		L	66		F	10	0
SHP02	0817	09/14/2006	Ammonia Total as N	960		F	910		F	700		JF	5	0
SHP02	0817	09/14/2006	Selenium	0.0016		F	0.0047		F	0.002	B	F	11	0
SHP02	0817	09/14/2006	Strontium	10		F	12.5		L	11		F	11	0
SHP02	0818	09/12/2006	Ammonia Total as N	150			120			105			6	0
SHP02	0830	09/13/2006	Calcium	680		F	670		F	480		F	9	0
SHP02	0830	09/13/2006	Chloride	86		F	60		F	41		F	9	0
SHP02	0830	09/13/2006	Magnesium	59		F	53.3			32		F	9	0
SHP02	0830	09/13/2006	Potassium	9.4		F	6.7		F	2.47		L	9	0
SHP02	0830	09/13/2006	Selenium	0.033		F	0.0259			0.019		F	10	0
SHP02	0830	09/13/2006	Sodium	180		F	166			120		F	9	0
SHP02	0830	09/13/2006	Total Dissolved Solids	3600		F	2900			2500		F	10	0
SHP02	0836	09/14/2006	Manganese	2.3		F	2.1		F	1.24			17	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06080459
Comparison: All Historical Data
Report Date: 11/22/2006

				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	0836	09/14/2006	Selenium	0.035		F	0.231		F	0.041		F	17	0
SHP02	0836	09/14/2006	Sodium	250		F	506		F	281			16	0
SHP02	0836	09/14/2006	Strontium	5.5		F	6.71		F	5.9		F	16	0
SHP02	0838	09/14/2006	Chloride	130		F	100		F	12.8			16	0
SHP02	0838	09/14/2006	Nitrate + Nitrite as Nitrogen	76		F	62		F	32		F	6	0
SHP02	0838	09/14/2006	Selenium	0.41		F	0.35		F	0.0272			18	0
SHP02	0838	09/14/2006	Sulfate	2500		F	2400		F	1180			19	0
SHP02	0838	09/14/2006	Total Dissolved Solids	2000		F	4500		F	2240			14	0
SHP02	0838	09/14/2006	Total Organic Carbon	6.6		F	6.2		F	3.2		F	5	0
SHP02	0838	09/14/2006	Uranium	0.04		F	0.035		F	0.023			19	0
SHP02	0839	09/13/2006	Ammonia Total as N	41			110		JQ	63		JFQ	5	0
SHP02	0839	09/13/2006	Nitrate + Nitrite as Nitrogen	460			600		FQ	530			5	0
SHP02	0839	09/13/2006	Total Dissolved Solids	21000			20900		L	18300			12	0
SHP02	0841	09/14/2006	Manganese	0.014	B	F	0.35			0.0169	B	JF	19	0
SHP02	0846	09/14/2006	Nitrate + Nitrite as Nitrogen	15		F	27		JF	17		F	7	0
SHP02	0846	09/14/2006	Selenium	0.1		F	0.931			0.11		F	18	0
SHP02	0846	09/14/2006	Sodium	180		F	660			210		F	17	0
SHP02	0889	09/13/2006	Calcium	280			506			340			18	0
SHP02	0889	09/13/2006	Chloride	920			2890			1090			18	0
SHP02	0889	09/13/2006	Magnesium	690			2610			898			18	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06080459
Comparison: All Historical Data
Report Date: 11/22/2006

				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	0889	09/13/2006	Nitrate + Nitrite as Nitrogen	370			730		J	600			5	0
SHP02	0889	09/13/2006	Sodium	4000			16900			6000			18	0
SHP02	0889	09/13/2006	Strontium	5.6			14			8.04			18	0
SHP02	0889	09/13/2006	Sulfate	11000			42400			13900			20	0
SHP02	0889	09/13/2006	Uranium	0.11			0.278			0.119			20	0
SHP02	0942	09/12/2006	Potassium	13			12	N	J	3.4			16	0
SHP02	1070	09/14/2006	Chloride	2900			1678			1278			10	0
SHP02	1070	09/14/2006	Sulfate	39000			17006			15000			12	0
SHP02	1071	09/14/2006	Ammonia Total as N	7.6			190			28			6	0
SHP02	1071	09/14/2006	Sulfate	13000			12879			2600			13	0
SHP02	1079	09/14/2006	Calcium	450		F	730		F	470		F	9	0
SHP02	1079	09/14/2006	Magnesium	99		F	150		F	100		F	9	0
SHP02	1079	09/14/2006	Nitrate + Nitrite as Nitrogen	35		F	91		F	42		F	5	0
SHP02	1079	09/14/2006	Strontium	4.2		F	7.6		F	4.4		F	9	0
SHP02	1079	09/14/2006	Sulfate	1600		F	2500		F	1700		F	9	0
SHP02	1079	09/14/2006	Total Dissolved Solids	3100		F	4700		F	3300		F	6	0
SHP02	1087	09/14/2006	Ammonia Total as N	220			160			60			8	0
SHP02	1087	09/14/2006	Nitrate + Nitrite as Nitrogen	490			430			140			5	0
SHP02	1087	09/14/2006	Sulfate	10000			9100			5000			14	0
SHP02	1087	09/14/2006	Uranium	0.85			0.72			0.43			12	0

Data Validation Minimums and Maximums Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 06080459
Comparison: All Historical Data
Report Date: 11/22/2006

				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	1088	09/14/2006	Chloride	1200			1700			1242			11	0
SHP02	1088	09/14/2006	Nitrate + Nitrite as Nitrogen	480			720			660			5	0
SHP02	1091	09/11/2006	Nitrate + Nitrite as Nitrogen	1800			1700			1600		J	5	0
SHP02	1092	09/11/2006	Nitrate + Nitrite as Nitrogen	1400			1900			1500			5	0
SHP02	1092	09/11/2006	Uranium	0.13			0.1207			0.092			11	0
SHP02	1093	09/11/2006	Sulfate	2900			6900		J	5300			13	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, Disposal Site **Sampling Data:** Ground water, surface water

Reviewer: Steve Donivan (Name (print)) Steve Donivan (Signature) 12-5-2006 (Date)

Site Hydrologist: David Miller (Name (print)) D Miller (Signature) 12/7/06 (Date)

Date of Review: November 22, 2006

Loc. No.	Analyte	Type of Anomaly	Disposition
0615	Ammonia	Low	Compare to future results
0615	Manganese	Low	Compare to future results
0959	Calcium	Low	Compare to future results
0959	Magnesium	Low	Compare to future results
0959	Potassium	Low	Compare to future results
0959	Sodium	Low	Compare to future results
0959	Strontium	Low	Compare to future results
1008	Nitrate	High	Compare to future results
1070	Chloride	High	Compare to future results
1070	Sulfate	High	Compare to future results
1071	Ammonia	Low	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: 11/22/2006
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	09/12/2006	0001	10	-	15	989		F	#		
Ammonia Total as N	mg/L	09/12/2006	0001	10	-	15	260		F	#	10	
Calcium	mg/L	09/12/2006	0001	10	-	15	450		F	#	.037	
Chloride	mg/L	09/12/2006	0001	10	-	15	380		F	#	40	
Dissolved Oxygen	mg/L	09/12/2006	N001	10	-	15	0.88		F	#		
Iron	mg/L	09/12/2006	0001	10	-	15	0.071	U	F	#	.071	
Magnesium	mg/L	09/12/2006	0001	10	-	15	1600		F	#	.028	
Manganese	mg/L	09/12/2006	0001	10	-	15	4.3		F	#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	10	-	15	550		F	#	5	
Oxidation Reduction Potential	mV	09/12/2006	N001	10	-	15	196		F	#		
pH	s.u.	09/12/2006	N001	10	-	15	6.83		F	#		
Potassium	mg/L	09/12/2006	0001	10	-	15	160		F	#	.28	
Selenium	mg/L	09/12/2006	0001	10	-	15	0.007		F	#	.000078	
Sodium	mg/L	09/12/2006	0001	10	-	15	2200		F	#	.1	
Specific Conductance	umhos /cm	09/12/2006	N001	10	-	15	17670		F	#		
Strontium	mg/L	09/12/2006	0001	10	-	15	12		F	#	.00038	
Sulfate	mg/L	09/12/2006	0001	10	-	15	11000		F	#	100	
Temperature	C	09/12/2006	N001	10	-	15	21.4		F	#		
Total Dissolved Solids	mg/L	09/12/2006	0001	10	-	15	20000		F	#	400	
Total Organic Carbon	mg/L	09/12/2006	N001	10	-	15	15		F	#	1	
Turbidity	NTU	09/12/2006	N001	10	-	15	9		F	#		
Uranium	mg/L	09/12/2006	0001	10	-	15	1.9		F	#	.00031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	10	-	15	650		F	#		
Ammonia Total as N	mg/L	09/12/2006	0001	10	-	15	36		F	#	2	
Calcium	mg/L	09/12/2006	0001	10	-	15	440		F	#	.037	
Chloride	mg/L	09/12/2006	0001	10	-	15	590		F	#	40	
Dissolved Oxygen	mg/L	09/12/2006	N001	10	-	15	1.08		F	#		
Iron	mg/L	09/12/2006	0001	10	-	15	0.071	U	F	#	.071	
Magnesium	mg/L	09/12/2006	0001	10	-	15	2600		F	#	.28	
Manganese	mg/L	09/12/2006	0001	10	-	15	3.1		F	#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	10	-	15	890		F	#	5	
Oxidation Reduction Potential	mV	09/12/2006	N001	10	-	15	203		F	#		
pH	s.u.	09/12/2006	N001	10	-	15	6.78		F	#		
Potassium	mg/L	09/12/2006	0001	10	-	15	210		F	#	.28	
Selenium	mg/L	09/12/2006	0001	10	-	15	0.14		F	#	.00016	
Sodium	mg/L	09/12/2006	0001	10	-	15	2800		F	#	.1	
Specific Conductance	umhos /cm	09/12/2006	N001	10	-	15	22101		F	#		
Strontium	mg/L	09/12/2006	0001	10	-	15	11		F	#	.00038	
Sulfate	mg/L	09/12/2006	0001	10	-	15	15000		F	#	100	
Temperature	C	09/12/2006	N001	10	-	15	20.5		F	#		
Total Dissolved Solids	mg/L	09/12/2006	0001	10	-	15	28000		F	#	400	
Total Organic Carbon	mg/L	09/12/2006	N001	10	-	15	22		F	#	1	
Turbidity	NTU	09/12/2006	N001	10	-	15	1		F	#		
Uranium	mg/L	09/12/2006	0001	10	-	15	3		F	#	.00031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	4.5	-	9.5	830		F	#		
Ammonia Total as N	mg/L	09/12/2006	0001	4.5	-	9.5	3.8		F	#	.1	
Calcium	mg/L	09/12/2006	0001	4.5	-	9.5	470		F	#	.037	
Chloride	mg/L	09/12/2006	0001	4.5	-	9.5	760		F	#	40	
Dissolved Oxygen	mg/L	09/12/2006	N001	4.5	-	9.5	1.37		F	#		
Iron	mg/L	09/12/2006	0001	4.5	-	9.5	0.071	U	F	#	.071	
Magnesium	mg/L	09/12/2006	0001	4.5	-	9.5	3100		F	#	.28	
Manganese	mg/L	09/12/2006	0001	4.5	-	9.5	0.68		F	#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	4.5	-	9.5	980		F	#	10	
Oxidation Reduction Potential	mV	09/12/2006	N001	4.5	-	9.5	190		F	#		
pH	s.u.	09/12/2006	N001	4.5	-	9.5	6.93		F	#		
Potassium	mg/L	09/12/2006	0001	4.5	-	9.5	280		F	#	.28	
Selenium	mg/L	09/12/2006	0001	4.5	-	9.5	0.46		F	#	.0016	
Sodium	mg/L	09/12/2006	0001	4.5	-	9.5	4800		F	#	.1	
Specific Conductance	umhos /cm	09/12/2006	N001	4.5	-	9.5	28632		F	#		
Strontium	mg/L	09/12/2006	0001	4.5	-	9.5	12		F	#	.00038	
Sulfate	mg/L	09/12/2006	0001	4.5	-	9.5	20000		F	#	250	
Temperature	C	09/12/2006	N001	4.5	-	9.5	25.3		F	#		
Total Dissolved Solids	mg/L	09/12/2006	0001	4.5	-	9.5	38000		F	#	400	
Total Organic Carbon	mg/L	09/12/2006	N001	4.5	-	9.5	29		F	#	1	
Turbidity	NTU	09/12/2006	N001	4.5	-	9.5	5		F	#		
Uranium	mg/L	09/12/2006	0001	4.5	-	9.5	4.8		F	#	.00031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	11	-	16	969		F	#		
Ammonia Total as N	mg/L	09/13/2006	0001	11	-	16	46		F	#	2	
Ammonia Total as N	mg/L	09/13/2006	0002	11	-	16	49		F	#	2	
Calcium	mg/L	09/13/2006	0001	11	-	16	430		F	#	.037	
Calcium	mg/L	09/13/2006	0002	11	-	16	430		F	#	.037	
Chloride	mg/L	09/13/2006	0001	11	-	16	640		F	#	40	
Chloride	mg/L	09/13/2006	0002	11	-	16	620		F	#	40	
Dissolved Oxygen	mg/L	09/13/2006	N001	11	-	16	0.68		F	#		
Iron	mg/L	09/13/2006	0001	11	-	16	0.071	U	F	#	.071	
Iron	mg/L	09/13/2006	0002	11	-	16	0.071	U	F	#	.071	
Magnesium	mg/L	09/13/2006	0001	11	-	16	1800		F	#	.028	
Magnesium	mg/L	09/13/2006	0002	11	-	16	1800		F	#	.028	
Manganese	mg/L	09/13/2006	0001	11	-	16	8.4		F	#	.00047	
Manganese	mg/L	09/13/2006	0002	11	-	16	8.3		F	#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	11	-	16	250		F	#	2	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0002	11	-	16	250		F	#	2	
Oxidation Reduction Potential	mV	09/13/2006	N001	11	-	16	180		F	#		
pH	s.u.	09/13/2006	N001	11	-	16	6.68		F	#		
Potassium	mg/L	09/13/2006	0001	11	-	16	130		F	#	.28	
Potassium	mg/L	09/13/2006	0002	11	-	16	130		F	#	.28	
Selenium	mg/L	09/13/2006	0001	11	-	16	0.26		F	#	.0016	
Selenium	mg/L	09/13/2006	0002	11	-	16	0.24		F	#	.0016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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
Sodium	mg/L	09/13/2006	0001	11	-	16	3000		F	#	.1	
Sodium	mg/L	09/13/2006	0002	11	-	16	2900		F	#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	11	-	16	19903		F	#		
Strontium	mg/L	09/13/2006	0001	11	-	16	9.5		F	#	.00038	
Strontium	mg/L	09/13/2006	0002	11	-	16	9.3		F	#	.00038	
Sulfate	mg/L	09/13/2006	0001	11	-	16	14000		F	#	100	
Sulfate	mg/L	09/13/2006	0002	11	-	16	14000		F	#	100	
Temperature	C	09/13/2006	N001	11	-	16	20.2		F	#		
Total Dissolved Solids	mg/L	09/13/2006	0001	11	-	16	24000		F	#	400	
Total Dissolved Solids	mg/L	09/13/2006	0002	11	-	16	25000		F	#	400	
Total Organic Carbon	mg/L	09/13/2006	N001	11	-	16	20		F	#	1	
Total Organic Carbon	mg/L	09/13/2006	N002	11	-	16	21		F	#	1	
Turbidity	NTU	09/13/2006	N001	11	-	16	1		F	#		
Uranium	mg/L	09/13/2006	0001	11	-	16	2.9		F	#	.00031	
Uranium	mg/L	09/13/2006	0002	11	-	16	3		F	#	.00016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	8	-	13	609		F	#		
Ammonia Total as N	mg/L	09/13/2006	0001	8	-	13	0.3		F	#	.1	
Calcium	mg/L	09/13/2006	0001	8	-	13	260		F	#	.037	
Chloride	mg/L	09/13/2006	0001	8	-	13	180		F	#	40	
Dissolved Oxygen	mg/L	09/13/2006	N001	8	-	13	0.97		F	#		
Iron	mg/L	09/13/2006	0001	8	-	13	1.2		F	#	.071	
Magnesium	mg/L	09/13/2006	0001	8	-	13	370		F	#	.028	
Manganese	mg/L	09/13/2006	0001	8	-	13	2.4		F	#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	8	-	13	0.01	U	F	#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	8	-	13	-44		F	#		
pH	s.u.	09/13/2006	N001	8	-	13	6.95		F	#		
Potassium	mg/L	09/13/2006	0001	8	-	13	61		F	#	.28	
Selenium	mg/L	09/13/2006	0001	8	-	13	0.00041		F	#	.000016	
Sodium	mg/L	09/13/2006	0001	8	-	13	1700		F	#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	8	-	13	11420		F	#		
Strontium	mg/L	09/13/2006	0001	8	-	13	5.2		F	#	.00038	
Sulfate	mg/L	09/13/2006	0001	8	-	13	5400		F	#	100	
Temperature	C	09/13/2006	N001	8	-	13	19		F	#		
Total Dissolved Solids	mg/L	09/13/2006	0001	8	-	13	9500		F	#	200	
Total Organic Carbon	mg/L	09/13/2006	N001	8	-	13	5.5		F	#	1	
Turbidity	NTU	09/13/2006	N001	8	-	13	0		F	#		
Uranium	mg/L	09/13/2006	0001	8	-	13	0.47		F	#	.000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
Location: 0734 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Dissolved Oxygen	mg/L	09/13/2006	N001	2	-	4	2.88		FQ	#		
Oxidation Reduction Potential	mV	09/13/2006	N001	2	-	4	52		FQ	#		
pH	s.u.	09/13/2006	N001	2	-	4	6.84		FQ	#		
Specific Conductance	umhos /cm	09/13/2006	N001	2	-	4	4558		FQ	#		
Temperature	C	09/13/2006	N001	2	-	4	21.7		FQ	#		
Total Organic Carbon	mg/L	09/13/2006	N001	2	-	4	13		FQ	#	1	
Turbidity	NTU	09/13/2006	N001	2	-	4	72		FQ	#		

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	3	-	8	649		F	#		
Ammonia Total as N	mg/L	09/12/2006	0001	3	-	8	16		F	#	2	
Calcium	mg/L	09/12/2006	0001	3	-	8	320		F	#	.037	
Chloride	mg/L	09/12/2006	0001	3	-	8	350		F	#	40	
Dissolved Oxygen	mg/L	09/12/2006	N001	3	-	8	1.6		F	#		
Iron	mg/L	09/12/2006	0001	3	-	8	0.071	U	F	#	.071	
Magnesium	mg/L	09/12/2006	0001	3	-	8	770		F	#	.028	
Manganese	mg/L	09/12/2006	0001	3	-	8	2.3		F	#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	3	-	8	400		F	#	5	
Oxidation Reduction Potential	mV	09/12/2006	N001	3	-	8	163		F	#		
pH	s.u.	09/12/2006	N001	3	-	8	6.83		F	#		
Potassium	mg/L	09/12/2006	0001	3	-	8	61		F	#	.28	
Selenium	mg/L	09/12/2006	0001	3	-	8	0.037		F	#	.000078	
Sodium	mg/L	09/12/2006	0001	3	-	8	2100		F	#	.1	
Specific Conductance	umhos /cm	09/12/2006	N001	3	-	8	13380		F	#		
Strontium	mg/L	09/12/2006	0001	3	-	8	7.1		F	#	.00038	
Sulfate	mg/L	09/12/2006	0001	3	-	8	6400		F	#	100	
Temperature	C	09/12/2006	N001	3	-	8	16.29		F	#		
Total Dissolved Solids	mg/L	09/12/2006	0001	3	-	8	14000		F	#	400	
Total Organic Carbon	mg/L	09/12/2006	N001	3	-	8	11		F	#	1	
Turbidity	NTU	09/12/2006	N001	3	-	8	9		F	#		
Uranium	mg/L	09/12/2006	0001	3	-	8	0.2		F	#	.000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	3	-	5	452		FQ	#		
Ammonia Total as N	mg/L	09/13/2006	0001	3	-	5	0.1	U	FQ	#	.1	
Calcium	mg/L	09/13/2006	0001	3	-	5	610		FQ	#	.037	
Chloride	mg/L	09/13/2006	0001	3	-	5	180		FQ	#	40	
Dissolved Oxygen	mg/L	09/13/2006	N001	3	-	5	2.74		FQ	#		
Iron	mg/L	09/13/2006	0001	3	-	5	0.13	B	UFQ	#	.071	
Magnesium	mg/L	09/13/2006	0001	3	-	5	260		FQ	#	.028	
Manganese	mg/L	09/13/2006	0001	3	-	5	3.5		FQ	#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	3	-	5	0.025		FQ	#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	3	-	5	56		FQ	#		
pH	s.u.	09/13/2006	N001	3	-	5	6.99		FQ	#		
Potassium	mg/L	09/13/2006	0001	3	-	5	60		FQ	#	.28	
Selenium	mg/L	09/13/2006	0001	3	-	5	0.00046		FQ	#	.000016	
Sodium	mg/L	09/13/2006	0001	3	-	5	1900		FQ	#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	3	-	5	11126		FQ	#		
Strontium	mg/L	09/13/2006	0001	3	-	5	9.4		FQ	#	.00038	
Sulfate	mg/L	09/13/2006	0001	3	-	5	6900		FQ	#	100	
Temperature	C	09/13/2006	N001	3	-	5	19.9		FQ	#		
Total Dissolved Solids	mg/L	09/13/2006	0001	3	-	5	11000		FQ	#	200	
Total Organic Carbon	mg/L	09/13/2006	N001	3	-	5	5.3		FQ	#	1	
Turbidity	NTU	09/13/2006	N001	3	-	5	3		FQ	#		
Uranium	mg/L	09/13/2006	0001	3	-	5	0.24		FQ	#	.000016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	7.3	-	9.3	590			#		
Ammonia Total as N	mg/L	09/13/2006	0001	7.3	-	9.3	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	7.3	-	9.3	440			#	.022	
Chloride	mg/L	09/13/2006	0001	7.3	-	9.3	170			#	20	
Iron	mg/L	09/13/2006	0001	7.3	-	9.3	0.36			#	.043	
Magnesium	mg/L	09/13/2006	0001	7.3	-	9.3	99			#	.017	
Manganese	mg/L	09/13/2006	0001	7.3	-	9.3	5.3			#	.00028	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	7.3	-	9.3	0.01			#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	7.3	-	9.3	-137			#		
pH	s.u.	09/13/2006	N001	7.3	-	9.3	7.08			#		
Potassium	mg/L	09/13/2006	0001	7.3	-	9.3	12			#	.17	
Selenium	mg/L	09/13/2006	0001	7.3	-	9.3	0.00011		U	#	.000016	
Sodium	mg/L	09/13/2006	0001	7.3	-	9.3	1300			#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	7.3	-	9.3	7596			#		
Strontium	mg/L	09/13/2006	0001	7.3	-	9.3	6.7			#	.00023	
Sulfate	mg/L	09/13/2006	0001	7.3	-	9.3	4000			#	50	
Temperature	C	09/13/2006	N001	7.3	-	9.3	19.89			#		
Total Dissolved Solids	mg/L	09/13/2006	0001	7.3	-	9.3	6900			#	200	
Total Organic Carbon	mg/L	09/13/2006	N001	7.3	-	9.3	10			#	1	
Turbidity	NTU	09/13/2006	N001	7.3	-	9.3	7.03			#		
Uranium	mg/L	09/13/2006	0001	7.3	-	9.3	0.013			#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	5.6	-	15.4	331		F	#		
Ammonia Total as N	mg/L	09/13/2006	0001	5.6	-	15.4	0.1	U	F	#	.1	
Calcium	mg/L	09/13/2006	0001	5.6	-	15.4	150		F	#	.015	
Chloride	mg/L	09/13/2006	0001	5.6	-	15.4	97		F	#	10	
Iron	mg/L	09/13/2006	0001	5.6	-	15.4	0.13		F	#	.028	
Magnesium	mg/L	09/13/2006	0001	5.6	-	15.4	27		F	#	.011	
Manganese	mg/L	09/13/2006	0001	5.6	-	15.4	0.44		F	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	5.6	-	15.4	0.027		F	#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	5.6	-	15.4	-31		F	#		
pH	s.u.	09/13/2006	N001	5.6	-	15.4	7.27		F	#		
Potassium	mg/L	09/13/2006	0001	5.6	-	15.4	7.2		F	#	.11	
Selenium	mg/L	09/13/2006	0001	5.6	-	15.4	0.00022		F	#	.000016	
Sodium	mg/L	09/13/2006	0001	5.6	-	15.4	540		F	#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	5.6	-	15.4	3626		F	#		
Strontium	mg/L	09/13/2006	0001	5.6	-	15.4	2		F	#	.00015	
Sulfate	mg/L	09/13/2006	0001	5.6	-	15.4	1500		F	#	25	
Temperature	C	09/13/2006	N001	5.6	-	15.4	20.01		F	#		
Total Dissolved Solids	mg/L	09/13/2006	0001	5.6	-	15.4	2700		F	#	80	
Total Organic Carbon	mg/L	09/13/2006	N001	5.6	-	15.4	5.7		F	#	1	
Turbidity	NTU	09/13/2006	N001	5.6	-	15.4	9.13		F	#		
Uranium	mg/L	09/13/2006	0001	5.6	-	15.4	0.068		F	#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	6.9	-	16.9	932		F	#		
Ammonia Total as N	mg/L	09/13/2006	0001	6.9	-	16.9	17		F	#	1	
Calcium	mg/L	09/13/2006	0001	6.9	-	16.9	430		F	#	.073	
Chloride	mg/L	09/13/2006	0001	6.9	-	16.9	860		F	#	100	
Dissolved Oxygen	mg/L	09/13/2006	N001	6.9	-	16.9	0.8		F	#		
Iron	mg/L	09/13/2006	0001	6.9	-	16.9	0.14	U	F	#	.14	
Magnesium	mg/L	09/13/2006	0001	6.9	-	16.9	2300		F	#	.055	
Manganese	mg/L	09/13/2006	0001	6.9	-	16.9	8.3		F	#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	6.9	-	16.9	160		F	#	1	
Oxidation Reduction Potential	mV	09/13/2006	N001	6.9	-	16.9	85		F	#		
pH	s.u.	09/13/2006	N001	6.9	-	16.9	6.81		F	#		
Potassium	mg/L	09/13/2006	0001	6.9	-	16.9	160		F	#	.57	
Selenium	mg/L	09/13/2006	0001	6.9	-	16.9	0.036		F	#	.000031	
Sodium	mg/L	09/13/2006	0001	6.9	-	16.9	4400		F	#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	6.9	-	16.9	24430		F	#		
Strontium	mg/L	09/13/2006	0001	6.9	-	16.9	12		F	#	.00076	
Sulfate	mg/L	09/13/2006	0001	6.9	-	16.9	18000		F	#	250	
Temperature	C	09/13/2006	N001	6.9	-	16.9	19.7		F	#		
Total Dissolved Solids	mg/L	09/13/2006	0001	6.9	-	16.9	32000		F	#	400	
Total Organic Carbon	mg/L	09/13/2006	N001	6.9	-	16.9	30		F	#	1	
Turbidity	NTU	09/13/2006	N001	6.9	-	16.9	1		F	#		
Uranium	mg/L	09/13/2006	0001	6.9	-	16.9	3		F	#	.00031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	4.8	-	14.8	734			#		
Ammonia Total as N	mg/L	09/13/2006	0001	4.8	-	14.8	1.4			#	.1	
Calcium	mg/L	09/13/2006	0001	4.8	-	14.8	440			#	.037	
Chloride	mg/L	09/13/2006	0001	4.8	-	14.8	480			#	40	
Dissolved Oxygen	mg/L	09/13/2006	N001	4.8	-	14.8	5.62			#		
Iron	mg/L	09/13/2006	0001	4.8	-	14.8	0.071	U		#	.071	
Magnesium	mg/L	09/13/2006	0001	4.8	-	14.8	1200			#	.028	
Manganese	mg/L	09/13/2006	0001	4.8	-	14.8	2.6			#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	4.8	-	14.8	46			#	.5	
Oxidation Reduction Potential	mV	09/13/2006	N001	4.8	-	14.8	102			#		
pH	s.u.	09/13/2006	N001	4.8	-	14.8	7.26			#		
Potassium	mg/L	09/13/2006	0001	4.8	-	14.8	120			#	.28	
Selenium	mg/L	09/13/2006	0001	4.8	-	14.8	0.034			#	.000078	
Sodium	mg/L	09/13/2006	0001	4.8	-	14.8	3100			#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	4.8	-	14.8	17731			#		
Strontium	mg/L	09/13/2006	0001	4.8	-	14.8	8.6			#	.00038	
Sulfate	mg/L	09/13/2006	0001	4.8	-	14.8	12000			#	100	
Temperature	C	09/13/2006	N001	4.8	-	14.8	22.85			#		
Total Dissolved Solids	mg/L	09/13/2006	0001	4.8	-	14.8	21000			#	400	
Total Organic Carbon	mg/L	09/13/2006	N001	4.8	-	14.8	17			#	1	
Turbidity	NTU	09/13/2006	N001	4.8	-	14.8	7.58			#		
Uranium	mg/L	09/13/2006	0001	4.8	-	14.8	1.5			#	.00016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	-	746			#		
Ammonia Total as N	mg/L	09/13/2006	0001	-	2.4			#	.2	
Calcium	mg/L	09/13/2006	0001	-	440			#	.073	
Chloride	mg/L	09/13/2006	0001	-	920			#	100	
Dissolved Oxygen	mg/L	09/13/2006	N001	-	2.32			#		
Magnesium	mg/L	09/13/2006	0001	-	1600			#	.055	
Manganese	mg/L	09/13/2006	0001	-	3.2			#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	-	100			#	1	
Oxidation Reduction Potential	mV	09/13/2006	N001	-	179			#		
pH	s.u.	09/13/2006	N001	-	7.03			#		
Potassium	mg/L	09/13/2006	0001	-	140			#	.57	
Selenium	mg/L	09/13/2006	0001	-	0.029			#	.000078	
Sodium	mg/L	09/13/2006	0001	-	3600			#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	-	23260			#		
Strontium	mg/L	09/13/2006	0001	-	10			#	.00076	
Sulfate	mg/L	09/13/2006	0001	-	19000			#	250	
Temperature	C	09/13/2006	N001	-	23.11			#		
Turbidity	NTU	09/13/2006	N001	-	2.36			#		
Uranium	mg/L	09/13/2006	0001	-	2			#	.00016	

