Data Validation Package

March 2009
Groundwater and Surface Water Sampling at the Shiprock, New Mexico, Disposal Site

June 2009

U.S. DEPARTMENT OF ENERGY | Legacy Management

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Contents

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Sampling Event Summary

Site: Shiprock, New Mexico, Disposal Site

Sampling Period: March 9-12, 2009

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

The contaminants of concern for the Shiprock Disposal Site are ammonia (as nitrogen), manganese, nitrate + nitrite (as nitrogen), selenium, strontium, sulfate, and uranium. Wells with contaminant concentrations that exceeded groundwater standards are listed in Table 1. Time-concentration graphs for the contaminants of concern are included in this report.

Table 1. Shiprock Locations that Exceed Standards

Analyte	Standard [a]	Site Code	Location	Concentration
Nitrate + Nitrite as Nitrogen	10	SHP01	0608	120
			0614	390
			0615	37
			0618	330
			0735	790
			0773	26
			0779	34
			1089	18
			1104	95
			1105	380
			1111	14
			1112	540
			1112	560
			1113	380
			1114	27
			1115	48
			1115	47
			1116	600
			1133	480
Selenium	0.01	SHP01	0614	0.31
			0615	0.23
			0618	0.16
			0734	0.016
			0735	0.022
			0773	0.032
			0855	0.02
			1089	0.019
			1104	0.037
			1105	0.069
			1111	0.51

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard [a]	Site Code	Location	Concentration
			1112	0.33
			1112	0.49
			1115	0.015
			1115	0.018
			1116	0.019
			1133	0.025
Uranium	0.044	SHP01	0608	0.69
			0612	0.18
			0614	1.8
			0615	0.83
			0618	2.4
			0619	0.14
			0619	0.17
			0625	0.054
			0628	0.08
			0734	0.12
			0735	0.44
			0736	0.081
			0768	0.66
			0773	0.68
			0775	0.65
			0779	1.1
			0792	0.92
			0850	0.064
			0853	0.051
			0855	0.07
			0856	0.079
			1089	0.79
			1104	1.8
			1105	1.6
			1111	0.91
			1112	1.7
			1112	1.7
			1113	1.1
			1114	0.52
			1115	0.32
			1115	0.31
			1116	1.6
			1133	0.92
Nitrate + Nitrite as Nitrogen	10	SHP02	0603	2000
			0727	150
			0728	200
			0731	140
			0812	1500
			0813	2600
			0813	2600
			0815	750
			0815	680
			0816	40
			0817	300
			0818	950
			0819	42
			0826	49
			0827	29
			0828	48
			0830	93
			0833	470
			0835	79
			0836	14
			0838	110
			0841	690
			0843	25
			0844	750

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard [a]	Site Code	Location	Concentration
			0846	56
			1059	380
			1070	970
			1071	2300
			1073	1500
			1074	1400
			1078	680
			1078	700
			1079	55
			1091	2100
			1092	2700
			1093R	2900
			1095	1700
			1096	640
			DM7	240
Selenium	0.01	SHP02	0603	0.087
			0731	0.02
			0812	5.5
			0813	0.038
			0813	0.048
			0815	0.06
			0815	0.061
			0816	0.027
			0818	2.2
			0819	0.019
			0827	0.064
			0828	0.069
			0830	0.03
			0833	0.36
			0835	0.28
			0836	0.12
			0837	0.14
			0838	0.46
			0841	3.2
			0843	0.22
			0844	1.8
			0846	0.37
			0848	0.041
			1059	0.016
			1070	2.5
			1071	0.18
			1073	2
			1074	0.25
			1078	2.9
			1078	3.2
			1079	0.26
			1091	0.76
			1092	0.52
			1093R	0.51
			1095	0.25
			1096	2.9
			1120	0.049
			1122	0.074
			DM7	0.013
Uranium	0.044	SHP02	0725	0.062
			0727	0.27
			0728	0.27
			0812	0.14
			0813	0.14
			0813	0.12
			0815	0.33
			0815	0.38

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard[a]	Site Code	Location	Concentration
			0817	3.8
			0818	0.14
			0819	1.2
			0826	3.8
			0827	0.68
			0828	0.21
			0833	0.25
			0835	0.083
			0838	0.045
			0841	0.14
			0844	0.16
			1059	0.074
			1070	0.1
			1071	0.14
			1073	0.069
			1074	1.9
			1078	0.14
			1078	0.13
			1091	0.092
			1092	0.11
			1093R	0.11
			1095	0.059
			1096	0.11
			1120	0.05
			1122	0.048
			DM7	0.047

[a] Standards are listed in 40 CFR 192.02 Table 1 to Subpart A; units are in milligrams per liter (mg/L).