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: 11/22/2006
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	09/14/2006	0001	26.93	-	36.93	100		FQ	#	20	
Calcium	mg/L	09/14/2006	0001	26.93	-	36.93	610		FQ	#	.015	
Chloride	mg/L	09/14/2006	0001	26.93	-	36.93	15		FQ	#	1	
Dissolved Oxygen	mg/L	09/14/2006	N001	26.93	-	36.93	5.54		FQ	#		
Iron	mg/L	09/14/2006	0001	26.93	-	36.93	0.075	B	UFQ	#	.028	
Magnesium	mg/L	09/14/2006	0001	26.93	-	36.93	140		FQ	#	.011	
Manganese	mg/L	09/14/2006	0001	26.93	-	36.93	21		FQ	#	.0047	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	26.93	-	36.93	150		FQ	#	1	
Oxidation Reduction Potential	mV	09/14/2006	N001	26.93	-	36.93	394		FQ	#		
pH	s.u.	09/14/2006	N001	26.93	-	36.93	3.85		FQ	#		
Potassium	mg/L	09/14/2006	0001	26.93	-	36.93	23		FQ	#	.11	
Selenium	mg/L	09/14/2006	0001	26.93	-	36.93	0.0092		FQ	#	.000016	
Sodium	mg/L	09/14/2006	0001	26.93	-	36.93	64		FQ	#	.1	
Specific Conductance	umhos /cm	09/14/2006	N001	26.93	-	36.93	4168		FQ	#		
Strontium	mg/L	09/14/2006	0001	26.93	-	36.93	2.6		FQ	#	.00015	
Sulfate	mg/L	09/14/2006	0001	26.93	-	36.93	2000		FQ	#	25	
Temperature	C	09/14/2006	N001	26.93	-	36.93	18.9		FQ	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	26.93	-	36.93	3600		FQ	#	80	
Total Organic Carbon	mg/L	09/14/2006	N001	26.93	-	36.93	1.2		FQ	#	1	
Turbidity	NTU	09/14/2006	N001	26.93	-	36.93	0		FQ	#		
Uranium	mg/L	09/14/2006	0001	26.93	-	36.93	0.0048		FQ	#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	21.6	-	31.62	1632		F	#		
Ammonia Total as N	mg/L	09/14/2006	0001	21.6	-	31.62	960		F	#	50	
Calcium	mg/L	09/14/2006	0001	21.6	-	31.62	450		F	#	.073	
Chloride	mg/L	09/14/2006	0001	21.6	-	31.62	470		F	#	100	
Dissolved Oxygen	mg/L	09/14/2006	N001	21.6	-	31.62	0.74		F	#		
Iron	mg/L	09/14/2006	0001	21.6	-	31.62	0.14	U	F	#	.14	
Magnesium	mg/L	09/14/2006	0001	21.6	-	31.62	1900		F	#	.055	
Manganese	mg/L	09/14/2006	0001	21.6	-	31.62	2		F	#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	21.6	-	31.62	500		F	#	5	
Oxidation Reduction Potential	mV	09/14/2006	N001	21.6	-	31.62	213		F	#		
pH	s.u.	09/14/2006	N001	21.6	-	31.62	6.39		F	#		
Potassium	mg/L	09/14/2006	0001	21.6	-	31.62	240		F	#	.57	
Selenium	mg/L	09/14/2006	0001	21.6	-	31.62	0.0016		F	#	.000078	
Sodium	mg/L	09/14/2006	0001	21.6	-	31.62	1500		F	#	.1	
Specific Conductance	umhos /cm	09/14/2006	N001	21.6	-	31.62	20164		F	#		
Strontium	mg/L	09/14/2006	0001	21.6	-	31.62	10		F	#	.00076	
Sulfate	mg/L	09/14/2006	0001	21.6	-	31.62	11000		F	#	250	
Temperature	C	09/14/2006	N001	21.6	-	31.62	21		F	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	21.6	-	31.62	20000		F	#	400	
Total Organic Carbon	mg/L	09/14/2006	N001	21.6	-	31.62	21		F	#	1	
Turbidity	NTU	09/14/2006	N001	21.6	-	31.62	4		F	#		
Uranium	mg/L	09/14/2006	0001	21.6	-	31.62	7.6		F	#	.00031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	52	-	61.5	708			#		
Ammonia Total as N	mg/L	09/12/2006	0001	52	-	61.5	150			#	5	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	52	-	61.5	1700			#	10	
Oxidation Reduction Potential	mV	09/12/2006	N001	52	-	61.5	150			#		
pH	s.u.	09/12/2006	N001	52	-	61.5	6.62			#		
Specific Conductance	umhos /cm	09/12/2006	N001	52	-	61.5	25664			#		
Sulfate	mg/L	09/12/2006	0001	52	-	61.5	11000			#	250	
Temperature	C	09/12/2006	N001	52	-	61.5	16.35			#		
Turbidity	NTU	09/12/2006	N001	52	-	61.5	7.72			#		
Uranium	mg/L	09/12/2006	0001	52	-	61.5	0.14			#	.000016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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
Alkalinity, Total (As CaCO3)	mg/L	09/13/2006	0001	7.7	-	17.7	0		F	#		
Ammonia Total as N	mg/L	09/13/2006	0001	7.7	-	17.7	16		F	#	1	
Calcium	mg/L	09/13/2006	0001	7.7	-	17.7	680		F	#	.015	
Chloride	mg/L	09/13/2006	0001	7.7	-	17.7	86		F	#	10	
Iron	mg/L	09/13/2006	0001	7.7	-	17.7	0.034	B	UF	#	.028	
Magnesium	mg/L	09/13/2006	0001	7.7	-	17.7	59		F	#	.011	
Manganese	mg/L	09/13/2006	0001	7.7	-	17.7	3.5		F	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	7.7	-	17.7	130		F	#	1	
Oxidation Reduction Potential	mV	09/13/2006	N001	7.7	-	17.7	398		F	#		
pH	s.u.	09/13/2006	N001	7.7	-	17.7	3.87		F	#		
Potassium	mg/L	09/13/2006	0001	7.7	-	17.7	9.4		F	#	.11	
Selenium	mg/L	09/13/2006	0001	7.7	-	17.7	0.033		F	#	.000078	
Sodium	mg/L	09/13/2006	0001	7.7	-	17.7	180		F	#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	7.7	-	17.7	3810		F	#		
Strontium	mg/L	09/13/2006	0001	7.7	-	17.7	0.26		F	#	.00015	
Sulfate	mg/L	09/13/2006	0001	7.7	-	17.7	1800		F	#	25	
Temperature	C	09/13/2006	N001	7.7	-	17.7	24.66		F	#		
Total Dissolved Solids	mg/L	09/13/2006	0001	7.7	-	17.7	3600		F	#	80	
Total Organic Carbon	mg/L	09/13/2006	N001	7.7	-	17.7	1.5		F	#	1	
Turbidity	NTU	09/13/2006	N001	7.7	-	17.7	4.55		F	#		
Uranium	mg/L	09/13/2006	0001	7.7	-	17.7	0.0094		F	#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	21.9	-	31.9	318		F	#		
Ammonia Total as N	mg/L	09/14/2006	0001	21.9	-	31.9	0.1	U	F	#	.1	
Calcium	mg/L	09/14/2006	0001	21.9	-	31.9	530		F	#	.015	
Chloride	mg/L	09/14/2006	0001	21.9	-	31.9	120		F	#	20	
Dissolved Oxygen	mg/L	09/14/2006	N001	21.9	-	31.9	2.82		F	#		
Iron	mg/L	09/14/2006	0001	21.9	-	31.9	0.028	U	F	#	.028	
Magnesium	mg/L	09/14/2006	0001	21.9	-	31.9	330		F	#	.011	
Manganese	mg/L	09/14/2006	0001	21.9	-	31.9	0.016		F	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	21.9	-	31.9	53		F	#	.5	
Oxidation Reduction Potential	mV	09/14/2006	N001	21.9	-	31.9	134		F	#		
pH	s.u.	09/14/2006	N001	21.9	-	31.9	6.92		F	#		
Potassium	mg/L	09/14/2006	0001	21.9	-	31.9	14		F	#	.11	
Selenium	mg/L	09/14/2006	0001	21.9	-	31.9	0.16		F	#	.00078	
Sodium	mg/L	09/14/2006	0001	21.9	-	31.9	440		F	#	.1	
Specific Conductance	umhos /cm	09/14/2006	N001	21.9	-	31.9	5488		F	#		
Strontium	mg/L	09/14/2006	0001	21.9	-	31.9	4.9		F	#	.00015	
Sulfate	mg/L	09/14/2006	0001	21.9	-	31.9	3200		F	#	50	
Temperature	C	09/14/2006	N001	21.9	-	31.9	21.4		F	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	21.9	-	31.9	5700		F	#	200	
Total Organic Carbon	mg/L	09/14/2006	N001	21.9	-	31.9	4.8		F	#	1	
Turbidity	NTU	09/14/2006	N001	21.9	-	31.9	2		F	#		
Uranium	mg/L	09/14/2006	0001	21.9	-	31.9	0.054		F	#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	26.8	-	36.8	483		F	#		
Ammonia Total as N	mg/L	09/14/2006	0001	26.8	-	36.8	0.1	U	F	#	.1	
Calcium	mg/L	09/14/2006	0001	26.8	-	36.8	530		F	#	.015	
Chloride	mg/L	09/14/2006	0001	26.8	-	36.8	43		F	#	2	
Iron	mg/L	09/14/2006	0001	26.8	-	36.8	0.028	U	F	#	.028	
Magnesium	mg/L	09/14/2006	0001	26.8	-	36.8	300		F	#	.011	
Manganese	mg/L	09/14/2006	0001	26.8	-	36.8	2.3		F	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	26.8	-	36.8	3.6		F	#	.05	
Oxidation Reduction Potential	mV	09/14/2006	N001	26.8	-	36.8	104		F	#		
pH	s.u.	09/14/2006	N001	26.8	-	36.8	7		F	#		
Potassium	mg/L	09/14/2006	0001	26.8	-	36.8	7.5		F	#	.11	
Selenium	mg/L	09/14/2006	0001	26.8	-	36.8	0.035		F	#	.00016	
Sodium	mg/L	09/14/2006	0001	26.8	-	36.8	250		F	#	.1	
Specific Conductance	umhos /cm	09/14/2006	N001	26.8	-	36.8	4552		F	#		
Strontium	mg/L	09/14/2006	0001	26.8	-	36.8	5.5		F	#	.00015	
Sulfate	mg/L	09/14/2006	0001	26.8	-	36.8	2700		F	#	50	
Temperature	C	09/14/2006	N001	26.8	-	36.8	15.96		F	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	26.8	-	36.8	4800		F	#	80	
Total Organic Carbon	mg/L	09/14/2006	N001	26.8	-	36.8	8.2		F	#	1	
Turbidity	NTU	09/14/2006	N001	26.8	-	36.8	3.19		F	#		
Uranium	mg/L	09/14/2006	0001	26.8	-	36.8	0.069		F	#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	21.9	-	31.9	263		F	#		
Ammonia Total as N	mg/L	09/14/2006	0001	21.9	-	31.9	0.1	U	F	#	.1	
Calcium	mg/L	09/14/2006	0001	21.9	-	31.9	720		F	#	.015	
Chloride	mg/L	09/14/2006	0001	21.9	-	31.9	130		F	#	20	
Iron	mg/L	09/14/2006	0001	21.9	-	31.9	0.028	U	F	#	.028	
Magnesium	mg/L	09/14/2006	0001	21.9	-	31.9	170		F	#	.011	
Manganese	mg/L	09/14/2006	0001	21.9	-	31.9	0.012		F	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	21.9	-	31.9	76		F	#	.5	
Oxidation Reduction Potential	mV	09/14/2006	N001	21.9	-	31.9	220		F	#		
pH	s.u.	09/14/2006	N001	21.9	-	31.9	6.96		F	#		
Potassium	mg/L	09/14/2006	0001	21.9	-	31.9	12		F	#	.11	
Selenium	mg/L	09/14/2006	0001	21.9	-	31.9	0.41		F	#	.0016	
Sodium	mg/L	09/14/2006	0001	21.9	-	31.9	290		F	#	.1	
Specific Conductance	umhos /cm	09/14/2006	N001	21.9	-	31.9	4699		F	#		
Strontium	mg/L	09/14/2006	0001	21.9	-	31.9	6.1		F	#	.00015	
Sulfate	mg/L	09/14/2006	0001	21.9	-	31.9	2500		F	#	50	
Temperature	C	09/14/2006	N001	21.9	-	31.9	16.63		F	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	21.9	-	31.9	2000		F	#	80	
Total Organic Carbon	mg/L	09/14/2006	N001	21.9	-	31.9	6.6		F	#	1	
Turbidity	NTU	09/14/2006	N001	21.9	-	31.9	1.91		F	#		
Uranium	mg/L	09/14/2006	0001	21.9	-	31.9	0.04		F	#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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
Alkalinity, Total (As CaCO3)	mg/L	09/13/2006	0001	18.1	-	28.1	915			#		
Ammonia Total as N	mg/L	09/13/2006	0001	18.1	-	28.1	41			#	2	
Calcium	mg/L	09/13/2006	0001	18.1	-	28.1	430			#	.037	
Chloride	mg/L	09/13/2006	0001	18.1	-	28.1	480			#	40	
Dissolved Oxygen	mg/L	09/13/2006	N001	18.1	-	28.1	0.84			#		
Iron	mg/L	09/13/2006	0001	18.1	-	28.1	0.071	U		#	.071	
Magnesium	mg/L	09/13/2006	0001	18.1	-	28.1	2000			#	.028	
Manganese	mg/L	09/13/2006	0001	18.1	-	28.1	1.2			#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	18.1	-	28.1	460			#	5	
Oxidation Reduction Potential	mV	09/13/2006	N001	18.1	-	28.1	164			#		
pH	s.u.	09/13/2006	N001	18.1	-	28.1	6.58			#		
Potassium	mg/L	09/13/2006	0001	18.1	-	28.1	130			#	.28	
Selenium	mg/L	09/13/2006	0001	18.1	-	28.1	0.00095			#	.000031	
Sodium	mg/L	09/13/2006	0001	18.1	-	28.1	2000			#	.1	
Specific Conductance	umhos /cm	09/13/2006	N001	18.1	-	28.1	17447			#		
Strontium	mg/L	09/13/2006	0001	18.1	-	28.1	10			#	.00038	
Sulfate	mg/L	09/13/2006	0001	18.1	-	28.1	11000			#	100	
Temperature	C	09/13/2006	N001	18.1	-	28.1	23.32			#		
Total Dissolved Solids	mg/L	09/13/2006	0001	18.1	-	28.1	21000			#	400	
Total Organic Carbon	mg/L	09/13/2006	N001	18.1	-	28.1	28			#	1	
Turbidity	NTU	09/13/2006	N001	18.1	-	28.1	14.6			#		
Uranium	mg/L	09/13/2006	0001	18.1	-	28.1	0.41			#	.000016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	42	-	52	848		F	#		
Ammonia Total as N	mg/L	09/14/2006	0001	42	-	52	0.1	U	F	#	.1	
Ammonia Total as N	mg/L	09/14/2006	0002	42	-	52	0.1	U	F	#	.1	
Calcium	mg/L	09/14/2006	0001	42	-	52	390		F	#	.073	
Calcium	mg/L	09/14/2006	0002	42	-	52	410		F	#	.073	
Chloride	mg/L	09/14/2006	0001	42	-	52	910		F	#	40	
Chloride	mg/L	09/14/2006	0002	42	-	52	830		F	#	100	
Iron	mg/L	09/14/2006	0001	42	-	52	0.14	U	F	#	.14	
Iron	mg/L	09/14/2006	0002	42	-	52	0.14	U	F	#	.14	
Magnesium	mg/L	09/14/2006	0001	42	-	52	680		F	#	.055	
Magnesium	mg/L	09/14/2006	0002	42	-	52	720		F	#	.055	
Manganese	mg/L	09/14/2006	0001	42	-	52	0.014	B	F	#	.00095	
Manganese	mg/L	09/14/2006	0002	42	-	52	0.026	B	UF	#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	42	-	52	660		F	#	5	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0002	42	-	52	630		F	#	5	
Oxidation Reduction Potential	mV	09/14/2006	N001	42	-	52	198		F	#		
pH	s.u.	09/14/2006	N001	42	-	52	7.18		F	#		
Potassium	mg/L	09/14/2006	0001	42	-	52	81		F	#	.57	
Potassium	mg/L	09/14/2006	0002	42	-	52	81		F	#	.57	
Selenium	mg/L	09/14/2006	0001	42	-	52	3.5		F	#	.016	
Selenium	mg/L	09/14/2006	0002	42	-	52	3.4		F	#	.016	
Sodium	mg/L	09/14/2006	0001	42	-	52	5600		F	#	.2	
Sodium	mg/L	09/14/2006	0002	42	-	52	5200		F	#	.2	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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
Specific Conductance	umhos /cm	09/14/2006	N001	42	-	52	25252		F	#		
Strontium	mg/L	09/14/2006	0001	42	-	52	8.1		F	#	.00076	
Strontium	mg/L	09/14/2006	0002	42	-	52	7.8		F	#	.00076	
Sulfate	mg/L	09/14/2006	0001	42	-	52	14000		F	#	100	
Sulfate	mg/L	09/14/2006	0002	42	-	52	13000		F	#	250	
Temperature	C	09/14/2006	N001	42	-	52	16.61		F	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	42	-	52	25000		F	#	2000	
Total Dissolved Solids	mg/L	09/14/2006	0002	42	-	52	26000		F	#	1000	
Total Organic Carbon	mg/L	09/14/2006	N001	42	-	52	30		F	#	1	
Total Organic Carbon	mg/L	09/14/2006	N002	42	-	52	29		F	#	1	
Turbidity	NTU	09/14/2006	N001	42	-	52	1.02		F	#		
Uranium	mg/L	09/14/2006	0001	42	-	52	0.12		F	#	.000016	
Uranium	mg/L	09/14/2006	0002	42	-	52	0.13		F	#	.000016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	17.9	-	27.9	225		F	#		
Ammonia Total as N	mg/L	09/14/2006	0001	17.9	-	27.9	0.1	U	F	#	.1	
Ammonia Total as N	mg/L	09/14/2006	0002	17.9	-	27.9	0.1	U	F	#	.1	
Calcium	mg/L	09/14/2006	0001	17.9	-	27.9	530		F	#	.015	
Calcium	mg/L	09/14/2006	0002	17.9	-	27.9	550		F	#	.015	
Chloride	mg/L	09/14/2006	0001	17.9	-	27.9	30		F	#	10	
Chloride	mg/L	09/14/2006	0002	17.9	-	27.9	28		F	#	2	
Iron	mg/L	09/14/2006	0001	17.9	-	27.9	0.028	UN	F	#	.028	
Iron	mg/L	09/14/2006	0002	17.9	-	27.9	0.028	U	F	#	.028	
Magnesium	mg/L	09/14/2006	0001	17.9	-	27.9	190		F	#	.011	
Magnesium	mg/L	09/14/2006	0002	17.9	-	27.9	190		F	#	.011	
Manganese	mg/L	09/14/2006	0001	17.9	-	27.9	0.00036	B	UF	#	.00019	
Manganese	mg/L	09/14/2006	0002	17.9	-	27.9	0.00019	U	F	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	17.9	-	27.9	15		F	#	.1	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0002	17.9	-	27.9	15		F	#	.1	
Oxidation Reduction Potential	mV	09/14/2006	N001	17.9	-	27.9	170		F	#		
pH	s.u.	09/14/2006	N001	17.9	-	27.9	7.02		F	#		
Potassium	mg/L	09/14/2006	0001	17.9	-	27.9	11	E	F	#	.11	
Potassium	mg/L	09/14/2006	0002	17.9	-	27.9	11		F	#	.11	
Selenium	mg/L	09/14/2006	0001	17.9	-	27.9	0.15		F	#	.00078	
Selenium	mg/L	09/14/2006	0002	17.9	-	27.9	0.1		F	#	.0016	
Sodium	mg/L	09/14/2006	0001	17.9	-	27.9	230		F	#	.01	
Sodium	mg/L	09/14/2006	0002	17.9	-	27.9	180		F	#	.1	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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
Specific Conductance	umhos /cm	09/14/2006	N001	17.9	-	27.9	3938		F	#		
Strontium	mg/L	09/14/2006	0001	17.9	-	27.9	4.9		F	#	.00015	
Strontium	mg/L	09/14/2006	0002	17.9	-	27.9	4.6		F	#	.00015	
Sulfate	mg/L	09/14/2006	0001	17.9	-	27.9	2300		F	#	25	
Sulfate	mg/L	09/14/2006	0002	17.9	-	27.9	2400		F	#	25	
Temperature	C	09/14/2006	N001	17.9	-	27.9	16.63		F	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	17.9	-	27.9	4000		F	#	80	
Total Dissolved Solids	mg/L	09/14/2006	0002	17.9	-	27.9	4000		F	#	80	
Total Organic Carbon	mg/L	09/14/2006	N001	17.9	-	27.9	3.4		F	#	1	
Total Organic Carbon	mg/L	09/14/2006	N002	17.9	-	27.9	2.9		F	#	1	
Turbidity	NTU	09/14/2006	N001	17.9	-	27.9	3.26		F	#		
Uranium	mg/L	09/14/2006	0001	17.9	-	27.9	0.033		F	#	.0000031	
Uranium	mg/L	09/14/2006	0002	17.9	-	27.9	0.033		F	#	.0000031	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
Location: 1070 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	09/14/2006	0001	52.5	-	62	704			#		
Ammonia Total as N	mg/L	09/14/2006	0001	52.5	-	62	20			#	2	
Chloride	mg/L	09/14/2006	0001	52.5	-	62	2900			#	100	
Dissolved Oxygen	mg/L	09/14/2006	N001	52.5	-	62	1.12			#		
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	52.5	-	62	680			#	10	
Oxidation Reduction Potential	mV	09/14/2006	N001	52.5	-	62	102			#		
pH	s.u.	09/14/2006	N001	52.5	-	62	6.79			#		
Specific Conductance	umhos /cm	09/14/2006	N001	52.5	-	62	28263			#		
Sulfate	mg/L	09/14/2006	0001	52.5	-	62	39000			#	250	
Temperature	C	09/14/2006	N001	52.5	-	62	16.9			#		
Turbidity	NTU	09/14/2006	N001	52.5	-	62	49			#		
Uranium	mg/L	09/14/2006	0001	52.5	-	62	0.12			#	.000016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	36.5	-	46	535			#		
Ammonia Total as N	mg/L	09/14/2006	0001	36.5	-	46	7.6			#	.2	
Calcium	mg/L	09/14/2006	0001	36.5	-	46	450			#	.073	
Chloride	mg/L	09/14/2006	0001	36.5	-	46	990			#	100	
Dissolved Oxygen	mg/L	09/14/2006	N001	36.5	-	46	0.83			#		
Magnesium	mg/L	09/14/2006	0001	36.5	-	46	1100			#	.055	
Manganese	mg/L	09/14/2006	0001	36.5	-	46	0.076			#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	36.5	-	46	680			#	5	
Oxidation Reduction Potential	mV	09/14/2006	N001	36.5	-	46	94			#		
pH	s.u.	09/14/2006	N001	36.5	-	46	6.92			#		
Potassium	mg/L	09/14/2006	0001	36.5	-	46	88			#	.57	
Selenium	mg/L	09/14/2006	0001	36.5	-	46	2.9			#	.0078	
Sodium	mg/L	09/14/2006	0001	36.5	-	46	5500			#	.2	
Specific Conductance	umhos /cm	09/14/2006	N001	36.5	-	46	23092			#		
Strontium	mg/L	09/14/2006	0001	36.5	-	46	10			#	.00076	
Sulfate	mg/L	09/14/2006	0001	36.5	-	46	13000			#	250	
Temperature	C	09/14/2006	N001	36.5	-	46	22.33			#		
Turbidity	NTU	09/14/2006	N001	36.5	-	46	12			#		
Uranium	mg/L	09/14/2006	0001	36.5	-	46	0.14			#	.000016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	35.5	-	45	548			#		
Ammonia Total as N	mg/L	09/14/2006	0001	35.5	-	45	3.5			#	.1	
Calcium	mg/L	09/14/2006	0001	35.5	-	45	400			#	.073	
Chloride	mg/L	09/14/2006	0001	35.5	-	45	1100			#	100	
Dissolved Oxygen	mg/L	09/14/2006	N001	35.5	-	45	3.12			#		
Magnesium	mg/L	09/14/2006	0001	35.5	-	45	1100			#	.055	
Manganese	mg/L	09/14/2006	0001	35.5	-	45	0.091			#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	35.5	-	45	640			#	5	
Oxidation Reduction Potential	mV	09/14/2006	N001	35.5	-	45	196			#		
pH	s.u.	09/14/2006	N001	35.5	-	45	7.06			#		
Potassium	mg/L	09/14/2006	0001	35.5	-	45	78			#	.57	
Selenium	mg/L	09/14/2006	0001	35.5	-	45	2.9			#	.0078	
Sodium	mg/L	09/14/2006	0001	35.5	-	45	5600			#	.2	
Specific Conductance	umhos /cm	09/14/2006	N001	35.5	-	45	24531			#		
Strontium	mg/L	09/14/2006	0001	35.5	-	45	9.8			#	.00076	
Sulfate	mg/L	09/14/2006	0001	35.5	-	45	13000			#	250	
Temperature	C	09/14/2006	N001	35.5	-	45	18.31			#		
Turbidity	NTU	09/14/2006	N001	35.5	-	45	1.27			#		
Uranium	mg/L	09/14/2006	0001	35.5	-	45	0.14			#	.000016	