Floodplain surface water analyte concentrations were compared to statistical benchmark values derived using data from location 0898, which is upstream of the site on the San Juan River. As shown in Table 2, benchmark values were not exceeded for the river locations adjacent to or downstream from the site.

Table 2. Floodplain River Locations

Location	Ammonia as N	Manganese	Nitrate+Nitrite as N	Selenium	Strontium	Sulfate	Uranium
Benchmark	0.1	0.0396	1.1	0.0019	1.2	220	0.056
0501	ND[a]	0.0089	0.47	0.0014	0.84	150	0.0017
0897	ND	0.0089	0.52	0.0014	0.83	150	0.0017
0940	ND	0.016	0.36	0.0010	0.81	150	0.0017
0956	ND	0.021	0.45	0.0011	0.85	150	0.0017
0965	ND	0.016	0.49	0.0011	0.86	160	0.0018
1203	ND	0.013	0.43	0.0010	0.83	150	0.0017
1205	ND	0.012	0.39	0.0011	0.82	150	0.0017

[a]ND = Not Detected.

David Miller
Site Lead, S.M. Stoller

10/21/09
Date

Shiprock, New Mexico, Disposal Site Sample Monitoring Locations

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Data Assessment Summary

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Water Sampling Field Activities Verification Checklist

Project	Shiprock, New Mexico	**Date(s) of Water Sampling**	March 9-12, 2009
Date(s) of Verification	May 29, 2009	**Name of Verifier**	Steve Donivan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures?	Yes	
List other documents, SOPs, instructions.		Work Order Letter dated February 5, 2009.
2. Were the sampling locations specified in the planning documents sampled?	No	Nine surface water locations (0786, 0884, 0887, 0933, 0934, 0936, 0937, 0938, and 0942) and four wells (0730, 0816, 0832, and 1060) were dry. Due to insufficient water in well 1120, only a metals sample was collected.
3. Was a pre-trip calibration conducted as specified in the above-named documents?	Yes	Pre-trip calibration was performed on March 5, 2009.
4. Was an operational check of the field equipment conducted daily?	Yes	
Did the operational checks meet criteria?	Yes	
5. Were the number and types (alkalinity, temperature, specific conductance, pH, turbidity, DO, ORP) of field measurements taken as specified?	No	Dissolved oxygen was not measured.
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	Turbidity criteria was not met for well 0850, the sample was filtered.
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	Six duplicate samples were collected.
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	Yes	
11. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
12. Were QC samples assigned a fictitious site identification number?	Yes	
Was the true identity of the samples recorded on the Quality Assurance Sample Log or in the Field Data Collection System (FDCS) report?	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 (hardcopies) or are dates present for the “Date Signed” fields (FDCS)?	Yes	
18. Was all other pertinent information documented on the field data sheets?	Yes	
19. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
20. Were water levels measured at the locations specified in the planning documents?	Yes	

Laboratory Performance Assessment

General Information

Report Number (RIN):	09032136
Sample Event:	March 9-12, 2009
Site(s):	Shiprock, New Mexico
Laboratory:	ALS Paragon, Fort Collins, Colorado
Work Order No.:	0903111
Analysis:	Metals and Wet Chemistry
Validator:	Steve Donivan
Review Date:	April 28, 2009

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

Table 3. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Ammonia as N	WCH-A-005	EPA 350.1	EPA 350.1
Calcium, Magnesium, Manganese, Potassium, Sodium, Strontium	LMM-01	SW-846 3005A	SW-846 6010B
Chloride	MIS-A-039	SW-846 9056	SW-846 9056
Nitrate + Nitrite as N	WCH-A-022	EPA 353.2	EPA 353.2
Selenium, Uranium	LMM-02	SW-846 3005A	SW-846 6020A
Sulfate	MIS-A-044	SW-846 9056	SW-846 9056
Total Dissolved Solids (TDS)	WCH-A-033	EPA 160.2	EPA 160.2

Data Qualifier Summary

Analytical results were qualified as listed in Table 4. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 4. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0903111-1	0501	Potassium	J	Matrix spike failure
0903111-1	0501	Sodium	J	Matrix spike and serial dilution failure
0903111-15	0736	Selenium	U	Less than 5 times the method blank
0903111-17	0773	Manganese	U	Less than 5 times the calibration blank
0903111-21	0797	Ammonia	J	Matrix spike failure
0903111-23	0853	Potassium	J	Matrix spike and serial dilution failure