Ground Water Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/14/2006	0001	10.5	-	20	288		F	#		
Ammonia Total as N	mg/L	09/14/2006	0001	10.5	-	20	0.1	U	F	#	.1	
Calcium	mg/L	09/14/2006	0001	10.5	-	20	450		F	#	.015	
Chloride	mg/L	09/14/2006	0001	10.5	-	20	61		F	#	10	
Iron	mg/L	09/14/2006	0001	10.5	-	20	0.028	U	F	#	.028	
Magnesium	mg/L	09/14/2006	0001	10.5	-	20	99		F	#	.011	
Manganese	mg/L	09/14/2006	0001	10.5	-	20	0.0018	B	UF	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	10.5	-	20	35		F	#	.2	
Oxidation Reduction Potential	mV	09/14/2006	N001	10.5	-	20	227		F	#		
pH	s.u.	09/14/2006	N001	10.5	-	20	6.93		F	#		
Potassium	mg/L	09/14/2006	0001	10.5	-	20	9.3		F	#	.11	
Selenium	mg/L	09/14/2006	0001	10.5	-	20	0.21		F	#	.00078	
Sodium	mg/L	09/14/2006	0001	10.5	-	20	300		F	#	.1	
Specific Conductance	umhos /cm	09/14/2006	N001	10.5	-	20	3279		F	#		
Strontium	mg/L	09/14/2006	0001	10.5	-	20	4.2		F	#	.00015	
Sulfate	mg/L	09/14/2006	0001	10.5	-	20	1600		F	#	25	
Temperature	C	09/14/2006	N001	10.5	-	20	18.09		F	#		
Total Dissolved Solids	mg/L	09/14/2006	0001	10.5	-	20	3100		F	#	80	
Total Organic Carbon	mg/L	09/14/2006	N001	10.5	-	20	3.5		F	#	1	
Turbidity	NTU	09/14/2006	N001	10.5	-	20	2.48		F	#		
Uranium	mg/L	09/14/2006	0001	10.5	-	20	0.026		F	#	.0000031	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
Location: 1087 TREATMENT SYSTEM Sump from interceptor trenches in Bob Lee 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	09/14/2006	0001	0	-	0	777			#		
Ammonia Total as N	mg/L	09/14/2006	0001	0	-	0	220			#	10	
Calcium	mg/L	09/14/2006	0001	0	-	0	480			#	.037	
Chloride	mg/L	09/14/2006	0001	0	-	0	390			#	40	
Dissolved Oxygen	mg/L	09/14/2006	N001	0	-	0	1.3			#		
Iron	mg/L	09/14/2006	0001	0	-	0	0.071	U		#	.071	
Magnesium	mg/L	09/14/2006	0001	0	-	0	1700			#	.028	
Manganese	mg/L	09/14/2006	0001	0	-	0	1.7			#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	0	-	0	490			#	5	
Oxidation Reduction Potential	mV	09/14/2006	N001	0	-	0	197			#		
pH	s.u.	09/14/2006	N001	0	-	0	6.57			#		
Potassium	mg/L	09/14/2006	0001	0	-	0	180			#	.28	
Selenium	mg/L	09/14/2006	0001	0	-	0	0.038			#	.000078	
Sodium	mg/L	09/14/2006	0001	0	-	0	1700			#	.2	
Specific Conductance	umhos /cm	09/14/2006	N001	0	-	0	16181			#		
Strontium	mg/L	09/14/2006	0001	0	-	0	11			#	.00038	
Sulfate	mg/L	09/14/2006	0001	0	-	0	10000			#	100	
Temperature	C	09/14/2006	N001	0	-	0	25.3			#		
Total Dissolved Solids	mg/L	09/14/2006	0001	0	-	0	19000			#	400	
Total Organic Carbon	mg/L	09/14/2006	N001	0	-	0	18			#	1	
Turbidity	NTU	09/14/2006	N001	0	-	0	2.44			#		
Uranium	mg/L	09/14/2006	0001	0	-	0	0.85			#	.000063	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
Location: 1088 TREATMENT SYSTEM Sump from interceptor trenches in Many Devils 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	09/14/2006	0001	0	-	0	549			#		
Ammonia Total as N	mg/L	09/14/2006	0001	0	-	0	0.1	U		#	.1	
Calcium	mg/L	09/14/2006	0001	0	-	0	410			#	.073	
Chloride	mg/L	09/14/2006	0001	0	-	0	1200			#	100	
Dissolved Oxygen	mg/L	09/14/2006	N001	0	-	0	4.75			#		
Iron	mg/L	09/14/2006	0001	0	-	0	0.14	U		#	.14	
Magnesium	mg/L	09/14/2006	0001	0	-	0	920			#	.055	
Manganese	mg/L	09/14/2006	0001	0	-	0	0.025	B		#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	0	-	0	480			#	5	
Oxidation Reduction Potential	mV	09/14/2006	N001	0	-	0	273			#		
pH	s.u.	09/14/2006	N001	0	-	0	7.25			#		
Potassium	mg/L	09/14/2006	0001	0	-	0	73			#	.57	
Selenium	mg/L	09/14/2006	0001	0	-	0	1.2			#	.0078	
Sodium	mg/L	09/14/2006	0001	0	-	0	6200			#	.2	
Specific Conductance	umhos /cm	09/14/2006	N001	0	-	0	25533			#		
Strontium	mg/L	09/14/2006	0001	0	-	0	8.3			#	.00076	
Sulfate	mg/L	09/14/2006	0001	0	-	0	15000			#	250	
Temperature	C	09/14/2006	N001	0	-	0	21.9			#		
Total Dissolved Solids	mg/L	09/14/2006	0001	0	-	0	28000			#	400	
Total Organic Carbon	mg/L	09/14/2006	N001	0	-	0	32			#	1	
Uranium	mg/L	09/14/2006	0001	0	-	0	0.14			#	.000016	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/11/2006	N001	33	-	43	2223			#		
Ammonia Total as N	mg/L	09/11/2006	0001	33	-	43	1.7			#	.1	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2006	0001	33	-	43	1800			#	10	
Oxidation Reduction Potential	mV	09/11/2006	N001	33	-	43	7.2			#		
pH	s.u.	09/11/2006	N001	33	-	43	6.59			#		
Specific Conductance	umhos /cm	09/11/2006	N001	33	-	43	26261			#		
Sulfate	mg/L	09/11/2006	0001	33	-	43	11000			#	250	
Temperature	C	09/11/2006	N001	33	-	43	18.67			#		
Turbidity	NTU	09/11/2006	N001	33	-	43	1.2			#		
Uranium	mg/L	09/11/2006	0001	33	-	43	0.12			#	.000016	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/11/2006	N001	33	-	43	960			#		
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2006	0001	33	-	43	1400			#	10	
Oxidation Reduction Potential	mV	09/11/2006	N001	33	-	43	107.3			#		
pH	s.u.	09/11/2006	N001	33	-	43	6.83			#		
Specific Conductance	umhos /cm	09/11/2006	N001	33	-	43	26927			#		
Sulfate	mg/L	09/11/2006	0001	33	-	43	13000			#	250	
Temperature	C	09/11/2006	N001	33	-	43	17.1			#		
Turbidity	NTU	09/11/2006	N001	33	-	43	3.47			#		
Uranium	mg/L	09/11/2006	0001	33	-	43	0.13			#	.000016	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/11/2006	N001	31.17	-	34.5	308			#		
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2006	0001	31.17	-	34.5	2500			#	20	
Oxidation Reduction Potential	mV	09/11/2006	N001	31.17	-	34.5	114.7			#		
pH	s.u.	09/11/2006	N001	31.17	-	34.5	6.7			#		
Specific Conductance	umhos /cm	09/11/2006	N001	31.17	-	34.5	23697			#		
Sulfate	mg/L	09/11/2006	0001	31.17	-	34.5	2900			#	250	
Temperature	C	09/11/2006	N001	31.17	-	34.5	23.45			#		
Turbidity	NTU	09/11/2006	N001	31.17	-	34.5	2.16			#		
Uranium	mg/L	09/11/2006	0001	31.17	-	34.5	0.079			#	.000016	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
Location: 1095 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	09/13/2006	N001	39	-	49	488			#		
Ammonia Total as N	mg/L	09/13/2006	0001	39	-	49	1100			#	50	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	39	-	49	1500			#	10	
Oxidation Reduction Potential	mV	09/13/2006	N001	39	-	49	129			#		
pH	s.u.	09/13/2006	N001	39	-	49	6.66			#		
Specific Conductance	umhos /cm	09/13/2006	N001	39	-	49	21861			#		
Sulfate	mg/L	09/13/2006	0001	39	-	49	7500			#	250	
Temperature	C	09/13/2006	N001	39	-	49	16.04			#		
Turbidity	NTU	09/13/2006	N001	39	-	49	2.39			#		
Uranium	mg/L	09/13/2006	0001	39	-	49	0.069			#	.000016	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
Location: 1096 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	09/14/2006	0001	57.5	-	66.5	659			#		
Ammonia Total as N	mg/L	09/14/2006	0001	57.5	-	66.5	20			#	2	
Calcium	mg/L	09/14/2006	0001	57.5	-	66.5	410			#	.073	
Chloride	mg/L	09/14/2006	0001	57.5	-	66.5	1100			#	100	
Dissolved Oxygen	mg/L	09/14/2006	N001	57.5	-	66.5	1.47			#		
Magnesium	mg/L	09/14/2006	0001	57.5	-	66.5	1300			#	.055	
Manganese	mg/L	09/14/2006	0001	57.5	-	66.5	0.23			#	.00095	
Nitrate + Nitrite as Nitrogen	mg/L	09/14/2006	0001	57.5	-	66.5	700			#	5	
Oxidation Reduction Potential	mV	09/14/2006	N001	57.5	-	66.5	140			#		
pH	s.u.	09/14/2006	N001	57.5	-	66.5	6.87			#		
Potassium	mg/L	09/14/2006	0001	57.5	-	66.5	100			#	.57	
Selenium	mg/L	09/14/2006	0001	57.5	-	66.5	2.8			#	.0078	
Sodium	mg/L	09/14/2006	0001	57.5	-	66.5	5200			#	.2	
Specific Conductance	umhos /cm	09/14/2006	N001	57.5	-	66.5	26351			#		
Strontium	mg/L	09/14/2006	0001	57.5	-	66.5	11			#	.00076	
Sulfate	mg/L	09/14/2006	0001	57.5	-	66.5	14000			#	250	
Temperature	C	09/14/2006	N001	57.5	-	66.5	16.72			#		
Turbidity	NTU	09/14/2006	N001	57.5	-	66.5	7			#		
Uranium	mg/L	09/14/2006	0001	57.5	-	66.5	0.12			#	.000016	

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: 11/22/2006
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	09/12/2006	0001	106			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	60			#	.0073	
Chloride	mg/L	09/12/2006	0001	11			#	1	
Dissolved Oxygen	mg/L	09/12/2006	N001	7.27			#		
Magnesium	mg/L	09/12/2006	0001	7.6			#	.0055	
Manganese	mg/L	09/12/2006	0001	0.0026	B	U	#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	0.44			#	.01	
Oxidation Reduction Potential	mV	09/12/2006	N001	115			#		
pH	s.u.	09/12/2006	N001	8.19			#		
Potassium	mg/L	09/12/2006	0001	3.6			#	.057	
Selenium	mg/L	09/12/2006	0001	0.00028			#	.000016	
Sodium	mg/L	09/12/2006	0001	32			#	.002	
Specific Conductance	umhos/cm	09/12/2006	N001	598			#		
Strontium	mg/L	09/12/2006	0001	0.71			#	.000076	
Sulfate	mg/L	09/12/2006	0001	120			#	2.5	
Temperature	C	09/12/2006	N001	16.65			#		
Uranium	mg/L	09/12/2006	0001	0.0016			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	212			#		
Ammonia Total as N	mg/L	09/13/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	63			#	.0073	
Chloride	mg/L	09/13/2006	0001	11			#	1	
Magnesium	mg/L	09/13/2006	0001	8.4			#	.0055	
Manganese	mg/L	09/13/2006	0001	0.0023	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	0.41			#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	152			#		
pH	s.u.	09/13/2006	N001	8.29			#		
Potassium	mg/L	09/13/2006	0001	3.4			#	.057	
Selenium	mg/L	09/13/2006	0001	0.00027			#	.000016	
Sodium	mg/L	09/13/2006	0001	34			#	.002	
Specific Conductance	umhos/cm	09/13/2006	N001	717			#		
Strontium	mg/L	09/13/2006	0001	0.73			#	.000076	
Sulfate	mg/L	09/13/2006	0001	120			#	2.5	
Temperature	C	09/13/2006	N001	21.1			#		
Uranium	mg/L	09/13/2006	0001	0.0016			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	123			#		
Ammonia Total as N	mg/L	09/13/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	62			#	.0073	
Chloride	mg/L	09/13/2006	0001	11			#	1	
Magnesium	mg/L	09/13/2006	0001	8.1			#	.0055	
Manganese	mg/L	09/13/2006	0001	0.0015	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	0.43			#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	72			#		
pH	s.u.	09/13/2006	N001	8.26			#		
Potassium	mg/L	09/13/2006	0001	3.4			#	.057	
Selenium	mg/L	09/13/2006	0001	0.00027			#	.000016	
Sodium	mg/L	09/13/2006	0001	34			#	.002	
Specific Conductance	umhos/cm	09/13/2006	N001	530			#		
Strontium	mg/L	09/13/2006	0001	0.74			#	.000076	
Sulfate	mg/L	09/13/2006	0001	120			#	2.5	
Temperature	C	09/13/2006	N001	18.35			#		
Uranium	mg/L	09/13/2006	0001	0.0015			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	115			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	61			#	.0073	
Chloride	mg/L	09/12/2006	0001	12			#	1	
Magnesium	mg/L	09/12/2006	0001	7.8			#	.0055	
Manganese	mg/L	09/12/2006	0001	0.003	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	0.018			#	.01	
Oxidation Reduction Potential	mV	09/12/2006	N001	141			#		
pH	s.u.	09/12/2006	N001	8.85			#		
Potassium	mg/L	09/12/2006	0001	4.9			#	.057	
Selenium	mg/L	09/12/2006	0001	0.00055			#	.000016	
Sodium	mg/L	09/12/2006	0001	53			#	.002	
Specific Conductance	umhos/cm	09/12/2006	N001	599			#		
Strontium	mg/L	09/12/2006	0001	0.7			#	.000076	
Sulfate	mg/L	09/12/2006	0001	160			#	2.5	
Temperature	C	09/12/2006	N001	25.78			#		
Uranium	mg/L	09/12/2006	0001	0.0024			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	119			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	55			#	.0073	
Chloride	mg/L	09/12/2006	0001	12			#	2	
Magnesium	mg/L	09/12/2006	0001	7.2			#	.0055	
Manganese	mg/L	09/12/2006	0001	0.07			#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	0.1			#	.01	
Oxidation Reduction Potential	mV	09/12/2006	N001	195			#		
pH	s.u.	09/12/2006	N001	8.08			#		
Potassium	mg/L	09/12/2006	0001	5.9			#	.057	
Selenium	mg/L	09/12/2006	0001	0.00066			#	.000016	
Sodium	mg/L	09/12/2006	0001	73			#	.002	
Specific Conductance	umhos/cm	09/12/2006	N001	742			#		
Strontium	mg/L	09/12/2006	0001	0.69			#	.000076	
Sulfate	mg/L	09/12/2006	0001	180			#	5	
Temperature	C	09/12/2006	N001	14.08			#		
Uranium	mg/L	09/12/2006	0001	0.0029			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	118			#		
Ammonia Total as N	mg/L	09/13/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	62			#	.0073	
Chloride	mg/L	09/13/2006	0001	12			#	1	
Dissolved Oxygen	mg/L	09/13/2006	N001	8.59			#		
Magnesium	mg/L	09/13/2006	0001	8.2			#	.0055	
Manganese	mg/L	09/13/2006	0001	0.002	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	0.42			#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	66			#		
pH	s.u.	09/13/2006	N001	8.22			#		
Potassium	mg/L	09/13/2006	0001	3.4			#	.057	
Selenium	mg/L	09/13/2006	0001	0.00024			#	.000016	
Sodium	mg/L	09/13/2006	0001	33			#	.002	
Specific Conductance	umhos/cm	09/13/2006	N001	1111			#		
Strontium	mg/L	09/13/2006	0001	0.74			#	.000076	
Sulfate	mg/L	09/13/2006	0001	120			#	2.5	
Temperature	C	09/13/2006	N001	20.08			#		
Uranium	mg/L	09/13/2006	0001	0.0016			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	118			#		
Ammonia Total as N	mg/L	09/13/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	63			#	.0073	
Chloride	mg/L	09/13/2006	0001	11			#	1	
Dissolved Oxygen	mg/L	09/13/2006	N001	7.86			#		
Magnesium	mg/L	09/13/2006	0001	8.7			#	.0055	
Manganese	mg/L	09/13/2006	0001	0.0034	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	0.38			#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	107			#		
pH	s.u.	09/13/2006	N001	8.1			#		
Potassium	mg/L	09/13/2006	0001	3.4			#	.057	
Selenium	mg/L	09/13/2006	0001	0.00021			#	.000016	
Sodium	mg/L	09/13/2006	0001	32			#	.002	
Specific Conductance	umhos/cm	09/13/2006	N001	650			#		
Strontium	mg/L	09/13/2006	0001	0.74			#	.000076	
Sulfate	mg/L	09/13/2006	0001	120			#	2.5	
Temperature	C	09/13/2006	N001	24.74			#		
Uranium	mg/L	09/13/2006	0001	0.0015			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	133			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	60			#	.0073	
Chloride	mg/L	09/12/2006	0001	11			#	1	
Magnesium	mg/L	09/12/2006	0001	7.7			#	.0055	
Manganese	mg/L	09/12/2006	0001	0.0064			#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	0.38			#	.01	
Oxidation Reduction Potential	mV	09/12/2006	N001	192			#		
pH	s.u.	09/12/2006	N001	8.31			#		
Potassium	mg/L	09/12/2006	0001	3.6			#	.057	
Selenium	mg/L	09/12/2006	0001	0.00033			#	.000016	
Sodium	mg/L	09/12/2006	0001	34			#	.002	
Specific Conductance	umhos/cm	09/12/2006	N001	498			#		
Strontium	mg/L	09/12/2006	0001	0.7			#	.000076	
Sulfate	mg/L	09/12/2006	0001	110			#	2.5	
Temperature	C	09/12/2006	N001	17.14			#		
Uranium	mg/L	09/12/2006	0001	0.0016			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	132			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	51			#	.0073	
Chloride	mg/L	09/12/2006	0001	10			#	2	
Magnesium	mg/L	09/12/2006	0001	5.4			#	.0055	
Manganese	mg/L	09/12/2006	0001	0.0049	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	0.24			#	.01	
Oxidation Reduction Potential	mV	09/12/2006	N001	184			#		
pH	s.u.	09/12/2006	N001	8.5			#		
Potassium	mg/L	09/12/2006	0001	4.9			#	.057	
Selenium	mg/L	09/12/2006	0001	0.00049			#	.000016	
Sodium	mg/L	09/12/2006	0001	76			#	.002	
Specific Conductance	umhos/cm	09/12/2006	N001	620			#		
Strontium	mg/L	09/12/2006	0001	0.62			#	.000076	
Sulfate	mg/L	09/12/2006	0001	170			#	5	
Temperature	C	09/12/2006	N001	14.5			#		
Uranium	mg/L	09/12/2006	0001	0.0027			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	124			#		
Ammonia Total as N	mg/L	09/13/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	63			#	.0073	
Chloride	mg/L	09/13/2006	0001	12			#	1	
Dissolved Oxygen	mg/L	09/13/2006	N001	7.63			#		
Magnesium	mg/L	09/13/2006	0001	8.7			#	.0055	
Manganese	mg/L	09/13/2006	0001	0.0043	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	0.38			#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	100			#		
pH	s.u.	09/13/2006	N001	8.12			#		
Potassium	mg/L	09/13/2006	0001	3.4			#	.057	
Selenium	mg/L	09/13/2006	0001	0.00024			#	.000016	
Sodium	mg/L	09/13/2006	0001	32			#	.002	
Specific Conductance	umhos/cm	09/13/2006	N001	533			#		
Strontium	mg/L	09/13/2006	0001	0.73			#	.000076	
Sulfate	mg/L	09/13/2006	0001	120			#	2.5	
Temperature	C	09/13/2006	N001	22.23			#		
Uranium	mg/L	09/13/2006	0001	0.0015			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	116			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	61			#	.0073	
Chloride	mg/L	09/12/2006	0001	11			#	1	
Dissolved Oxygen	mg/L	09/12/2006	N001	7.52			#		
Magnesium	mg/L	09/12/2006	0001	7.8			#	.0055	
Manganese	mg/L	09/12/2006	0001	0.0044	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	0.41			#	.01	
Oxidation Reduction Potential	mV	09/12/2006	N001	119			#		
pH	s.u.	09/12/2006	N001	8.14			#		
Potassium	mg/L	09/12/2006	0001	3.7			#	.057	
Selenium	mg/L	09/12/2006	0001	0.00029			#	.000016	
Sodium	mg/L	09/12/2006	0001	36			#	.002	
Specific Conductance	umhos/cm	09/12/2006	N001	501			#		
Strontium	mg/L	09/12/2006	0001	0.71			#	.000076	
Sulfate	mg/L	09/12/2006	0001	110			#	2.5	
Temperature	C	09/12/2006	N001	17.88			#		
Uranium	mg/L	09/12/2006	0001	0.0016			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	119			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	61			#	.0073	
Chloride	mg/L	09/12/2006	0001	11			#	1	
Dissolved Oxygen	mg/L	09/12/2006	N001	6.81			#		
Magnesium	mg/L	09/12/2006	0001	7.8			#	.0055	
Manganese	mg/L	09/12/2006	0001	0.0028	B		#	.000095	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	0.37			#	.01	
Oxidation Reduction Potential	mV	09/12/2006	N001	110			#		
pH	s.u.	09/12/2006	N001	8.05			#		
Potassium	mg/L	09/12/2006	0001	3.5			#	.057	
Selenium	mg/L	09/12/2006	0001	0.00023			#	.000016	
Sodium	mg/L	09/12/2006	0001	32			#	.002	
Specific Conductance	umhos/cm	09/12/2006	N001	522			#		
Strontium	mg/L	09/12/2006	0001	0.7			#	.000076	
Sulfate	mg/L	09/12/2006	0001	110			#	2.5	
Temperature	C	09/12/2006	N001	19.95			#		
Uranium	mg/L	09/12/2006	0001	0.0015			#	.0000031	

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: 11/22/2006
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	09/13/2006	0001	57			#		
Ammonia Total as N	mg/L	09/13/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	110			#	.015	
Chloride	mg/L	09/13/2006	0001	54			#	10	
Dissolved Oxygen	mg/L	09/13/2006	N001	4.38			#		
Magnesium	mg/L	09/13/2006	0001	13			#	.011	
Manganese	mg/L	09/13/2006	0001	0.0043	B	U	#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	0.099			#	.01	
Oxidation Reduction Potential	mV	09/13/2006	N001	113			#		
pH	s.u.	09/13/2006	N001	7.8			#		
Potassium	mg/L	09/13/2006	0001	12			#	.11	
Selenium	mg/L	09/13/2006	0001	0.000016	U		#	.000016	
Sodium	mg/L	09/13/2006	0001	750			#	.1	
Specific Conductance	umhos/cm	09/13/2006	N001	4155			#		
Strontium	mg/L	09/13/2006	0001	10			#	.00015	
Sulfate	mg/L	09/13/2006	0001	2000			#	25	
Temperature	C	09/13/2006	N001	25.2			#		
Uranium	mg/L	09/13/2006	0001	0.00013			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/13/2006	0001	361			#		
Ammonia Total as N	mg/L	09/13/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/13/2006	0001	280			#	.037	
Chloride	mg/L	09/13/2006	0001	920			#	40	
Magnesium	mg/L	09/13/2006	0001	690			#	.028	
Manganese	mg/L	09/13/2006	0001	0.089			#	.00047	
Nitrate + Nitrite as Nitrogen	mg/L	09/13/2006	0001	370			#	2	
Oxidation Reduction Potential	mV	09/13/2006	N001	179			#		
pH	s.u.	09/13/2006	N001	8.29			#		
Potassium	mg/L	09/13/2006	0001	67			#	.28	
Selenium	mg/L	09/13/2006	0001	0.9			#	.0078	
Sodium	mg/L	09/13/2006	0001	4000			#	.2	
Specific Conductance	umhos/cm	09/13/2006	N001	20094			#		
Strontium	mg/L	09/13/2006	0001	5.6			#	.00038	
Sulfate	mg/L	09/13/2006	0001	11000			#	100	
Temperature	C	09/13/2006	N001	24.35			#		
Uranium	mg/L	09/13/2006	0001	0.11			#	.000016	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
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	09/12/2006	0001	398			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.1	U		#	.1	
Calcium	mg/L	09/12/2006	0001	520			#	.022	
Chloride	mg/L	09/12/2006	0001	120			#	20	
Magnesium	mg/L	09/12/2006	0001	340			#	.017	
Manganese	mg/L	09/12/2006	0001	0.1			#	.00028	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	37			#	.5	
Oxidation Reduction Potential	mV	09/12/2006	N001	207			#		
pH	s.u.	09/12/2006	N001	6.83			#		
Potassium	mg/L	09/12/2006	0001	18			#	.17	
Selenium	mg/L	09/12/2006	0001	0.27	E		#	.00078	
Sodium	mg/L	09/12/2006	0001	600			#	.1	
Specific Conductance	umhos/cm	09/12/2006	N001	5880			#		
Strontium	mg/L	09/12/2006	0001	6.8			#	.00023	
Sulfate	mg/L	09/12/2006	0001	3500			#	50	
Temperature	C	09/12/2006	N001	16.98			#		
Uranium	mg/L	09/12/2006	0001	0.064			#	.0000031	

Ground Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006
Location: 0942 SURFACE LOCATION Pond N of Shiprock high School and US Hwy 64

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/12/2006	0001	297			#		
Ammonia Total as N	mg/L	09/12/2006	0001	0.25			#	.1	
Calcium	mg/L	09/12/2006	0001	450			#	.015	
Chloride	mg/L	09/12/2006	0001	43			#	10	
Magnesium	mg/L	09/12/2006	0001	160			#	.011	
Manganese	mg/L	09/12/2006	0001	0.062			#	.00019	
Nitrate + Nitrite as Nitrogen	mg/L	09/12/2006	0001	2.5			#	.02	
Oxidation Reduction Potential	mV	09/12/2006	N001	-24			#		
pH	s.u.	09/12/2006	N001	7.75			#		
Potassium	mg/L	09/12/2006	0001	13			#	.11	
Selenium	mg/L	09/12/2006	0001	0.065			#	.00016	
Sodium	mg/L	09/12/2006	0001	280			#	.1	
Specific Conductance	umhos/cm	09/12/2006	N001	3678			#		
Strontium	mg/L	09/12/2006	0001	4.6			#	.00015	
Sulfate	mg/L	09/12/2006	0001	2200			#	25	
Temperature	C	09/12/2006	N001	25.3			#		
Uranium	mg/L	09/12/2006	0001	0.023			#	.0000031	

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.

Equipment Blank Data

BLANKS REPORT
LAB: PARAGON (Fort Collins, CO)
RIN: 06080459
Report Date: 11/22/2006

Parameter	Site Code	Location ID	Sample Date	Sample ID	Units	Result	Qualifiers Lab	Qualifiers Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	SHP02	0999	09/13/2006	0001	mg/L	.1	U		.1		E
Calcium	SHP02	0999	09/13/2006	0001	mg/L	.067	B	U	.0073		E
Chloride	SHP02	0999	09/13/2006	0001	mg/L	.2	U		.2		E
Iron	SHP02	0999	09/13/2006	0001	mg/L	.014	U		.014		E
Magnesium	SHP02	0999	09/13/2006	0001	mg/L	.051	B	U	.0055		E
Manganese	SHP02	0999	09/13/2006	0001	mg/L	.00058	B	U	.000095		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	09/13/2006	0001	mg/L	.01	U		.01		E
Potassium	SHP02	0999	09/13/2006	0001	mg/L	.19	B	U	.057		E
Selenium	SHP02	0999	09/13/2006	0001	mg/L	.000016	U		.000016		E
Sodium	SHP02	0999	09/13/2006	0001	mg/L	.18	B	U	.002		E
Strontium	SHP02	0999	09/13/2006	0001	mg/L	.00064	B	U	.000076		E
Sulfate	SHP02	0999	09/13/2006	0001	mg/L	.69			.5		E
Total Dissolved Solids	SHP02	0999	09/13/2006	0001	mg/L	20	U		20		E
Total Organic Carbon	SHP02	0999	09/13/2006	N001	mg/L	1	U		1		E
Uranium	SHP02	0999	09/13/2006	0001	mg/L	.00004	B		.0000031		E

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

LAB QUALIFIERS:
- * Replicate analysis not within control limits.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.

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

DATA QUALIFIERS:

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

SAMPLE TYPES:

E Equipment Blank.

Static Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 11/22/2006

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	12-SEP-06	10:40:00	7.15	4886.2	
0614		4892.79	12-SEP-06	11:35:00	8.87	4883.92	
0615		4892.23	12-SEP-06	14:08:00	8.45	4883.78	
0617		4891.9	13-SEP-06	08:41:00	8.81	4883.09	
0618		4891.51	13-SEP-06	08:11:00	8.34	4883.17	
0619		4892.19	13-SEP-06	09:02:00	9.35	4882.84	
0734		4886.55	13-SEP-06	14:10:00	6.87	4879.68	
0735		4895.85	12-SEP-06	08:27:00	5.92	4889.93	
0736		4887.99	12-SEP-06	11:40:00	6.98	4881.01	
0797		4908.04	13-SEP-06	09:02:00	9.98	4898.06	
0850	B	4907.51	13-SEP-06	09:42:00	9.9	4897.61	
0854		4890.09	13-SEP-06	08:55:00	8.96	4881.13	
0854		4890.09	13-SEP-06	11:35:00	9.05	4881.04	
0857		4894.02	13-SEP-06	08:45:00	10.69	4883.33	
0899		4893.84	13-SEP-06	08:55:00	3.55	4890.29	
1008		4890.8	13-SEP-06	09:00:00	9.35	4881.45	
1008		4890.8	13-SEP-06	09:39:00	9.35	4881.45	

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 11/22/2006

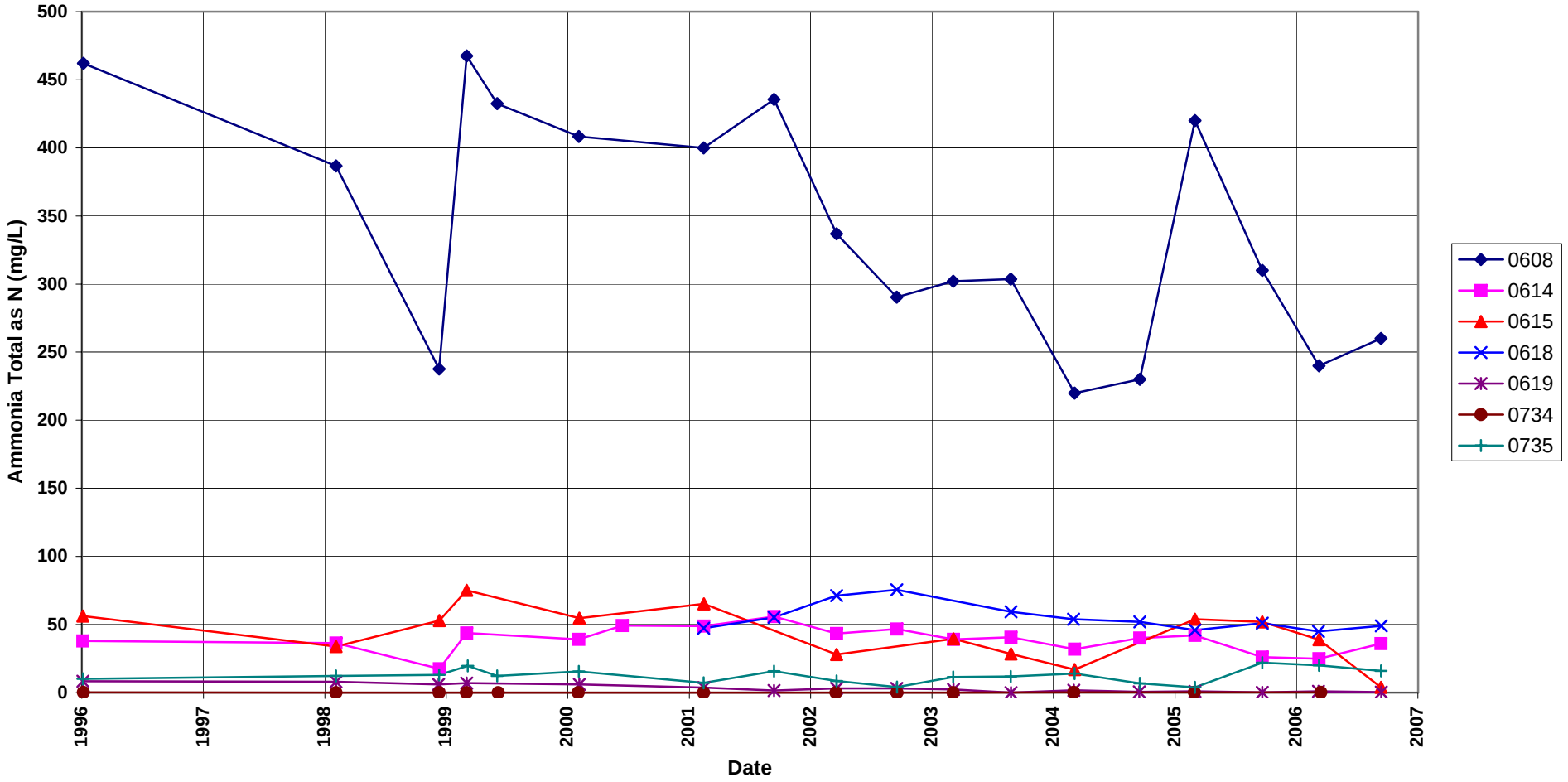
Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0602		4956.89	14-SEP-06	08:21:00	20.02	4936.87	
0603		4978.62	13-SEP-06	16:30:00	30.78	4947.84	
0604		4995.87	14-SEP-06	14:36:00	54.75	4941.12	
0730		4977.75	14-SEP-06				D
0731		4972.15	13-SEP-06	16:20:00	24.59	4947.56	
0814		4968.12	14-SEP-06	15:30:00	31.95	4936.17	
0817		4957.34	14-SEP-06	08:28:00	18.83	4938.51	
0819		4955.76	14-SEP-06	09:20:00	20.18	4935.58	
0827		4946.92	13-SEP-06	16:05:00	25.17	4921.75	
0830		4960.77	13-SEP-06	15:52:00	17.44	4943.33	
0832		4964.65	13-SEP-06				D
0833		4940.52	14-SEP-06	14:15:00	29.5	4911.02	
0835		4930.48	14-SEP-06	15:15:00	20.42	4910.06	
0836		4901.74	14-SEP-06	09:35:00	21.59	4880.15	
0837		4889.54	14-SEP-06	15:30:00	15.81	4873.73	
0838		4937.7	14-SEP-06	14:46:00	27.19	4910.51	
0839		4943.21	14-SEP-06				D
0841		4984.05	14-SEP-06	12:06:00	45.67	4938.38	
0843		4883.56	14-SEP-06	14:32:00	12.1	4871.46	
0846		4934.57	14-SEP-06	11:02:00	23.98	4910.59	
0848		4949.91	14-SEP-06	08:30:00	38.53	4911.38	
1007		4962.01	13-SEP-06	16:00:00	44.75	4917.26	
1048		4921.35	13-SEP-06	14:00:00	5.41	4915.94	
1049		4923.89	13-SEP-06	14:15:00	6.48	4917.41	
1057		4984.83	13-SEP-06		38.85	4945.98	
1059		4970.52	13-SEP-06	14:30:00	23.25	4947.27	
1060		4970.62	14-SEP-06	13:30:00	37.78	4932.84	
1079		4925.22	14-SEP-06	08:47:00	15.91	4909.31	
DM7		4974.44	14-SEP-06	11:17:00	48.73	4925.71	

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

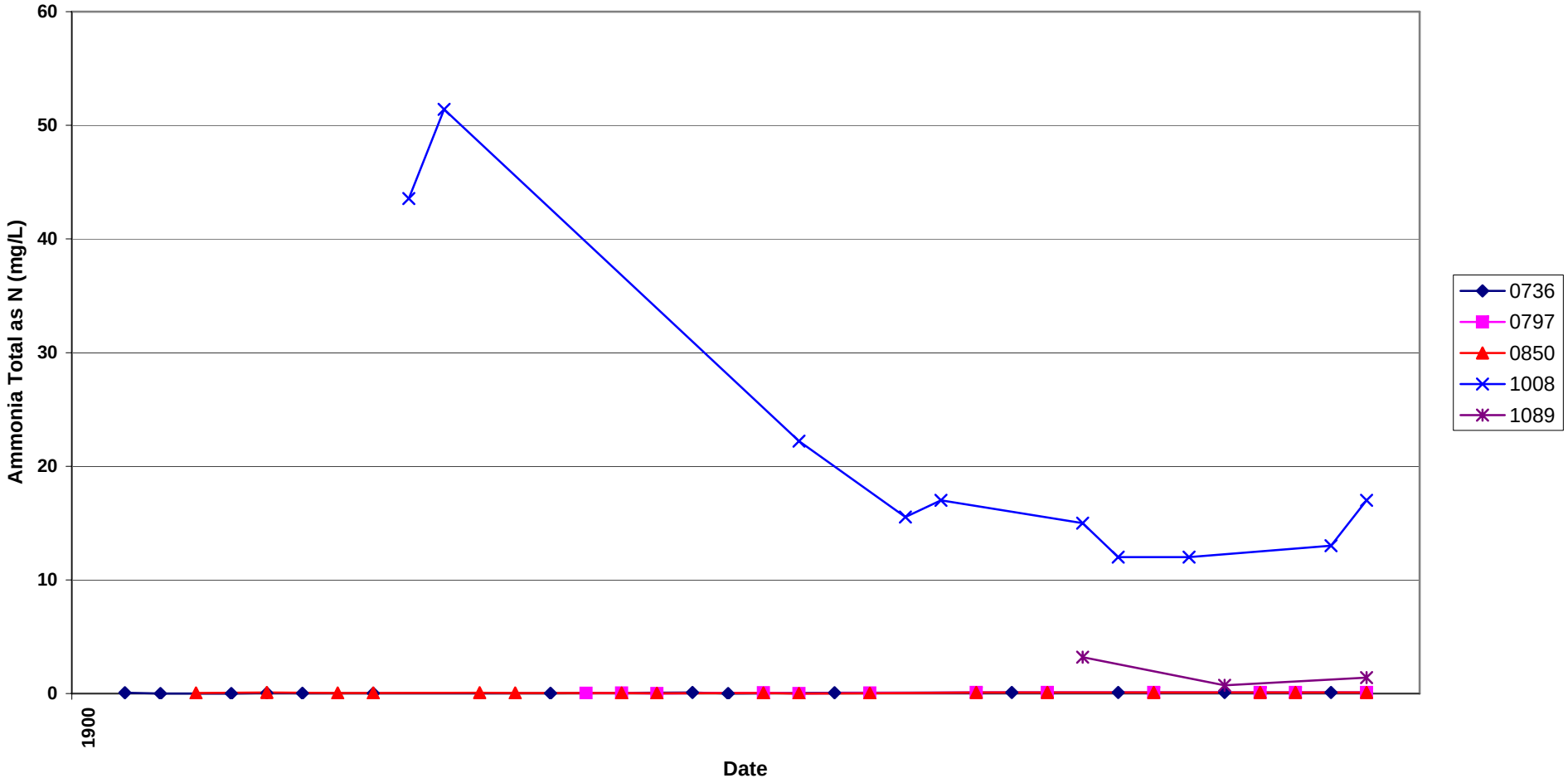
WATER LEVEL FLAGS: D Dry

Time Versus Concentration Graphs
Floodplain Locations

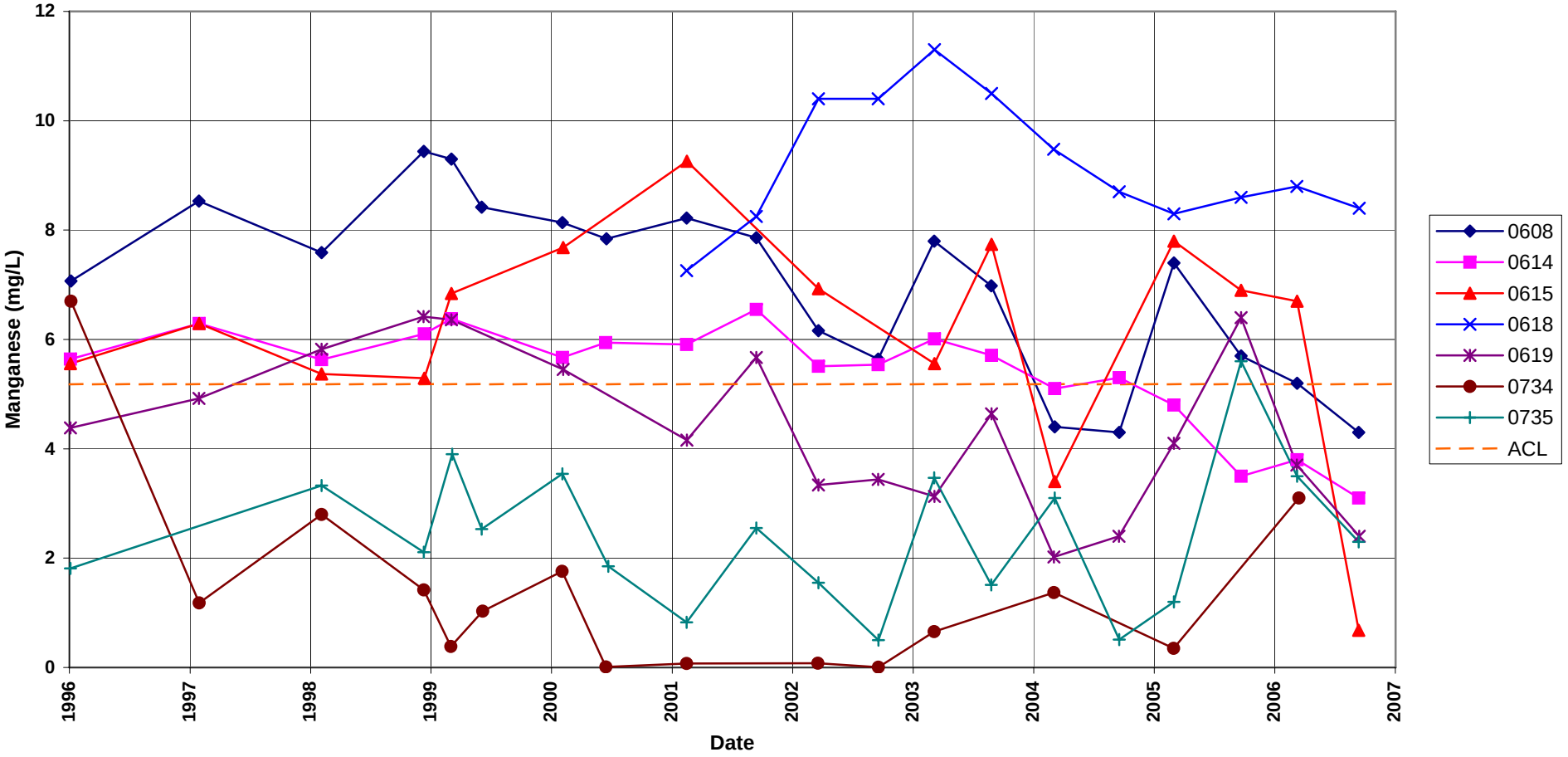
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