Table 4 (continued). Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0903111-23	0853	Selenium	U	Less than 5 times the method blank
0903111-23	0853	Sodium	J	Serial dilution failure
0903111-26	0897	Calcium	J	Serial dilution failure
0903111-26	0897	Magnesium	J	Matrix spike failure
0903111-26	0897	Potassium	J	Matrix spike failure
0903111-26	0897	Sodium	J	Matrix spike and serial dilution failure
0903111-39	1112	Selenium	J	Duplicate relative percent difference greater than 20%
0903111-44	1117	Sodium	J	Serial dilution failure
0903111-48	1134	Selenium	U	Less than 5 times the calibration blank
0903111-53	Equipment Blank	Selenium	U	Less than 5 times the method blank
0903111-53	Equipment Blank	Sodium	U	Less than 5 times the method blank
0903111-53	Equipment Blank	Uranium	U	Less than 5 times the method blank
0903111-60	0648	Selenium	U	Less than 5 times the method blank
0903111-60	0648	Uranium	U	Less than 5 times the method blank
0903111-61	0662	Selenium	U	Less than 5 times the calibration blank
0903111-61	0662	Uranium	U	Less than 5 times the method blank
0903111-67	0782R	Selenium	U	Less than 5 times the method blank
0903111-67	0782R	Sodium	J	Serial dilution failure
0903111-70	0813	Selenium	J	Duplicate relative percent difference greater than 20%
0903111-72	0816	Manganese	J	Negative calibration blank
0903111-78	0828	Manganese	J	Negative calibration blank
0903111-81	0835	Ammonia	J	Matrix spike failure
0903111-81	0835	Manganese	J	Negative calibration blank
0903111-86	0843	Sodium	J	Serial dilution failure
0903111-88	0846	Manganese	J	Negative calibration blank
0903111-90	0889	Manganese	U	Less than 5 times the calibration blank
0903111-98	1079	Manganese	U	Less than 5 times the calibration blank
0903111-97	1078	Manganese	J	Duplicate relative percent difference greater than 20%
0903111-97	1078	Sodium	J	Duplicate relative percent difference greater than 20%
0903111-100	1088	Manganese	U	Less than 5 times the calibration blank

Sample Shipping/Receiving

ALS Paragon in Fort Collins, Colorado, received 108 water samples on March 13, 2009, 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 that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents including the COC forms had no errors or omissions with the following exception. Sample 0816 was incorrectly crossed off on the COC form as not sampled, but was received and analyzed. The receiving documentation included copies for the shipping labels listing the air waybill numbers.

Preservation and Holding Times

The sample shipments were received intact with the temperatures inside the iced cooler between

0.2 °C and 1.8 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses with the following exceptions. The acidified aliquots for samples 0625, 0848, and 1104 were received with a pH greater than two because of the buffering capacity of the samples. Prior to analysis, the laboratory acidified and equilibrated these aliquots to a pH less than two as required. All samples were analyzed within the required holding time.

Laboratory Instrument Calibration

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

Method MCAWW 160.1

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

Method MCAWW 350.1

Calibration was performed for ammonia as N on March 19, 2009, using six calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the method detection limit (MDL). Initial and continuing calibration verification checks were made at the required frequency resulting in 17 verification checks. All calibration checks met the acceptance criteria.

Method MCAWW 353.2

Calibration was performed for nitrate + nitrite as N on March 23, 2009, using seven calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency resulting in 17 verification checks. All calibration checks met the acceptance criteria.

Method SW-846 6010B

Five calibrations for calcium, magnesium, manganese, potassium, sodium, and strontium were performed between March 25 and March 31, 2009, using single point calibrations. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 48 verification checks. All calibration checks met the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit (PQL) and all results were within the acceptance range.

Method SW-846 6020A

Calibrations were performed for selenium between March 27 and March 31, 2009; and for uranium between March 24 and March 30, 2009, using seven calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 28 verification checks for selenium and 31 checks for uranium. All calibration checks met the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the PQL and all results were within the acceptance range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries associated with requested analytes were stable and within acceptable ranges.

Method SW-846 9056

Calibrations were performed for chloride and sulfate on March 13 and March 18, 2009, using five calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 20 verification checks. All calibration checks met the acceptance criteria.

Method and Calibration Blanks

Method blanks (MB) 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 MB and initial and continuing calibration blank (CCB) results associated with the samples were below the PQL with the exception of nitrate CCB 4. The samples associated with this CCB were reanalyzed with an acceptable CCB. In cases where a blank concentration exceeds the MDL, the associated sample results are qualified with a “U” flag (not detected) when the sample result is greater than the MDL but less than 5 times the blank concentration.

Many magnesium, manganese, and strontium calibration blanks were negative and the absolute values were greater than the MDL but less than the PQL. Associated sample results that are less than 5 times the MDL are qualified with a “J” flag as estimated values.

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 data are not evaluated when the concentration of the unspiked sample is greater than 4 times the spike concentration. The spike recoveries met the recovery criteria for all analytes evaluated with the following exceptions.

The ammonia as N, calcium, magnesium, potassium, and sodium MS/MSD recoveries did not meet the acceptance criteria for one or more samples. The associated sample results for these analytes are qualified with a "J" flag as estimated values.