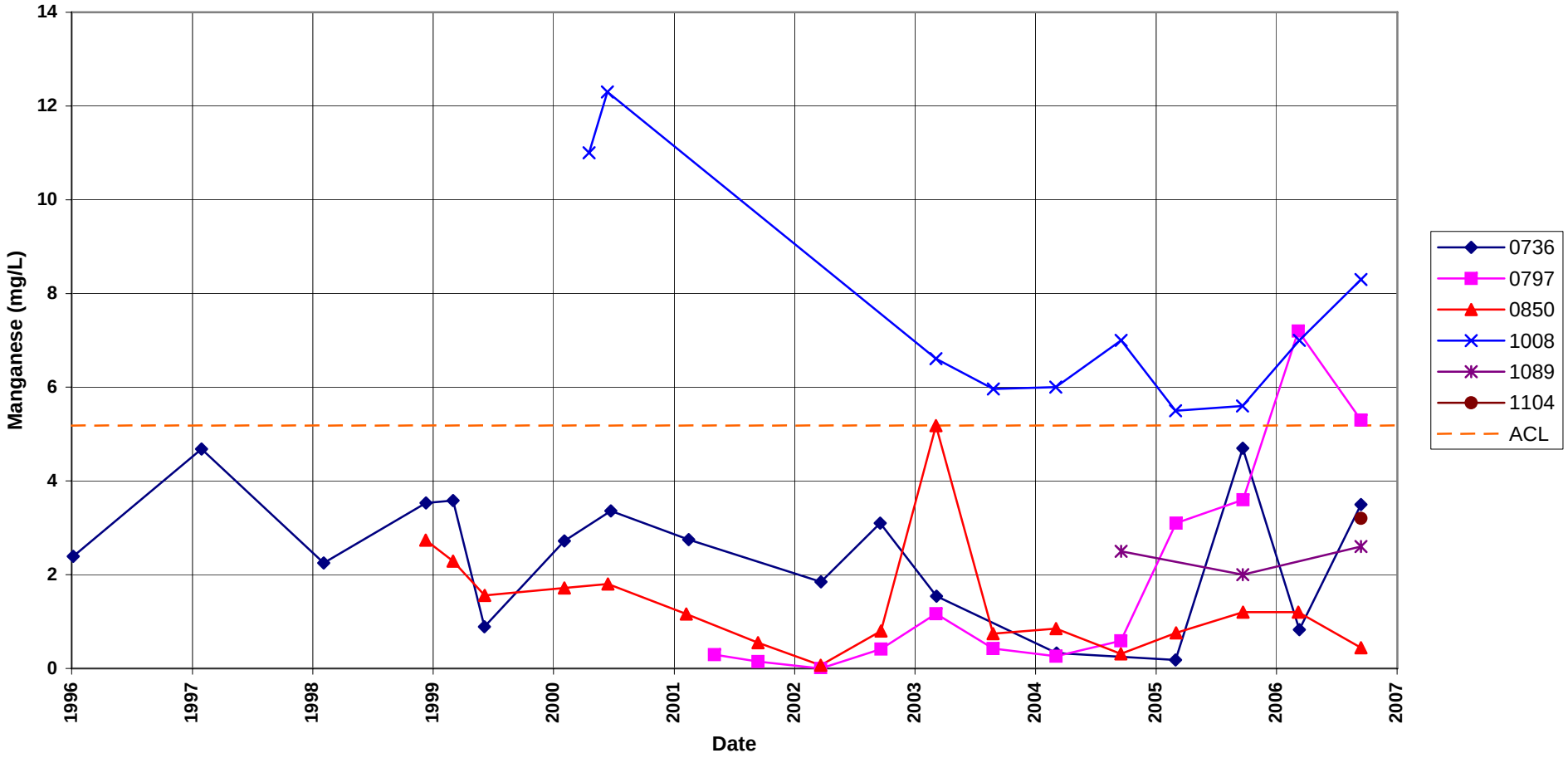
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



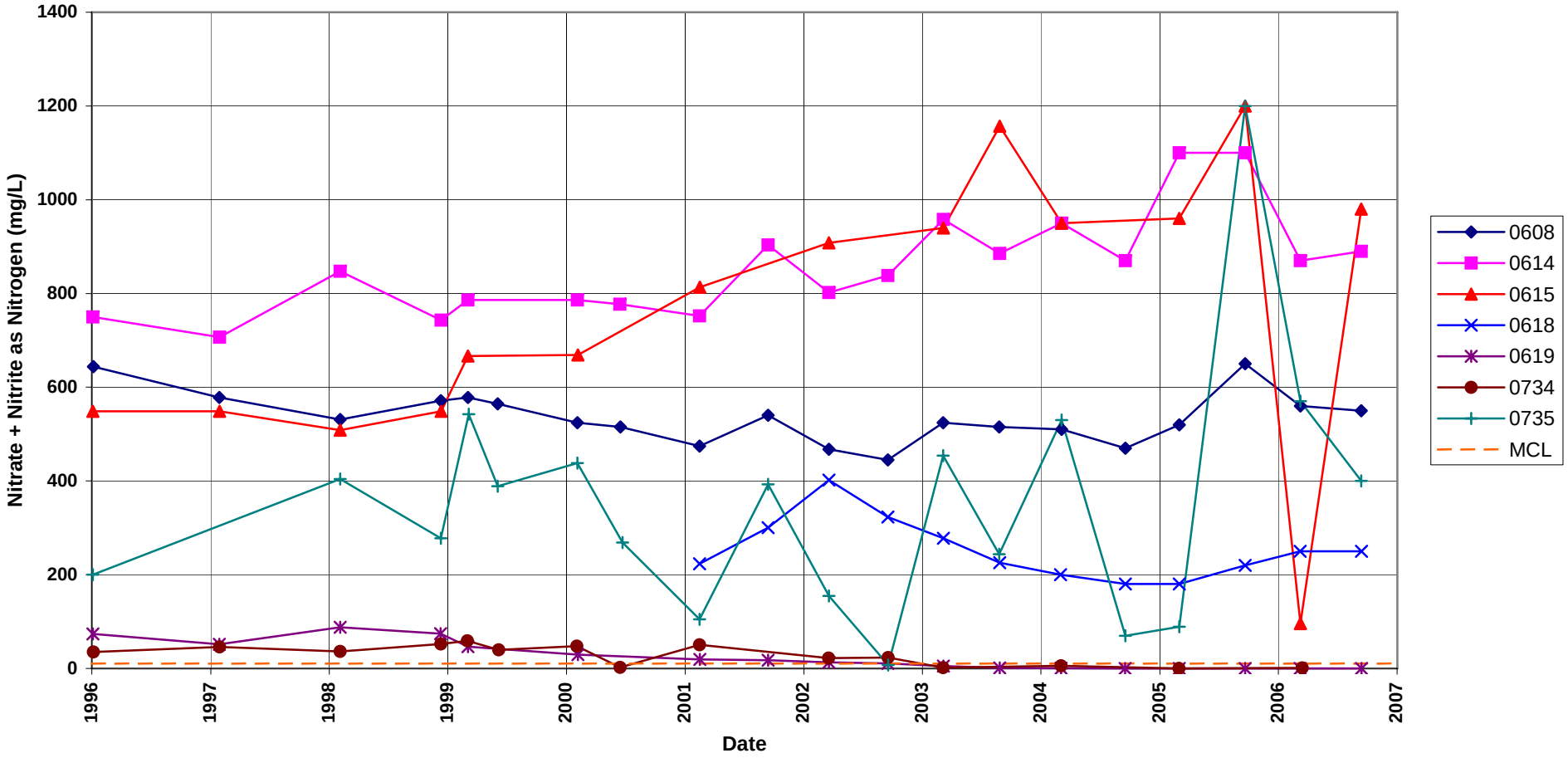
Shiprock Disposal Site (Floodplain)
Manganese Concentration
ACL = 5.18 mg/L



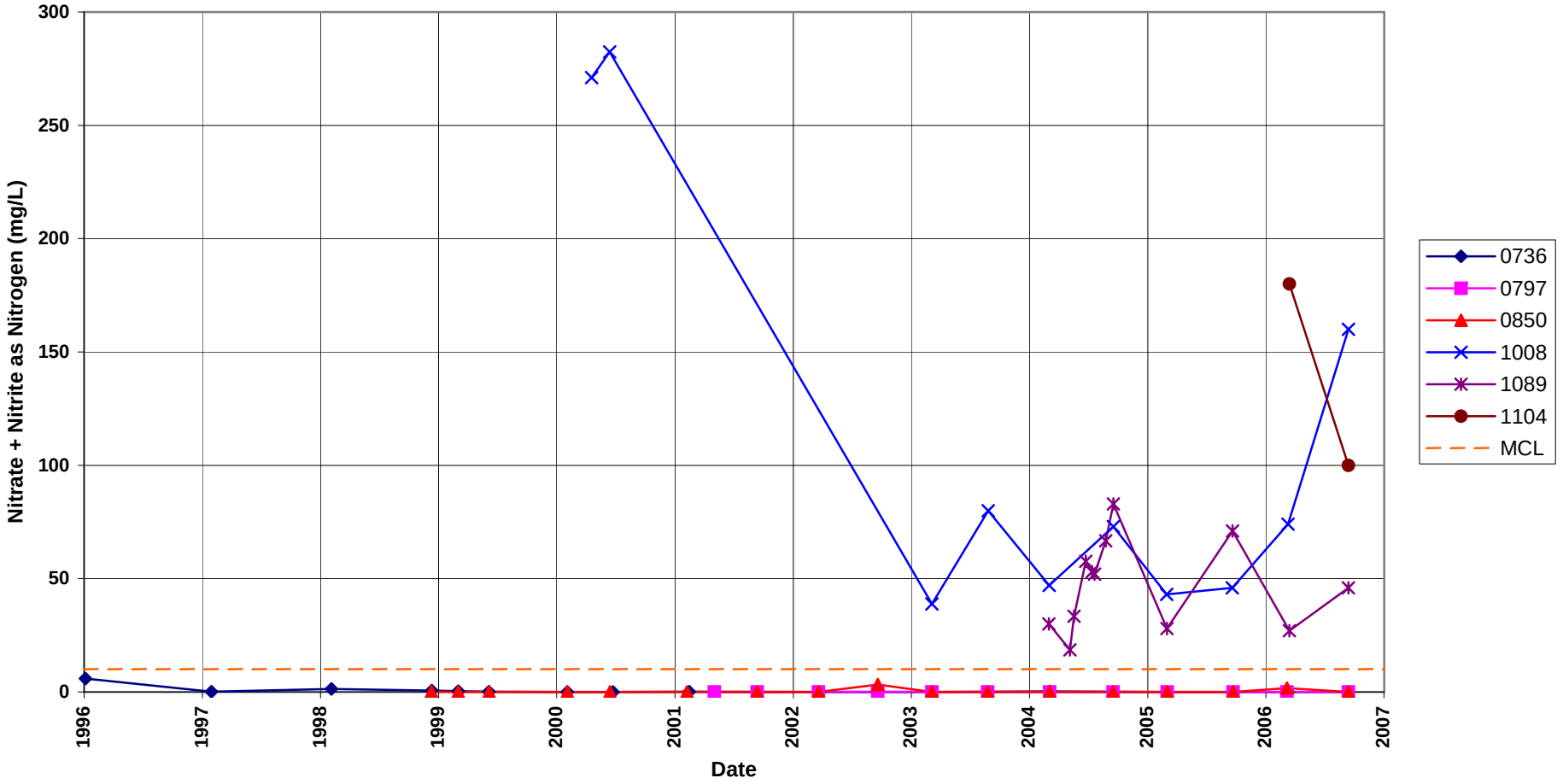
Shiprock Disposal Site (Floodplain)
Manganese Concentration
ACL = 5.18 mg/L



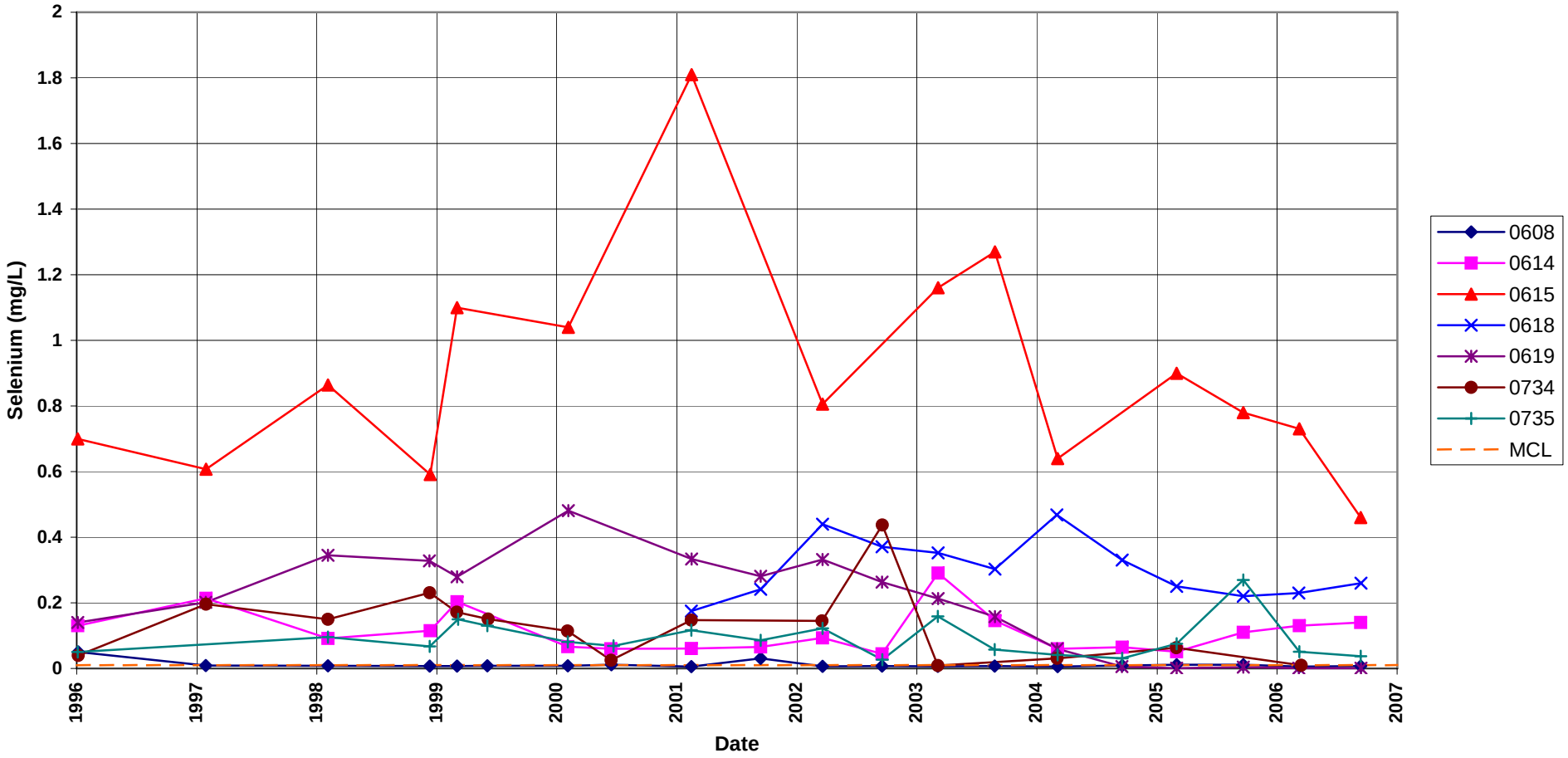
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



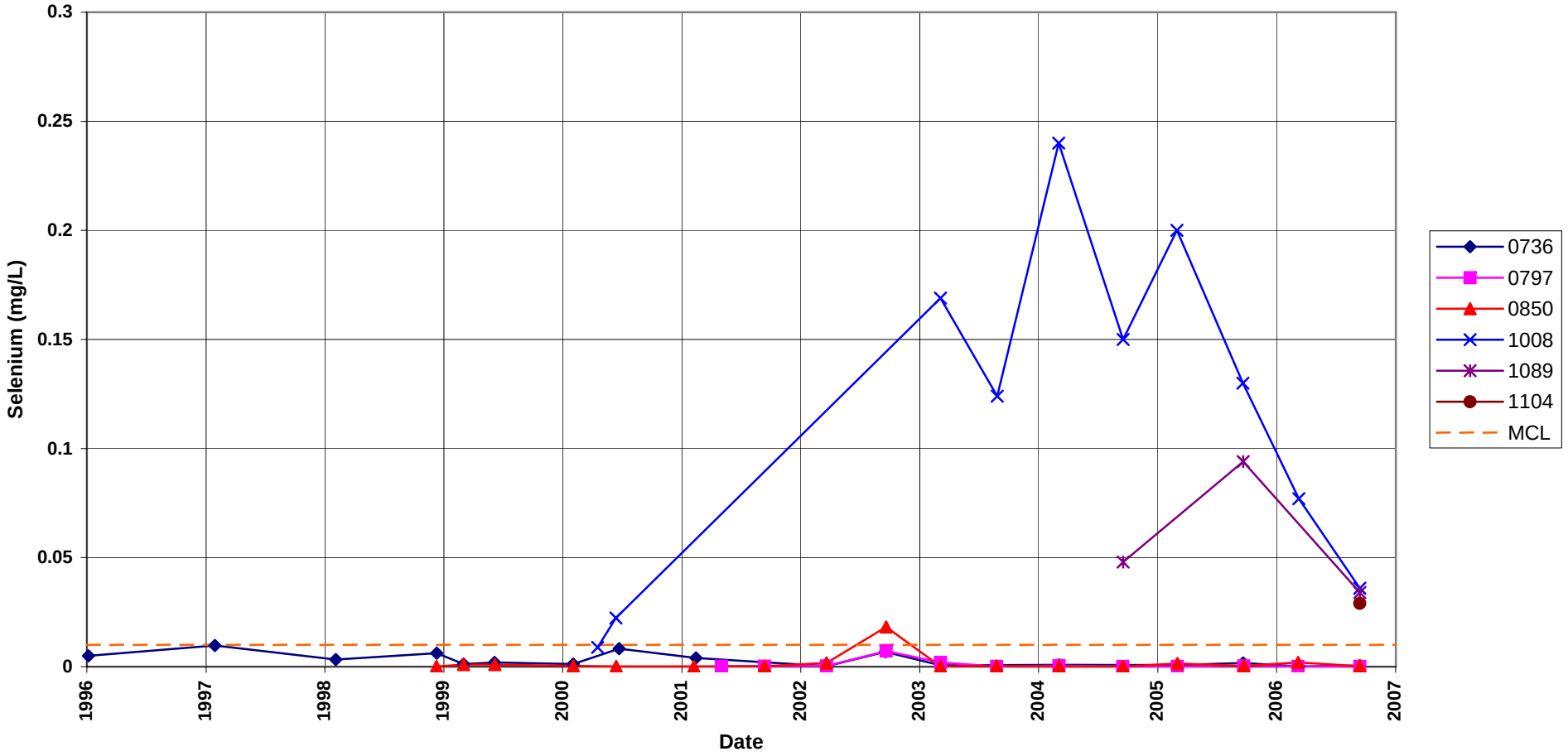
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



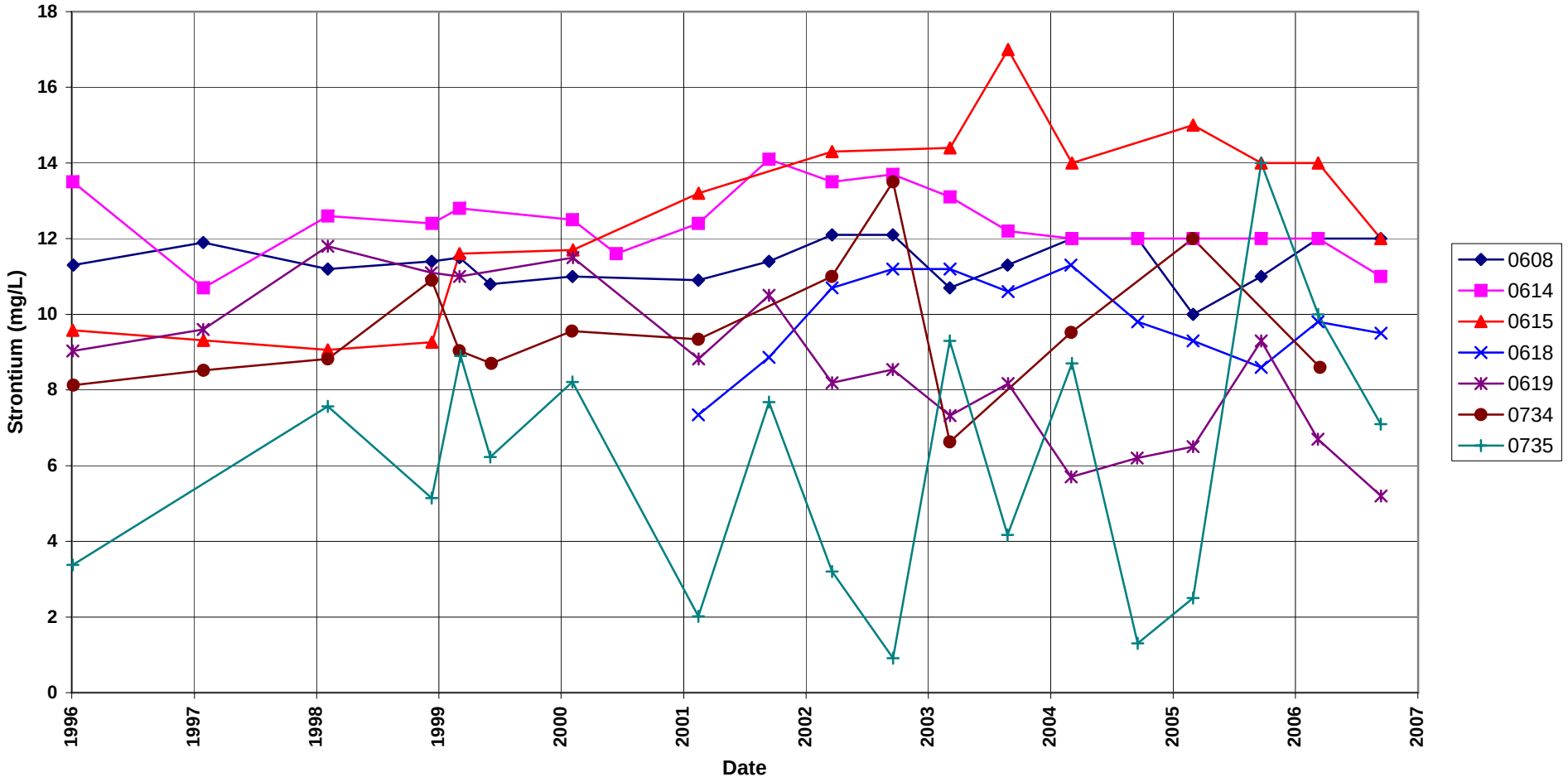
Shiprock Disposal Site (Floodplain)
Selenium Concentration
MCL = 0.01 mg/L

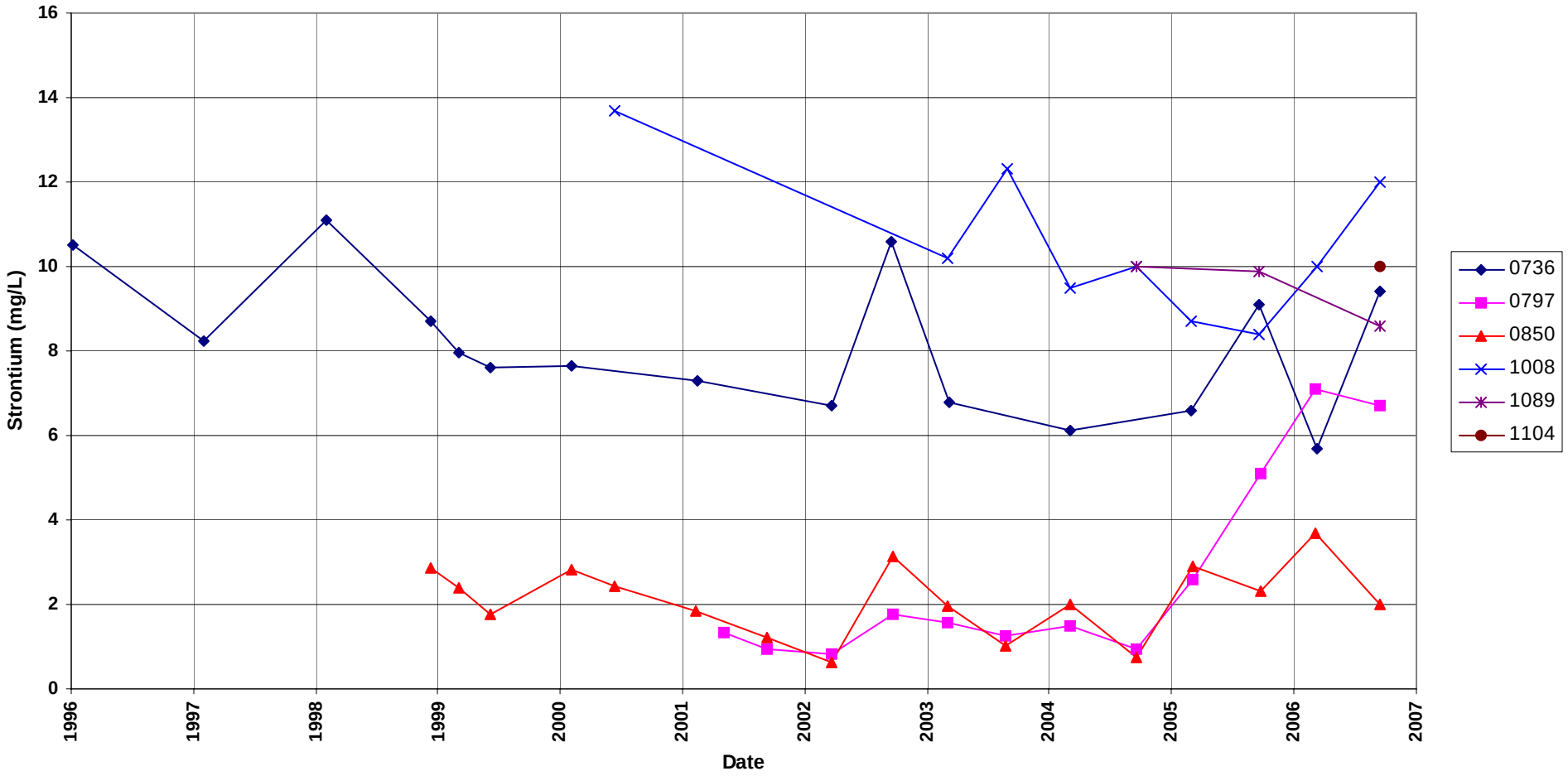


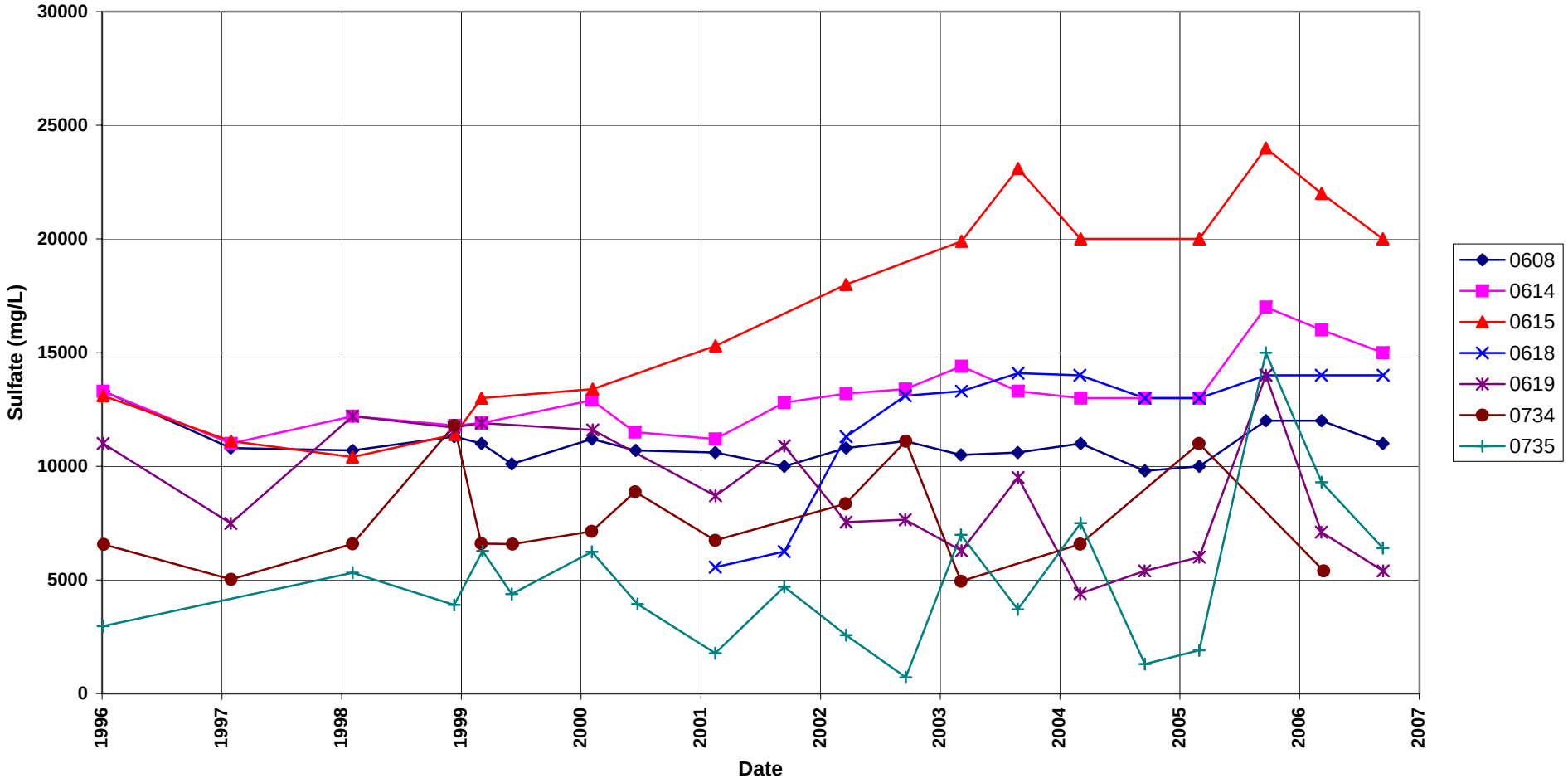
Shiprock Disposal Site (Floodplain)
Selenium Concentration
MCL = 0.01 mg/L



Shiprock Disposal Site (Floodplain)
Strontium Concentration




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
2007
Date
0736
0797
0850
1008
1089
1104


Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Sulfate (mg/L)
30000
25000
20000
15000
10000
5000
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Date
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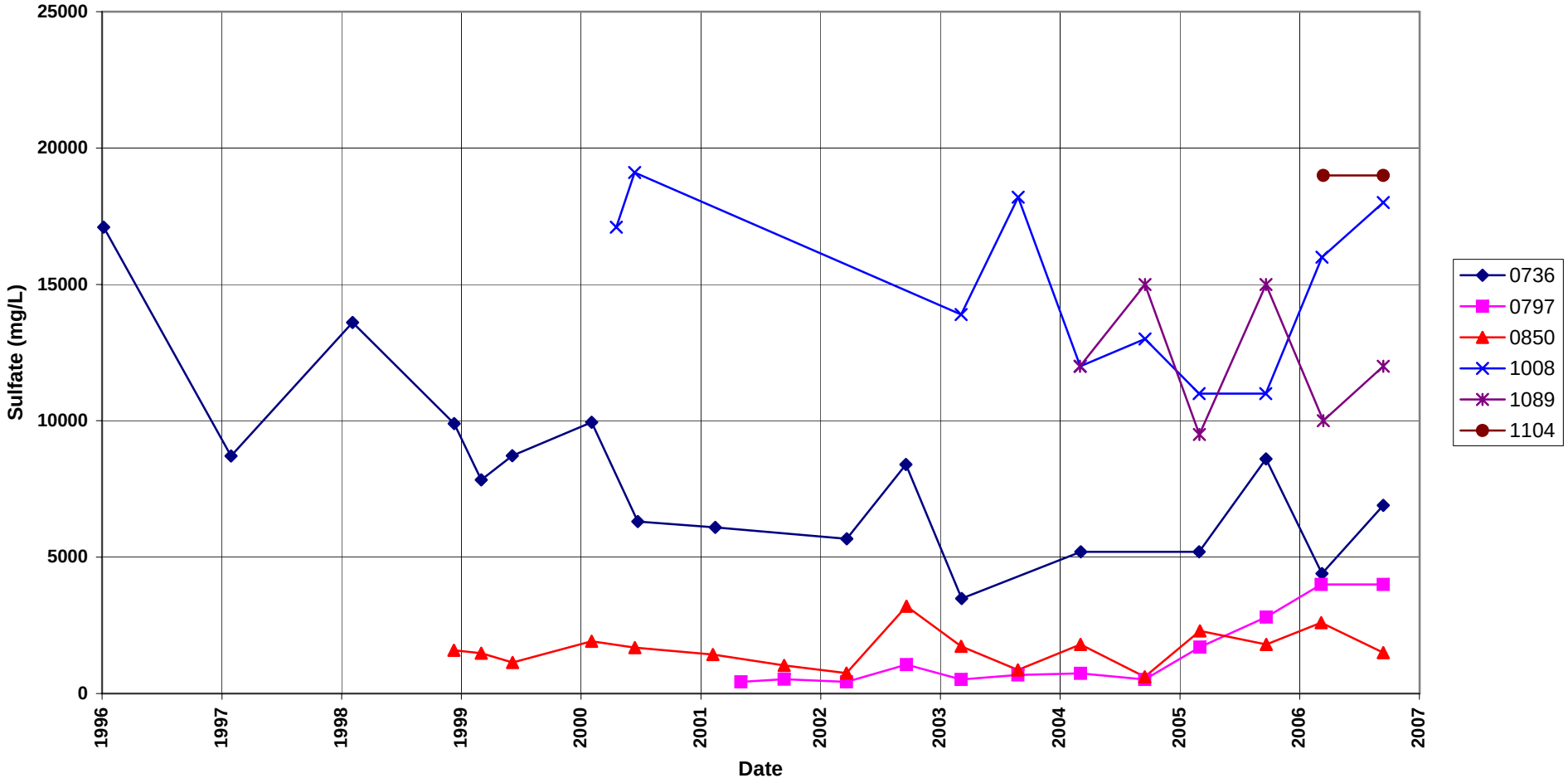
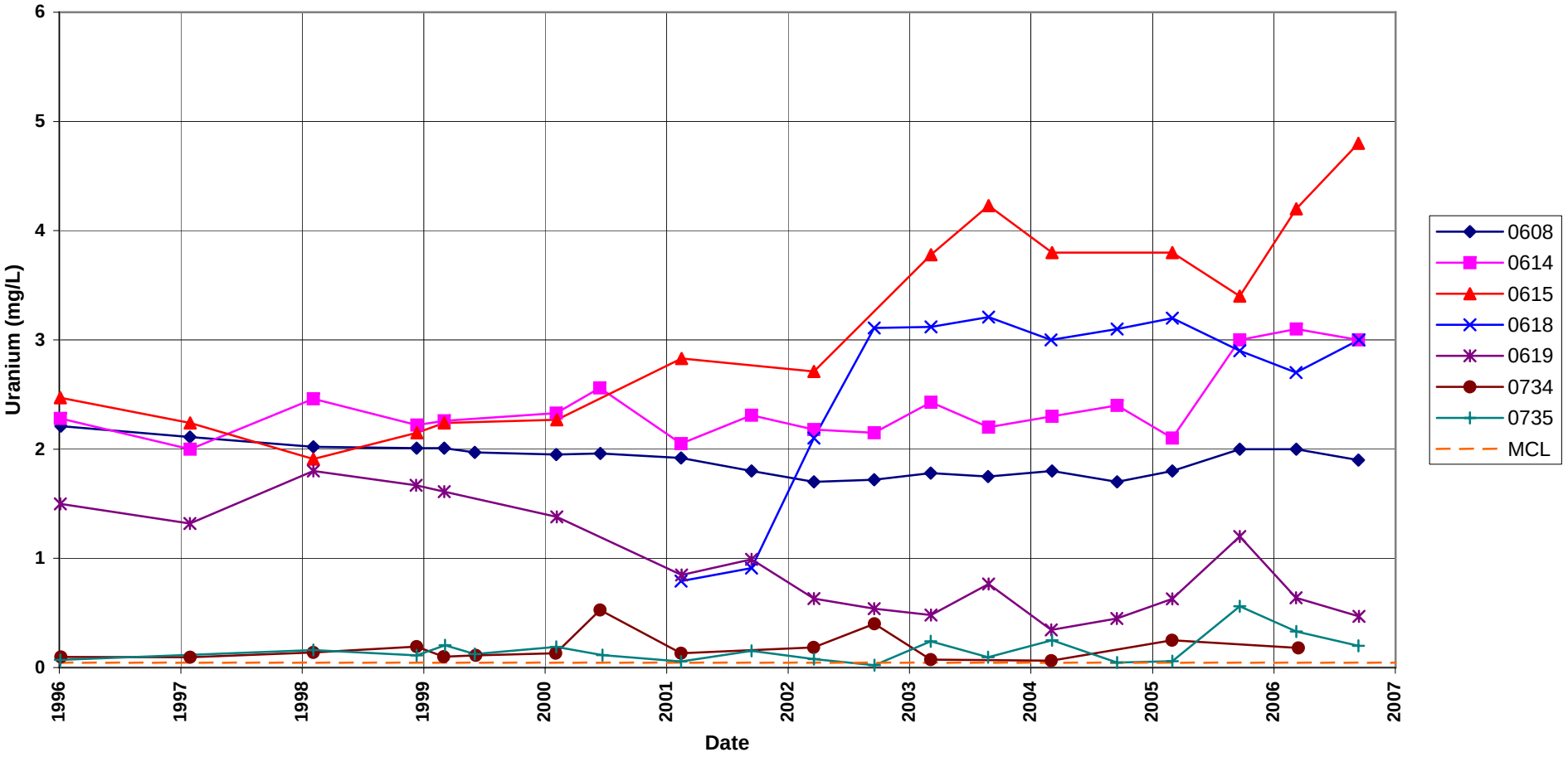
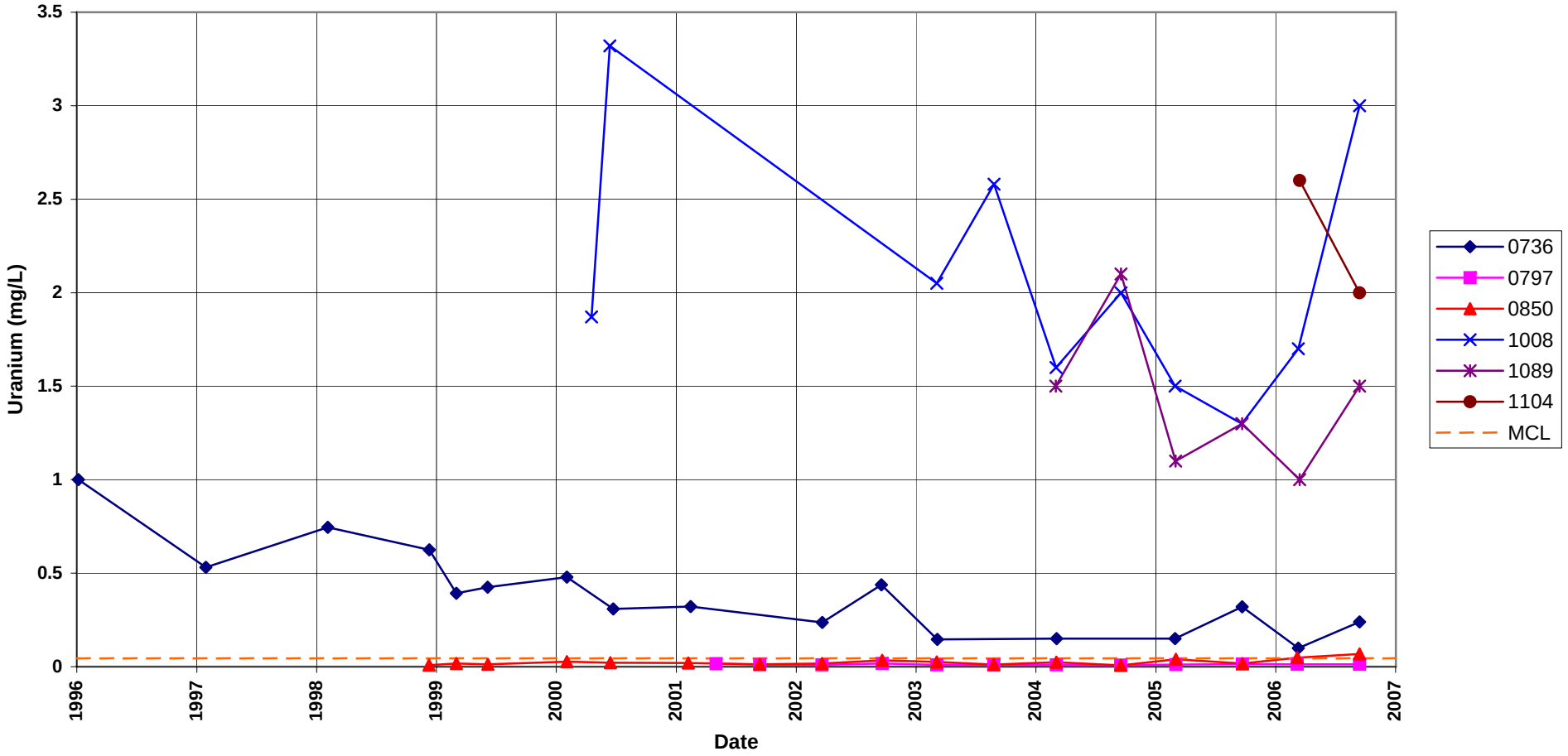
0615
0618
0619
0734
0735


Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Sulfate (mg/L)
25000
20000
15000
10000
5000
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Date
0736
0797
0850
1008
1089
1104

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

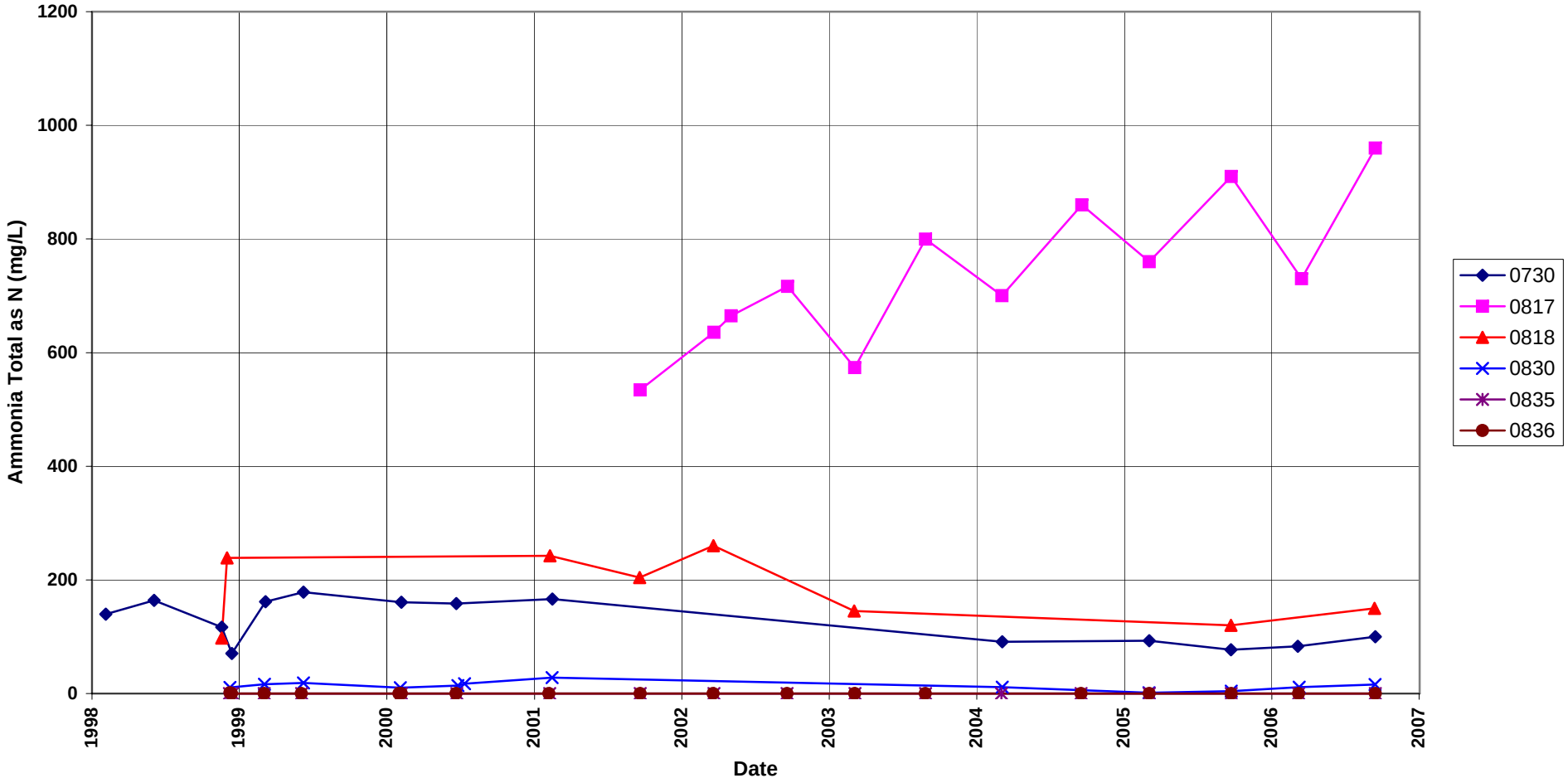


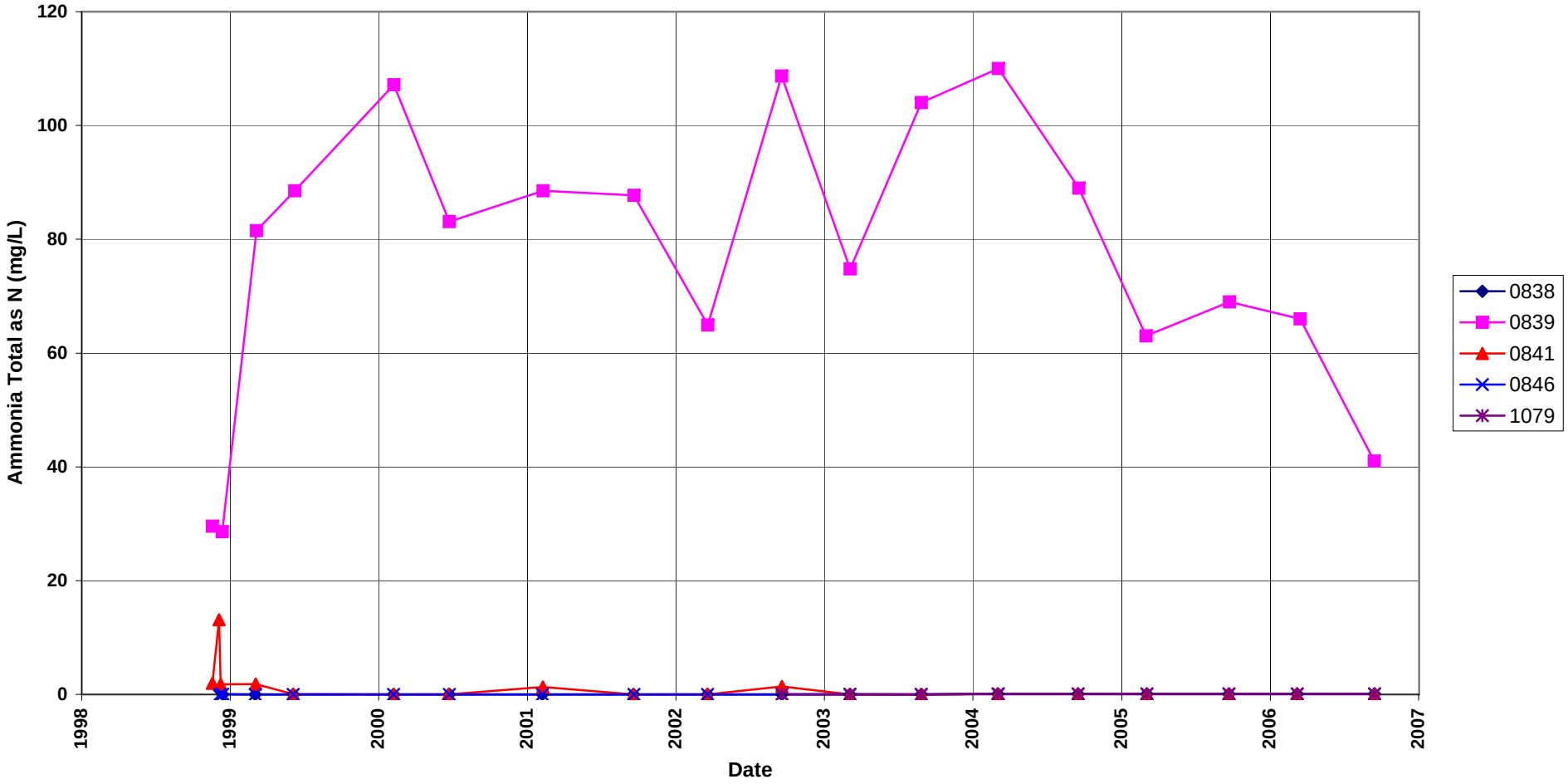
Shiprock Disposal Site (Floodplain)
Uranium Concentration
MCL = 0.044 mg/L