Laboratory Replicate Analysis

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

Laboratory Control Samples (LCSs)

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

Metals Serial Dilution

Serial dilutions were prepared and analyzed for the metals analyses to monitor chemical or physical interferences in the sample matrix. Serial dilution data are evaluated when the concentration of the undiluted sample is greater than 100 times the PQL for ICP-MS or greater than 50 times the PQL for ICP. All evaluated serial dilution data were acceptable with the following exceptions.

The potassium and sodium serial dilution results did not meet the acceptance criteria for one or more samples. The associated sample results for these analytes are qualified with a "J" flag as estimated values.

Detection Limits/Dilutions

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

Completeness

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

Chromatography Peak Integration

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

Electronic Data Deliverable (EDD) File

The EDD file arrived on April 1, 2009. The Sample Management System EDD validation module was used to verify that the EDD files were complete and in compliance with requirements. The module compares the contents of the files to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Report

RIN: 09032136 **Lab Code:** PAR **Validator:** Steve Donivan **Validation Date:** 4/28/2009

Project: Shiprock **Analysis Type:** ☑ Metals ☑ General Chem ☐ Rad ☐ Organics

# of Samples: 108 **Matrix:** WATER **Requested Analysis Completed:** Yes

Chain of Custody

Present: OK **Signed:** OK **Dated:** OK

Sample

Integrity: OK **Preservation:** OK **Temperature:** OK

Select Quality Parameters

☑ Holding Times	All analyses were completed within the applicable holding times.
☑ Detection Limits	There are 0 detection limit failures.
☑ Field/Trip Blanks	There was 1 trip/equipment blank evaluated.
☑ Field Duplicates	There were 6 duplicates evaluated.

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 09032136 **Lab Code:** PAR **Date Due:** 4/10/2009

Matrix: Water **Site Code:** SHP **Date Completed:** 4/2/2009

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
CALCIUM	03/25/2009			OK	OK	OK	OK	OK		131.0	124.0	2.0	106.0	10.0	104.0
CALCIUM	03/25/2009									106.0	110.0	1.0	105.0	6.0	101.0
CALCIUM	03/26/2009			OK	OK	OK	OK	OK	101.0	103.0	100.0	1.0	108.0	2.0	110.0
CALCIUM	03/27/2009			OK	OK	OK	OK	OK	96.0	106.0	111.0	1.0	99.0	2.0	101.0
CALCIUM	03/30/2009			OK	OK	OK	OK	OK	103.0	61.0	104.0	4.0	104.0	1.0	104.0
CALCIUM	03/31/2009			OK	OK	OK	OK	OK	97.0	100.0	99.0	0.0	104.0	5.0	106.0
MAGNESIUM	03/25/2009			OK	OK	OK	OK	OK		129.0	125.0	3.0	107.0	8.0	104.0
MAGNESIUM	03/25/2009									114.0	118.0	2.0	105.0	4.0	102.0
MAGNESIUM	03/26/2009			OK	OK	OK	OK	OK	99.0	98.0	98.0	0.0	105.0	0.0	105.0
MAGNESIUM	03/27/2009			OK	OK	OK	OK	OK	96.0	101.0	103.0	1.0	97.0	0.0	99.0
MAGNESIUM	03/30/2009			OK	OK	OK	OK	OK	104.0	87.0	100.0	3.0	104.0	0.0	104.0
MAGNESIUM	03/31/2009			OK	OK	OK	OK	OK	102.0	102.0	102.0	0.0	104.0	8.0	106.0
MANGANESE	03/25/2009			OK	OK	OK	OK	OK		104.0	109.0	5.0	94.0	2.0	103.0
MANGANESE	03/25/2009									103.0	101.0	2.0	93.0	2.0	100.0
MANGANESE	03/26/2009			OK	OK	OK	OK	OK	95.0	91.0	91.0	0.0	93.0	4.0	108.0
MANGANESE	03/27/2009			OK	OK	OK	OK	OK	95.0	76.0	82.0	1.0	89.0	7.0	100.0
MANGANESE	03/30/2009			OK	OK	OK	OK	OK	102.0	68.0	87.0	3.0	94.0		106.0
MANGANESE	03/31/2009			OK	OK	OK	OK	OK	95.0	93.0	93.0	0.0	91.0		101.0

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 09032136 **Lab Code:** PAR **Date Due:** 4/10/2009