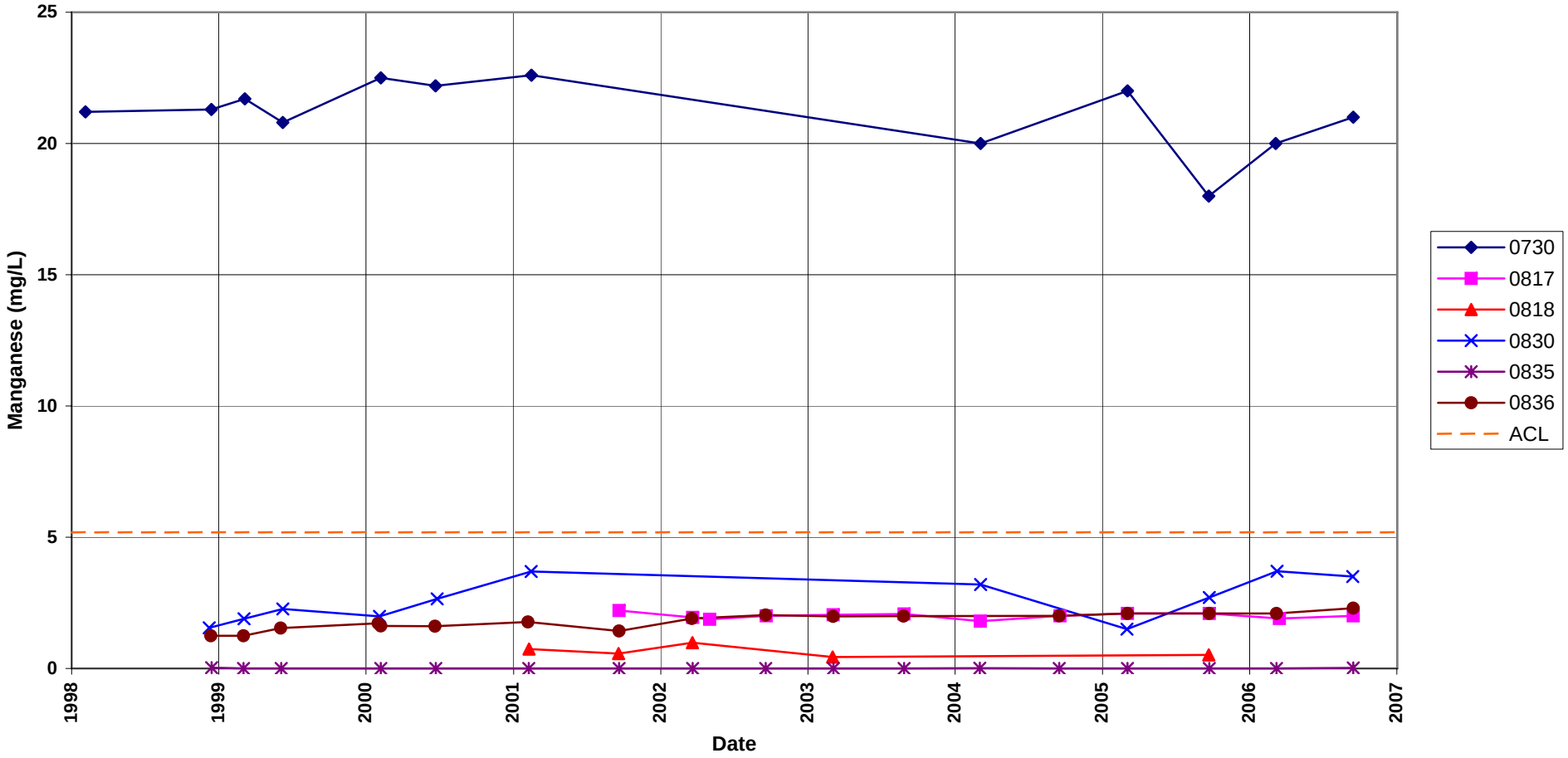
Time Versus Concentration Graphs
Terrace Locations

Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration

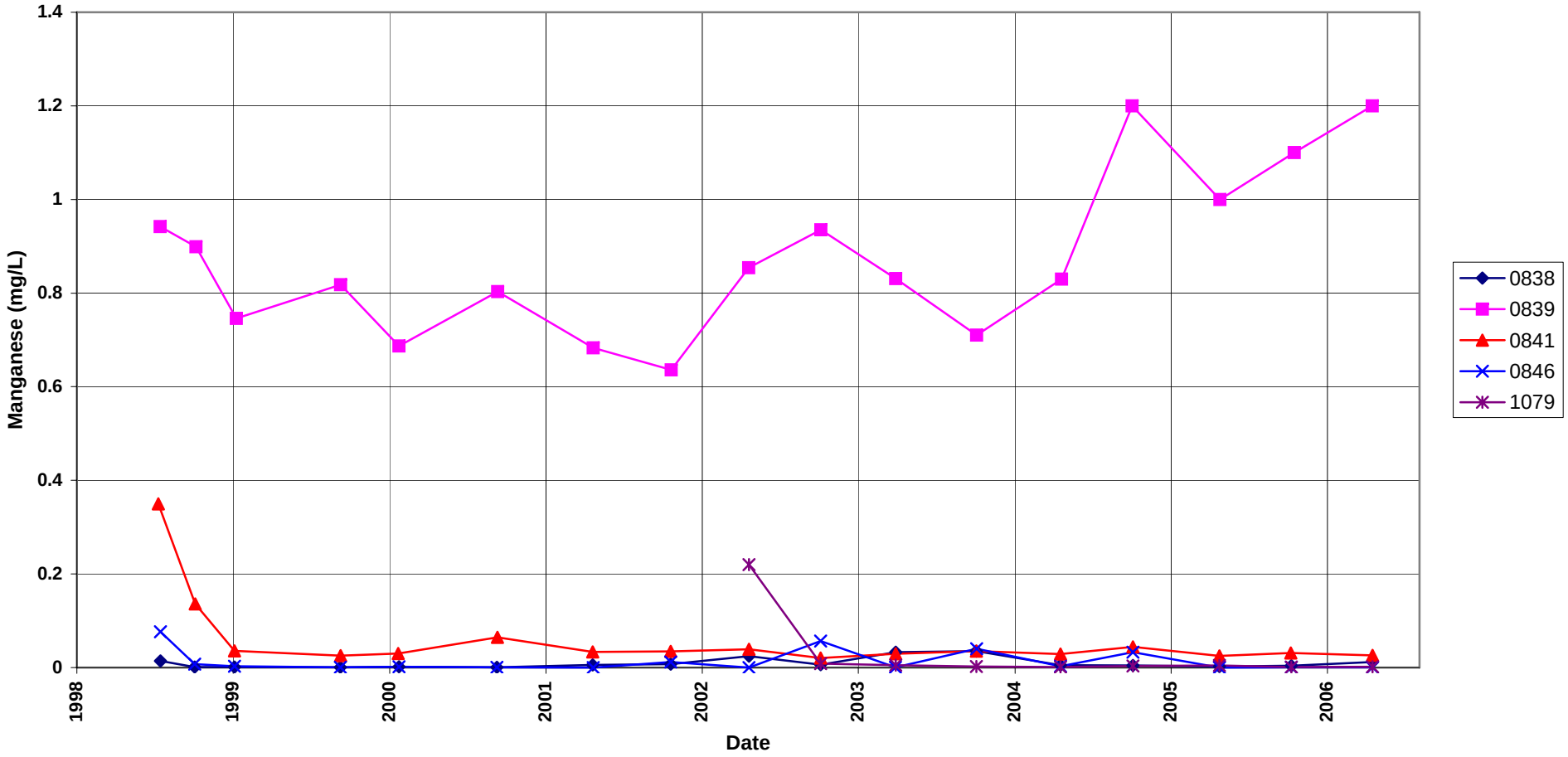



Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration
Ammonia Total as N (mg/L)
120
100
80
60
40
20
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Date
0838
0839
0841
0846
1079

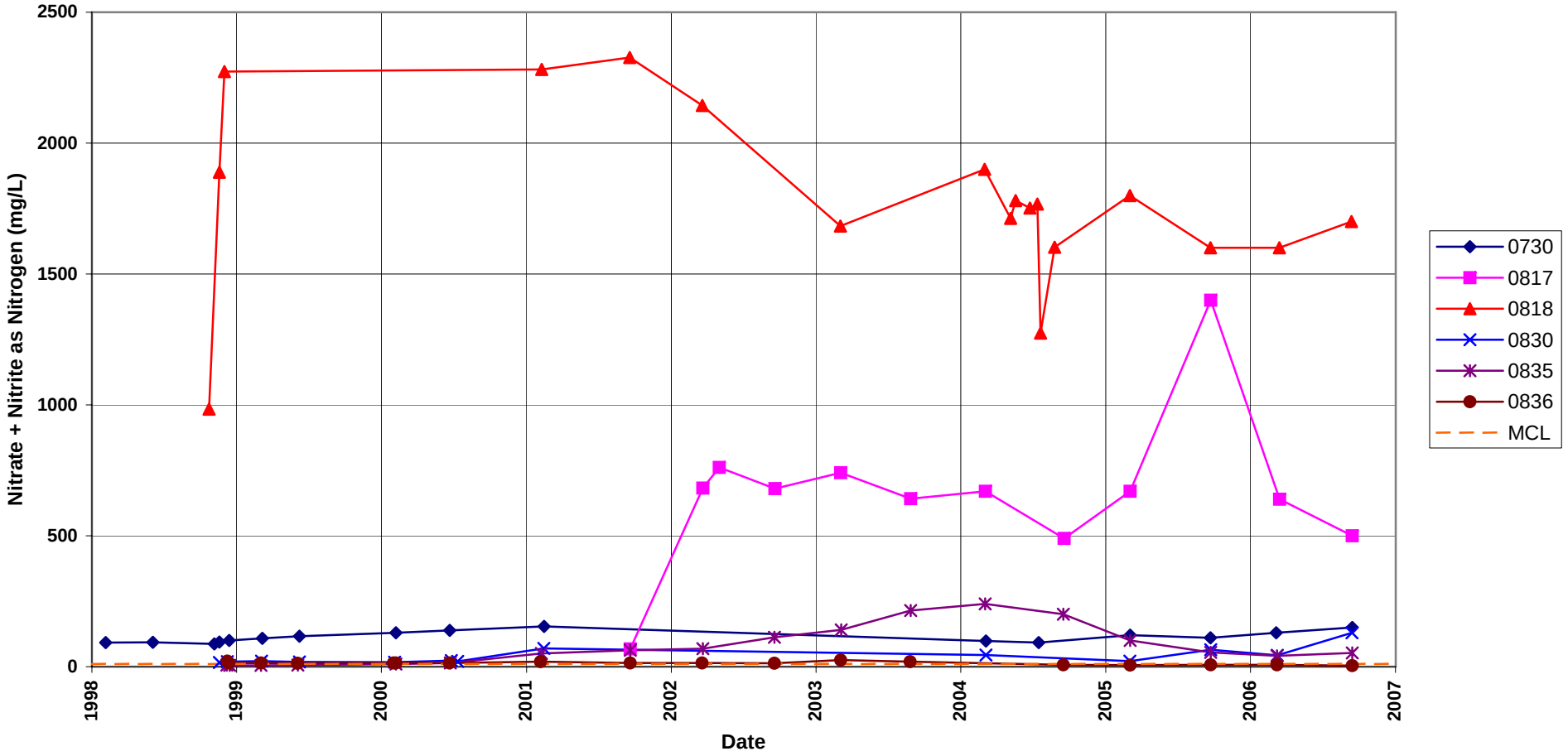
Shiprock Disposal Site (Terrace)
Manganese Concentration
ACL = 5.18 mg/L



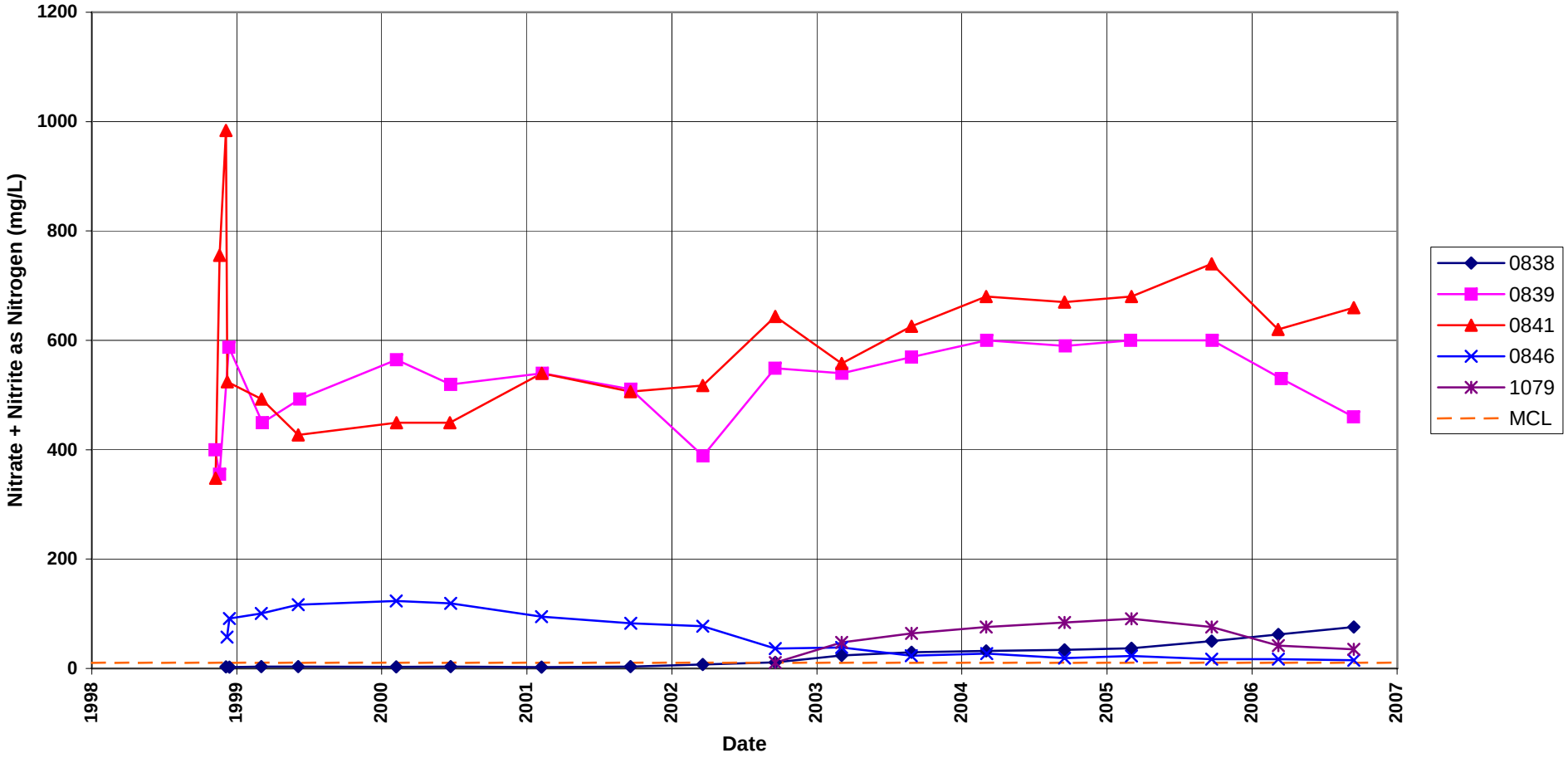
Shiprock Disposal Site (Terrace)
Manganese Concentration
ACL = 5.18 mg/L



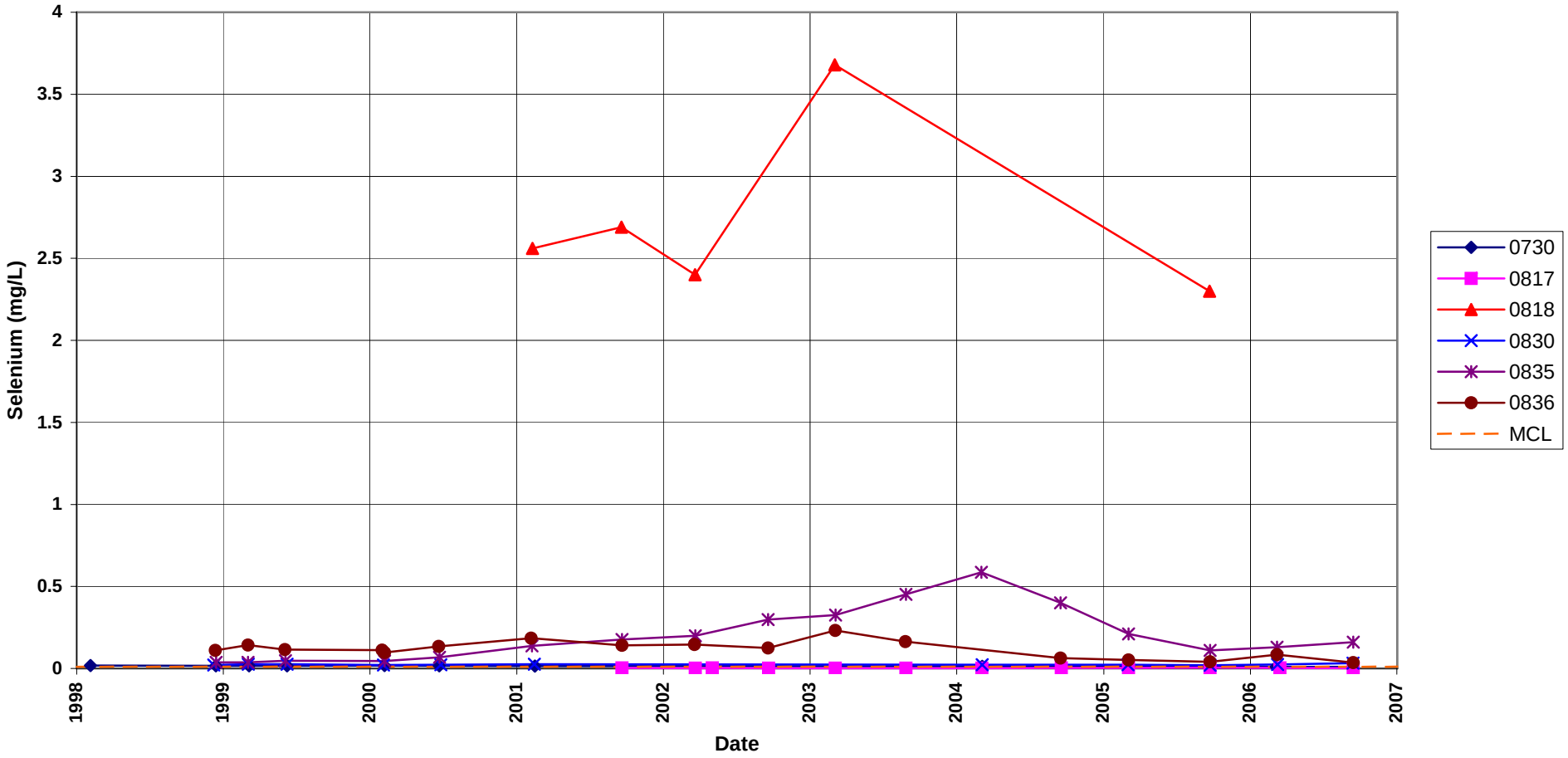
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



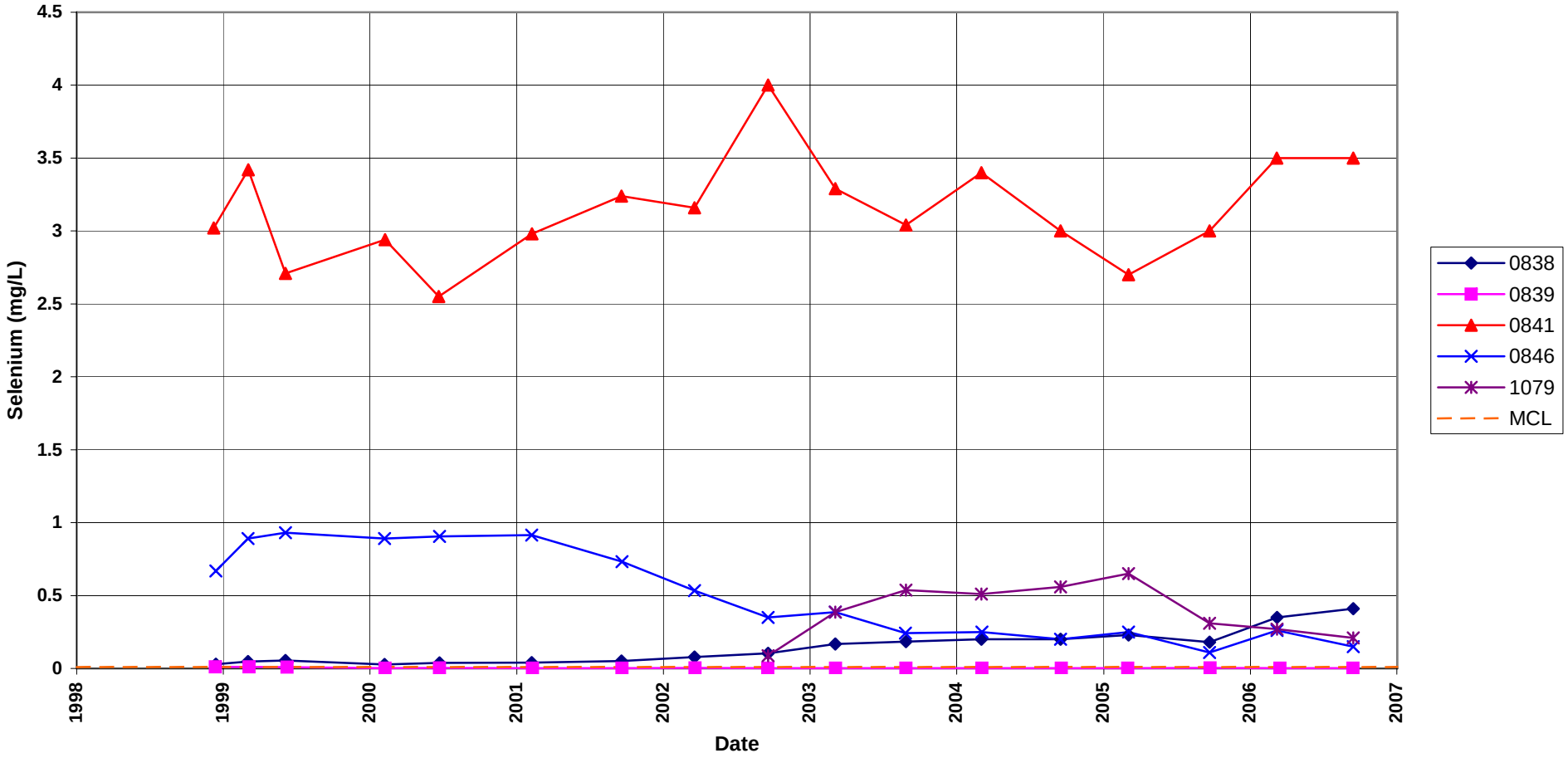
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
MCL = 10.0 mg/L



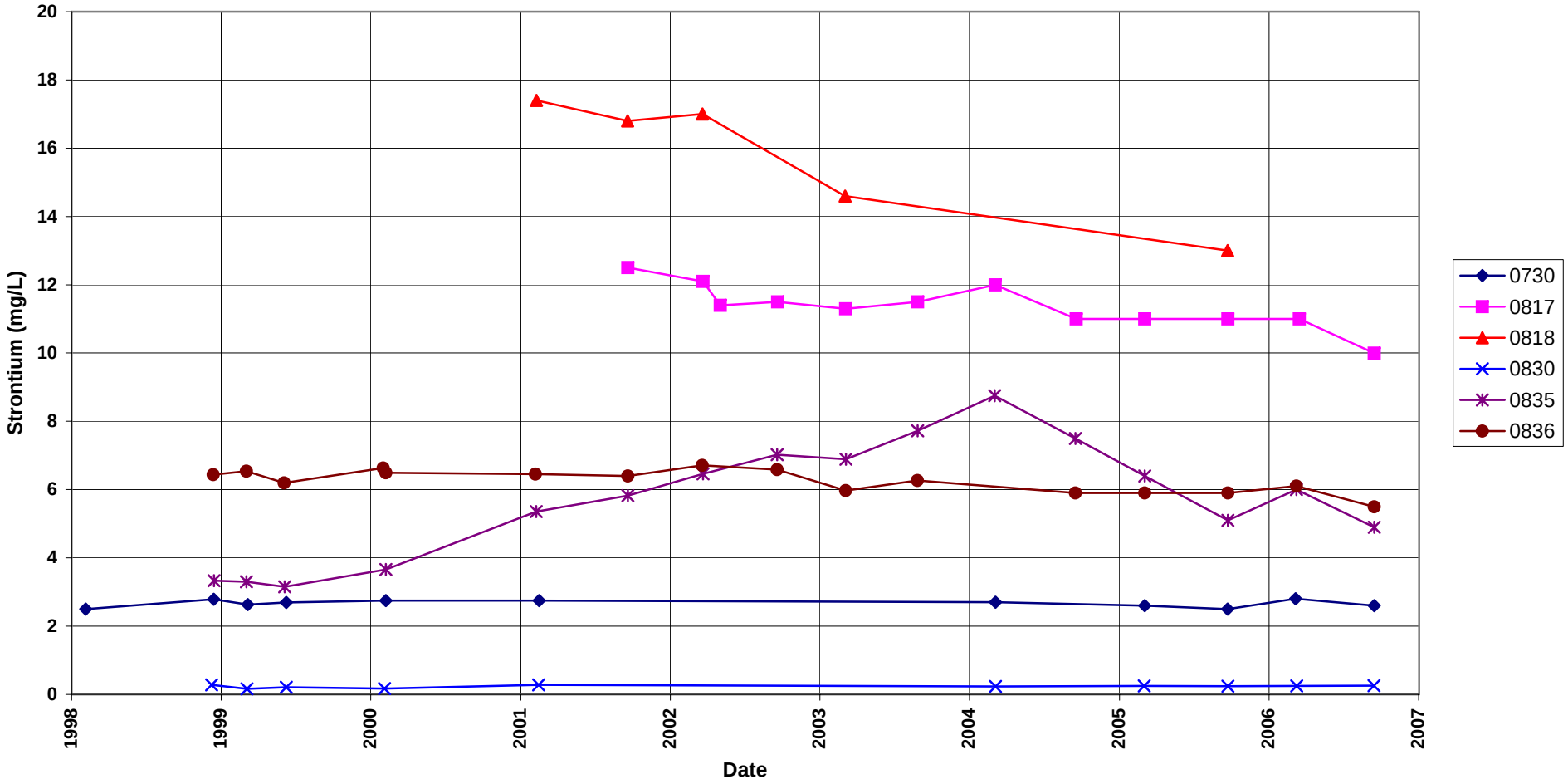
Shiprock Disposal Site (Terrace)
Selenium Concentration
MCL = 0.01 mg/L