Matrix: Water **Site Code:** SHP **Date Completed:** 4/2/2009

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
POTASSIUM	03/25/2009			OK	OK	OK	OK	OK		143.0	139.0	3.0			87.0
POTASSIUM	03/25/2009									132.0	135.0	2.0			86.0
POTASSIUM	03/26/2009			OK	OK	OK	OK	OK	98.0	110.0	110.0	0.0		15.0	90.0
POTASSIUM	03/27/2009			OK	OK	OK	OK	OK	98.0	112.0	112.0	0.0			86.0
POTASSIUM	03/30/2009			OK	OK	OK	OK	OK	99.0	112.0	113.0	0.0			88.0
POTASSIUM	03/31/2009			OK	OK	OK	OK	OK	94.0	100.0	100.0	0.0			87.0
SELENIUM	03/27/2009	0.0000	1.0000	OK	OK	OK	OK	OK	87.0	88.0	84.0	4.0			82.0
SELENIUM	03/27/2009							OK	88.0	97.0	97.0	0.0	101.0		
SELENIUM	03/27/2009							OK	87.0	100.0	104.0	3.0			
SELENIUM	03/31/2009	0.0000	1.0000	OK	OK	OK	OK	OK	94.0	85.0	78.0	7.0	98.0	7.0	75.0
SELENIUM	03/31/2009							OK	88.0	87.0	84.0	3.0	115.0		
SELENIUM	03/31/2009							OK	94.0						
SODIUM	03/25/2009			OK	OK	OK	OK	OK		137.0	131.0	2.0		18.0	88.0
SODIUM	03/25/2009									125.0	127.0	1.0		17.0	88.0
SODIUM	03/26/2009			OK	OK	OK	OK	OK	99.0	108.0	107.0	0.0		11.0	90.0
SODIUM	03/27/2009			OK	OK	OK	OK	OK	98.0	109.0	109.0	0.0		11.0	85.0
SODIUM	03/30/2009			OK	OK	OK	OK	OK	100.0	97.0	102.0	1.0		9.0	89.0
SODIUM	03/31/2009			OK	OK	OK	OK	OK	97.0	104.0	104.0	0.0		11.0	87.0

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 09032136 **Lab Code:** PAR **Date Due:** 4/10/2009

Matrix: Water **Site Code:** SHP **Date Completed:** 4/2/2009

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
STRONTIUM	03/25/2009			OK	OK	OK	OK	OK		96.0	100.0	2.0	97.0	3.0	105.0
STRONTIUM	03/25/2009									91.0	88.0	1.0	96.0	2.0	105.0
STRONTIUM	03/26/2009			OK	OK	OK	OK	OK	96.0	90.0	91.0	0.0	96.0	3.0	102.0
STRONTIUM	03/27/2009			OK	OK	OK	OK	OK	97.0	102.0	103.0	0.0	91.0	1.0	98.0
STRONTIUM	03/30/2009			OK	OK	OK	OK	OK	103.0	88.0	99.0	1.0	96.0	2.0	101.0
STRONTIUM	03/31/2009			OK	OK	OK	OK	OK	99.0	94.0	95.0	0.0	94.0	8.0	103.0
URANIUM	03/24/2009	0.0000	1.0000	OK	OK	OK	OK	OK		108.0	108.0	0.0	103.0		91.0
URANIUM	03/24/2009									108.0	108.0	0.0		1.0	
URANIUM	03/26/2009	0.0000	1.0000	OK	OK	OK	OK	OK	102.0	105.0	107.0	1.0	106.0	1.0	88.0
URANIUM	03/26/2009							OK	111.0	115.0	109.0	2.0		1.0	
URANIUM	03/30/2009	0.0000	1.0000	OK	OK	OK	OK	OK	106.0	108.0	109.0	1.0	107.0	2.0	89.0
URANIUM	03/30/2009							OK	110.0	98.0	109.0	4.0		6.0	

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 09032136 **Lab Code:** PAR **Date Due:** 4/10/2009

Matrix: Water **Site Code:** SHP **Date Completed:** 4/2/2009

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
AMMONIA AS N	03/19/2009	0.000	0.9999	OK	OK	OK	OK	OK	98.00	75.0	70.0	6.00	
AMMONIA AS N	03/19/2009							OK	99.00	74.0	74.0	1.00	
AMMONIA AS N	03/19/2009							OK	100.00	99.0	97.0	2.00	
AMMONIA AS N	03/19/2009							OK	99.00	101.0	102.0	0	
AMMONIA AS N	03/19/2009							OK	101.00	100.0	96.0	5.00	
AMMONIA AS N	03/19/2009							OK	101.00				
CHLORIDE	03/17/2009	0.000	0.9999	OK	OK	OK	OK	OK	96.00	101.0	104.0	2.00	
CHLORIDE	03/17/2009							OK	98.00	100.0	103.0	1.00	
CHLORIDE	03/17/2009							OK	99.00	100.0	95.0	4.00	
CHLORIDE	03/17/2009									101.0			
CHLORIDE	03/18/2009	0.000	1.0000	OK	OK	OK	OK	OK	97.00	101.0	99.0	3.00	
CHLORIDE	03/18/2009							OK	95.00	104.0	98.0	3.00	
CHLORIDE	03/18/2009									102.0			
CHLORIDE	03/18/2009									95.0			
CHLORIDE	03/19/2009				OK		OK	OK	100.00	101.0	100.0	1.00	
CHLORIDE	03/19/2009									102.0			

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 09032136 **Lab Code:** PAR **Date Due:** 4/10/2009

Matrix: Water **Site Code:** SHP **Date Completed:** 4/2/2009

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
NITRATE/NITRITE AS N	03/23/2009							OK	105.00	104.0	104.0	0	
NITRATE/NITRITE AS N	03/23/2009							OK	105.00	93.0	91.0	0	
NITRATE/NITRITE AS N	03/23/2009							OK	102.00	101.0	105.0	2.00	
NITRATE/NITRITE AS N	03/23/2009							OK	103.00	104.0	103.0	1.00	
NITRATE/NITRITE AS N	03/23/2009							OK	97.00	104.0	103.0	0	
NITRATE/NITRITE AS N	03/23/2009							OK	97.00	99.0	96.0	1.00	
SULFATE	03/17/2009	0.000	0.9999	OK	OK	OK	OK	OK	94.00	105.0	111.0	2.00	
SULFATE	03/17/2009							OK	100.00	104.0	101.0	1.00	
SULFATE	03/17/2009							OK	100.00	104.0	96.0	3.00	
SULFATE	03/17/2009									113.0			
SULFATE	03/18/2009	0.000	0.9999	OK	OK	OK	OK	OK	97.00	105.0	108.0	1.00	
SULFATE	03/18/2009							OK	97.00	103.0			
SULFATE	03/19/2009				OK		OK	OK	100.00	109.0	106.0	1.00	
SULFATE	03/19/2009									102.0	96.0	2.00	
SULFATE	03/19/2009									103.0			
SULFATE	03/19/2009									102.0			

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 09032136 **Lab Code:** PAR **Date Due:** 4/10/2009

Matrix: Water **Site Code:** SHP **Date Completed:** 4/2/2009

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
TOTAL DISSOLVED SOLIDS	03/17/2009							OK	99.00			0	
TOTAL DISSOLVED SOLIDS	03/17/2009							OK	100.00			2.00	
TOTAL DISSOLVED SOLIDS	03/18/2009							OK	99.00			1.00	
TOTAL DISSOLVED SOLIDS	03/18/2009							OK	101.00			1.00	
TOTAL DISSOLVED SOLIDS	03/19/2009							OK	100.00			0	
TOTAL DISSOLVED SOLIDS	03/19/2009							OK	100.00			0	

Sampling Quality Control Assessment

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

Sampling Protocol

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

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

- Wells 0727, 0797, 0816, 0817, 0819, 0826, 0827, 1058, 1059, and 1074 were classified as Category II.
- Wells 0734, 0812, 0846, 1073, 1116, 1120, and 1122 were classified as Category III.
- Turbidity requirements were not met for well 0850.

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

Surface locations 0501, 0662, 0897, 0898, 0940, 0949, 0956, 0965, 1203, and 1205 had turbidity values greater than ten nephlometric turbidity units (NTU). Samples from these locations were filtered.

Equipment Blank Assessment

An equipment blank is normally collected after completion of decontamination and prior to collection of environmental samples when using non-dedicated sampling equipment. This blank is useful in documenting adequate decontamination of sampling equipment. One equipment blank was collected during this sampling event. Calcium, potassium, and sulfate were detected in the equipment blank. All associated sample results for these analytes were greater than 5 times the blank concentration.

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 01-0619, 01-1112, 01-1115, 02-0813, 02-0815, and 02-1078. The U.S. Environmental Protection Agency recommended laboratory duplicate criterion is less than 20 RPD for results that are greater than 5 times the PQL. The duplicate results were acceptable for all analytes with the following exceptions.

The manganese and sodium duplicate results from location 02-1078 and the selenium duplicate results from locations 01-1112 and 02-0813 had RPD values greater than 20 percent. These results are qualified with a "J" flag as estimated values.

SAMPLE MANAGEMENT SYSTEM

Validation Report: Equipment/Trip Blanks

RIN: 09032136 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 4/28/2009

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0903111-53	SW6010	CALCIUM	140	B	4	UG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
0903111-1	HET 263	0501	70000	1		
0903111-12	HET 272	0655	290000	5		
0903111-26	HET 247	0897	68000	1	N	
0903111-27	HET 248	0898	73000	1		
0903111-28	HET 249	0940	66000	1		
0903111-29	HET 455	0949	510000	5		
0903111-30	HET 250	0956	71000	1		
0903111-31	HET 260	0959	480000	5		
0903111-32	HET 252	0965	73000	1		
0903111-45	HET 251	1118	410000	5		
0903111-49	HET 253	1203	69000	1		
0903111-50	HET 254	1205	67000	1		
0903111-51	HET 456	1215	500000	50		
0903111-61	HET 289	0662	110000	5		
0903111-90	HET 255	0889	460000	50		