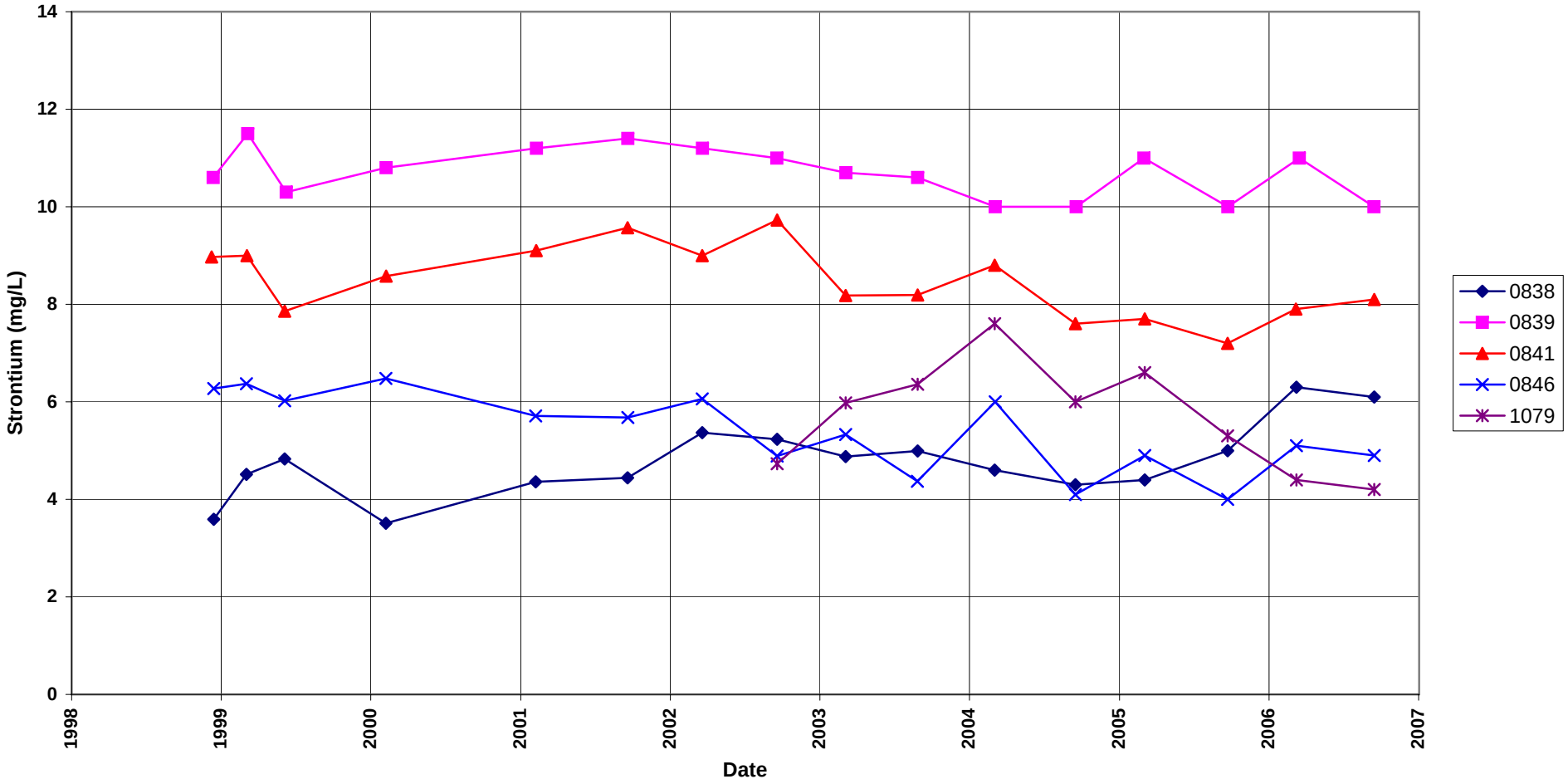


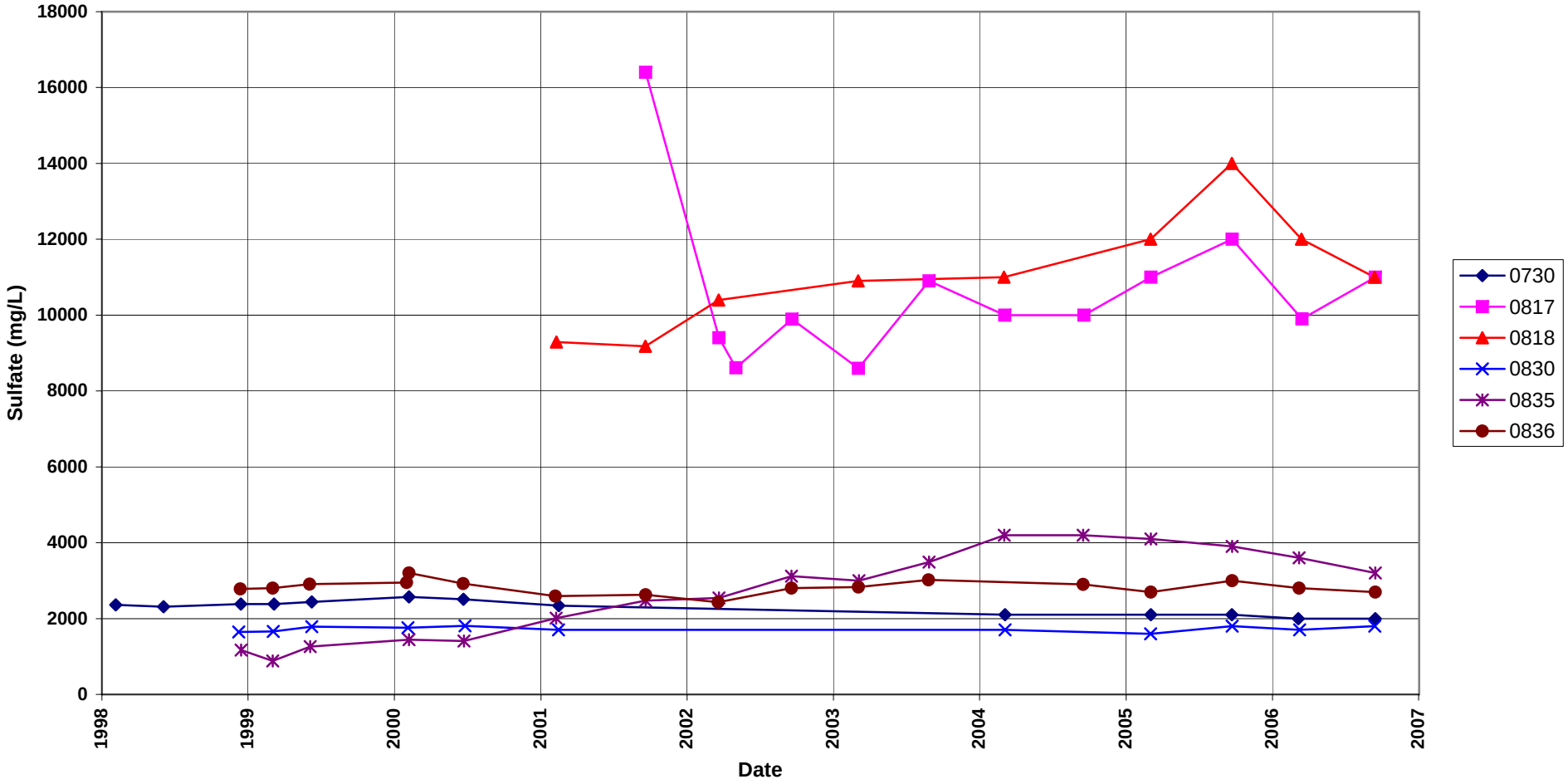
Shiprock Disposal Site (Terrace)
Selenium Concentration
MCL = 0.01 mg/L

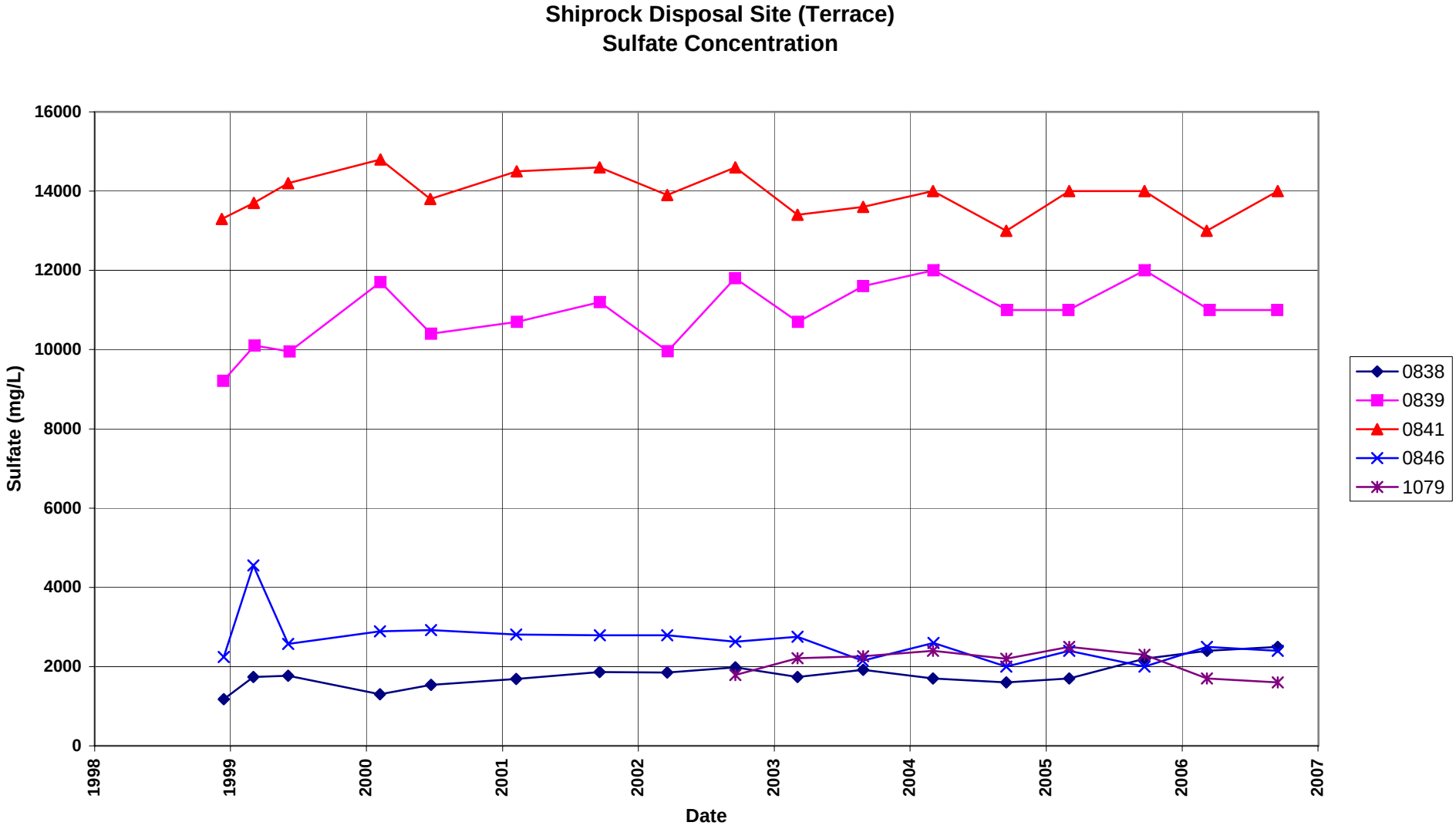


Shiprock Disposal Site (Terrace)
Strontium Concentration

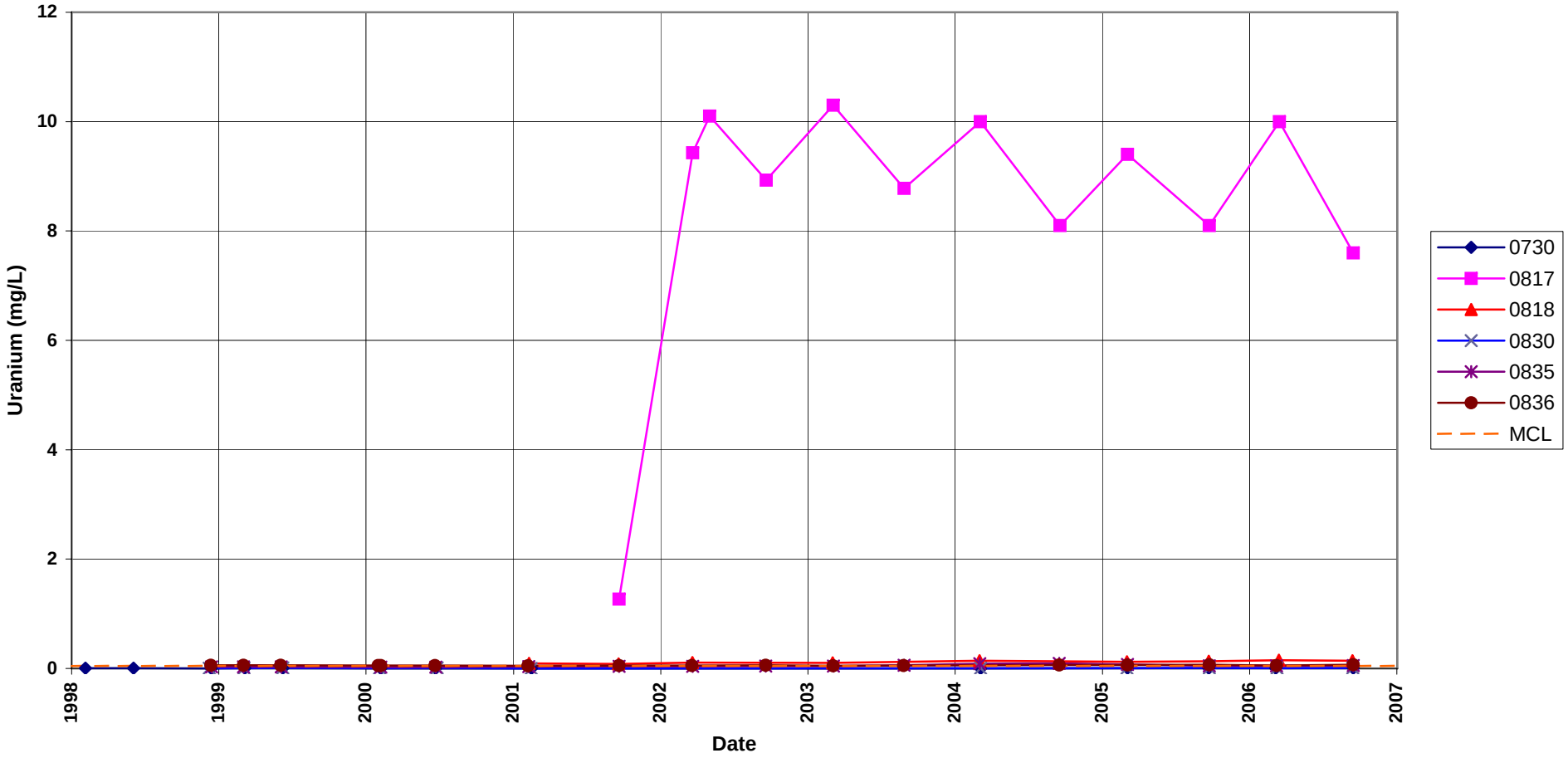



Shiprock Disposal Site (Terrace)
Strontium Concentration
Strontium (mg/L)
14
12
10
8
6
4
2
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Date
0838
0839
0841
0846
1079

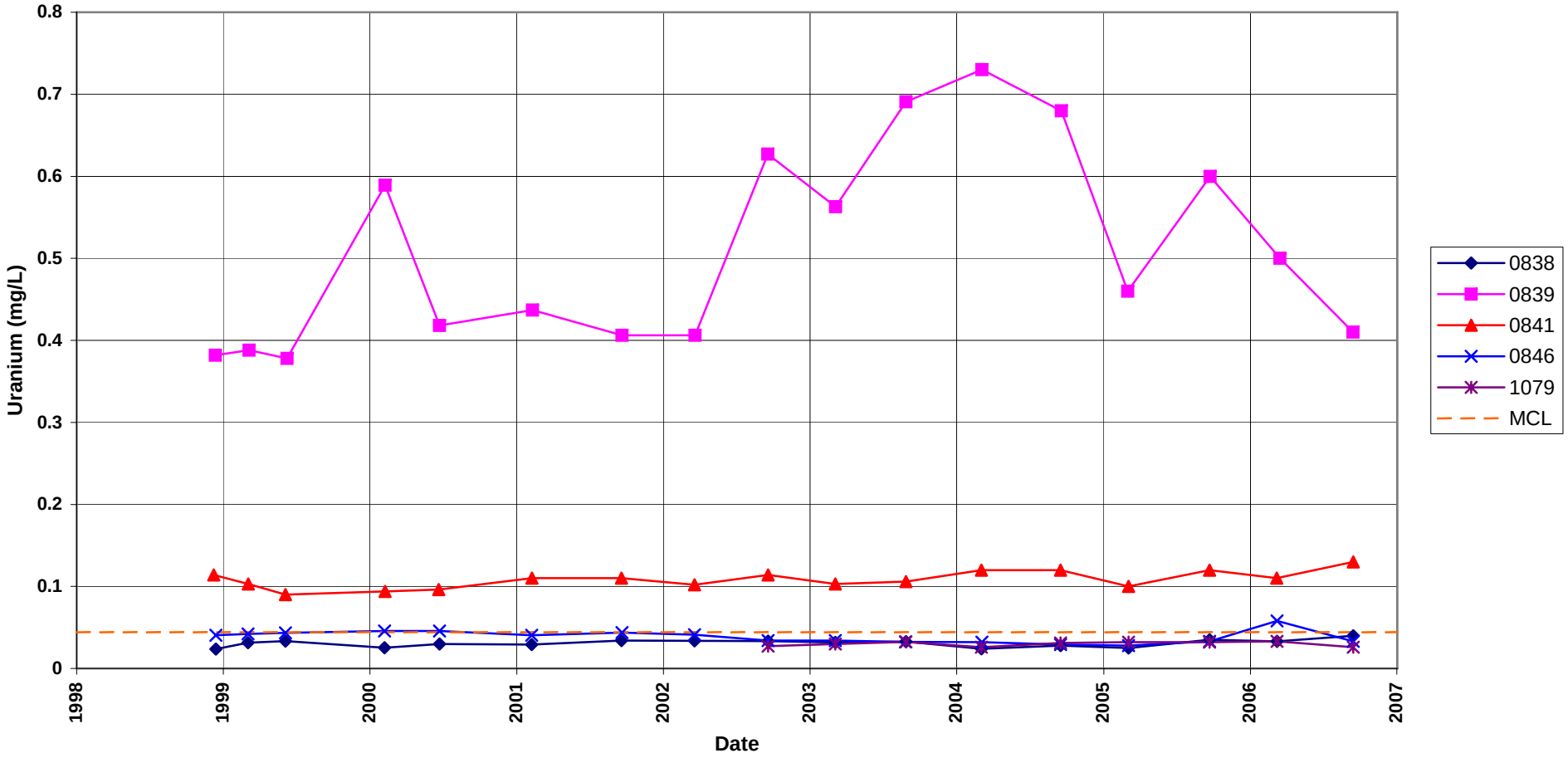

Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Date
0730
0817
0818
0830
0835
0836


Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
16000
14000
12000
10000
8000
6000
4000
2000
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Date
0838
0839
0841
0846
1079

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-T06-1640

August 8, 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
September 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 September 11, 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	839 Al	1057 Al	1071 Al	1087 Nr	1092 Nr
817 Km	835 Al	841 Al	1060 Al	1078 Al	1088 Nr	1093 Nr
818 Al	836 Al	846 Al	1070 Al	1079 Al	1091 Nr	1094 Nr
830 Km	838 Al					

*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						

SHP02

425	662	884	889	933	935	942
426	786	885	932	934	936	

Water levels will be collected from additional (non-sampled) wells as shown in the attachment. QA/QC samples will be collected as directed in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites*. 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 (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: October 12, 2006

TO: David E. Miller

FROM: Daniel L Sellers

SUBJECT: Trip Report

Site: Shiprock, New Mexico, Processing Site.

Dates of Sampling Event: September 11 to September 14, 2006.

Team Members: Sam Campbell, Dan Sellers, Emile Bettez and Jeremiah McLaughlin.

Number of Locations Sampled: Sixty-four locations were scheduled for sampling during this event. This included the following: 9 extraction wells, 25 monitor wells, 28 surface locations and two sumps. Five extraction wells (SHP01-1104, SHP01-1109, SHP01-1110, SHP02-1095, and SHP02-1096), and one seep vault were added to this event per the site lead's request. A total of 53 locations were sampled, which includes the following: 12 extraction wells, 22 monitor wells, 16 surface locations, 2 sumps and 1 seep vault (location not identified in data base).

Locations Not Sampled/Reason:

Extraction Well Locations

SHP01-1077 – Eliminated from the sampling event per site lead's direction (abandoned).
SHP02-1094 – Not sampled because of inoperative pump.

Monitor Wells Locations

SHP02-0832 – Water level below bottom of dedicated bladder pump.
SHP02-1057 – Eliminated from the sampling event per site lead's direction.
SHP02-1060 – Water level below bottom of dedicated bladder pump.

Surface Locations: The following ten surface locations were not sampled because of insufficient water:

SHP01-0655
SHP01-0887
SHP01-0938
SHP02-0786
SHP02-0884
SHP02-0885
SHP02-0932
SHP02-0933
SHP02-0934
SHP02-0935

Seep Locations

SHP02-0425 – Eliminated from the sampling event per site lead's direction.
SHP02-0426 – Eliminated from the sampling event per site lead's direction.

Location Specific Information: River was extremely muddy. River slough tributary was not flowing so many surface locations along this tributary were dry. Many seep and surface locations west of the flood plain area were dry.

Water levels were not collected at SHP02–0730 and SHP02–0839 because they were dry to the top of the pump.

The water in well SHP02–0730 was too acidic for an alkalinity measurement. Organic matter was found in the water from wells SHP01–0735 and SHP01–0736. There was a yellowish tint to the water in wells SHP02–0817 and SHP02–0839.

Surface locations 0937, 0939, and 0959 at SHP01 contained stagnant, isolated water. Location SHP02–0942 seep was collected at base of hill downgradient of stake ~50 yards.

Monitor well SHP02-1077 has been abandoned.

Field Variance: Partial sample collected at SHP01-0734 (TOC sample only); the well dewatered and there was no recharge (alkalinity was not measured). Monitor well SHP02-0839 is a Cat III well. Parameters were taken after samples were collected.

A water level was not collected at SHP01-0736 because the probe was at the top of the data logger.

A sample was collected from a vault that is referred to as the "Seep Vault." The water is considered seep water that is collected in a concrete vault and represents water from two seep locations (SHP01-0425 and SHP-0426).

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

False ID	True ID	Sample Type	Ticket Number
2604	0618	Duplicate	NFA 592
2605	NA	Equipment Blank	NFJ 443
2606	Seep Vault	Duplicate	NFJ 583
2608	0846	Duplicate	NFJ 447
2609	0841	Duplicate	NFJ 449

Requisition Numbers Assigned: All samples were assigned to report identification number (RIN) 06080459.

Water Level Measurements: Water levels were measured at all sampled monitor wells and 34 additional monitor wells. Data loggers were downloaded at 20 locations. Location

SHP01–0899 has a data logger in it but was not downloaded because it is the stilling well at the river and there is no water level reference.

Well Inspection Summary: With the exception of bolts missing at well SHP02–0839, all wells were in good condition.

Equipment: Data logger in SHP02–0827 was not downloaded because connection was lost and could not connect again. This data logger will be downloaded next time using external power.

Regulatory: None.

Institutional Controls

Fences, Gates, Locks: Fence to Many Devils Wash needs to be fixed.

Signs: None.

Trespassing/Site Disturbances: None.

Site Issues:

Disposal Cell/Drainage Structure Integrity: Not applicable.

Vegetation/Noxious Weed Concerns: Not applicable.

Maintenance Requirements: Fence to Many Devils Wash needs to be fixed.

Access Issues: None.

Corrective Action Required/Taken: The sampling map needs to be updated to include SHP01-1104, SHP01-1109, SHP01-1110, SHP02-1087, SHP02-1088 and the "Seep Vault" locations. Additionally, the map should show the location of all the data loggers and eliminate surface locations that are not normally sampled.

The database needs to be updated to include the "Seep Vault" including a location code. Update the database to show that SHP01-1077 has been abandoned.

Need to survey the stilling well (SHP01-0899) and reinstall the data logger. May need to replace data logger at location SHP02-0827.

Well SHP01–0797 needs redevelopment; there are roots in the well.

A path needs to be cleared to surface location SHP01–1203. The pressure gauge on SHP02–1071 extraction well has a cracked face and water is squirting out of it.

(DLS/lcg)

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