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0903111-53	SW6010	POTASSIUM	140	B	85	UG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
0903111-1	HET 263	0501	3000	1	N	
0903111-12	HET 272	0655	17000	5		
0903111-26	HET 247	0897	2900	1	N	
0903111-27	HET 248	0898	3200	1		
0903111-28	HET 249	0940	2900	1		
0903111-29	HET 455	0949	11000	5		
0903111-30	HET 250	0956	3100	1		
0903111-31	HET 260	0959	17000	5		
0903111-32	HET 252	0965	3100	1		
0903111-45	HET 251	1118	38000	5		
0903111-49	HET 253	1203	2900	1		

SAMPLE MANAGEMENT SYSTEM

Validation Report: Equipment/Trip Blanks

RIN: 09032136 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 4/28/2009

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0903111-53		POTASSIUM				

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
0903111-50	HET 254	1205	2800	1		
0903111-51	HET 456	1215	320000	50		
0903111-61	HET 289	0662	11000	5		
0903111-90	HET 255	0889	75000	50		

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	0903111-53	SW9056	SULFATE	4.6		0.5	MG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
0903111-1	HET 263	0501	150	5		
0903111-12	HET 272	0655	3300	100		
0903111-26	HET 247	0897	150	5		
0903111-27	HET 248	0898	160	5		
0903111-28	HET 249	0940	150	5		
0903111-29	HET 455	0949	2600	50		
0903111-30	HET 250	0956	150	5		
0903111-31	HET 260	0959	3500	100		
0903111-32	HET 252	0965	160	5		
0903111-45	HET 251	1118	5600	100		
0903111-49	HET 253	1203	150	5		
0903111-50	HET 254	1205	150	5		
0903111-51	HET 456	1215	27000	500		
0903111-61	HET 289	0662	2100	50		
0903111-90	HET 255	0889	21000	500		

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 09032136 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 4/28/2009

Duplicate: 2604 **Sample:** 1115

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	65			65					MG/L
CALCIUM	140000			140000			0		UG/L
CHLORIDE	66			62			6.25		MG/L
MAGNESIUM	200000			190000			5.13		UG/L
MANGANESE	870			880			1.14		UG/L
NITRATE/NITRITE AS N	48			47			2.11		MG/L
POTASSIUM	30000			33000			9.52		UG/L
SELENIUM	15			18			18.18		UG/L
SODIUM	300000			320000			6.45		UG/L
STRONTIUM	2100			2200			4.65		UG/L
SULFATE	1500			1500			0		MG/L
TOTAL DISSOLVED SOLIDS	2800			2900			3.51		MG/L
URANIUM	310			320			3.17		UG/L

Duplicate: 2731 **Sample:** 0619

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	0.42			0.39					MG/L
CALCIUM	250000			240000			4.08		UG/L
CHLORIDE	75			80					MG/L
MAGNESIUM	110000			110000			0		UG/L
MANGANESE	1200			1100			8.70		UG/L
NITRATE/NITRITE AS N	0.1			0.08			22.22		MG/L
POTASSIUM	28000			27000			3.64		UG/L
SELENIUM	0.3			0.36			18.18		UG/L
SODIUM	1100000			1100000			0		UG/L
STRONTIUM	5900			5900			0		UG/L
SULFATE	3000			3000			0		MG/L
TOTAL DISSOLVED SOLIDS	5100			5100			0		MG/L
URANIUM	170			140			19.35		UG/L

Duplicate: 2733 **Sample:** 1112

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	31			30			3.28		MG/L
CALCIUM	400000			390000			2.53		UG/L
CHLORIDE	360			370			2.74		MG/L
MAGNESIUM	1700000			1600000			6.06		UG/L

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 09032136 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 4/28/2009

Duplicate: 2733 **Sample:** 1112

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
MANGANESE	3000			2500			18.18		UG/L
NITRATE/NITRITE AS N	560			540			3.64		MG/L
POTASSIUM	130000			130000			0		UG/L
SELENIUM	330			490			39.02		UG/L
SODIUM	1900000			2000000			5.13		UG/L
STRONTIUM	9700			9200			5.29		UG/L
SULFATE	9900			10000			1.01		MG/L
TOTAL DISSOLVED SOLIDS	18000			18000			0		MG/L
URANIUM	1700			1700			0		UG/L

Duplicate: 2735 **Sample:** 1078

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	2.6			2.9			10.91		MG/L
CALCIUM	410000			390000			5.00		UG/L
CHLORIDE	1200			1200			0		MG/L
MAGNESIUM	1100000			1100000			0		UG/L
MANGANESE	90			70			25.00		UG/L
NITRATE/NITRITE AS N	680			700			2.90		MG/L
POTASSIUM	78000			78000			0		UG/L
SELENIUM	3200			2900			9.84		UG/L
SODIUM	6400000			4800000			28.57		UG/L
STRONTIUM	10000			10000			0		UG/L
SULFATE	15000			15000			0		MG/L
TOTAL DISSOLVED SOLIDS	28000			28000			0		MG/L
URANIUM	130			140			7.41		UG/L

Duplicate: 2737 **Sample:** 0813

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	81			89			9.41		MG/L
CALCIUM	660000			620000			6.25		UG/L
CHLORIDE	640			680			6.06		MG/L
MAGNESIUM	3400000			3200000			6.06		UG/L
MANGANESE	310			290			6.67		UG/L
NITRATE/NITRITE AS N	2600			2600			0		MG/L
POTASSIUM	180000			170000			5.71		UG/L
SELENIUM	38			48			23.26		UG/L

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 09032136 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 4/28/2009

Duplicate: 2737 **Sample:** 0813

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
SODIUM	2500000			2500000			0		UG/L
STRONTIUM	20000			19000			5.13		UG/L
SULFATE	10000			10000			0		MG/L
TOTAL DISSOLVED SOLIDS	30000			31000			3.28		MG/L
URANIUM	140			120			15.38		UG/L

Duplicate: 2738 **Sample:** 0815

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	000000014901	U		.000000014901	U				MG/L
CALCIUM	420000			420000			0		UG/L
CHLORIDE	670			610			9.38		MG/L
MAGNESIUM	2500000			2600000			3.92		UG/L
MANGANESE	1300			1300			0		UG/L
NITRATE/NITRITE AS N	680			750			9.79		MG/L
POTASSIUM	100000			110000			9.52		UG/L
SELENIUM	60			61			1.65		UG/L
SODIUM	3500000			2900000			18.75		UG/L
STRONTIUM	12000			12000			0		UG/L
SULFATE	15000			15000			0		MG/L
TOTAL DISSOLVED SOLIDS	27000			26000			3.77		MG/L
URANIUM	380			330			14.08		UG/L

Certification

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

Laboratory Coordinator: Steve Donivan — Date: 9-30-2009

Data Validation Lead: Steve Donivan — Date: 9-30-2009

Attachment 1
Assessment of Anomalous Data

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Potential Outliers Report

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Potential Outliers Report

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

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

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

1. Identify extreme values that may be potential outliers by generating the Outliers Report using the Sample Management System from data in the SEEPro database. The application compares the new data set with historical data and lists the new data that fall outside the historical data range. A determination is also made if the data are normally distributed using the Shapiro-Wilk Test.
2. Apply the appropriate statistical test. Dixon's Extreme Value test is used to test for statistical outliers when the sample size is less than or equal to 25. This test considers both extreme values that are much smaller than the rest of the data (case 1) and extreme values that are much larger than the rest of the data (case 2). This test is valid only if the data without the suspected outlier are normally distributed. Rosner's Test is a parametric test that is used to detect outliers for sample sizes of 25 or more. This test also assumes that the data without the suspected outliers are normally distributed.
3. Scientifically review statistical outliers and decide on their disposition.

The turbidity value for well 02-1092 of 108 NTUs was identified as an outlier. The turbidity in this well has never been measured at a value exceeding 10.1 NTUs. The result of 108 NTUs is qualified with an “R” flag as rejected because of a suspected data entry error. Other potential anomalous data are from wells where analyte concentrations are trending upward (e.g. well 02-0838) or downward (e.g., well 01-0608). There were no other data errors indicated from the review of potential outliers and the data from this event are acceptable as qualified.

There were 32 results from the September 2008 sampling event that had been noted as potentially anomalous. For the locations that were sampled during this event, the September 2008 results were confirmed as acceptable as qualified based on the results from this sampling event.

Data Validation Outliers Report - Field Parameters Only
Laboratory: Field Measurements
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP01	0608	03/10/2009	Oxidation Reduction Potential	61.9		F	516			70.8		F	30	0	No	No
SHP01	0612	03/10/2009	Turbidity	0.53		F	4.35			1.04		F	7	0	No	No
SHP01	0626	03/12/2009	Oxidation Reduction Potential	-85.9		F	495.4			0			14	0	Yes (log)	No
SHP01	0628	03/12/2009	Specific Conductance	9056		F	7340			3480			19	0	Yes	No
SHP01	0628	03/12/2009	Turbidity	9.08		F	7.6			0.71			12	0	Yes	No
SHP01	0630	03/12/2009	Oxidation Reduction Potential	-51.1		F	467.7			-22.8		F	12	0	Yes	No
SHP01	0655	03/09/2009	Oxidation Reduction Potential	242			240			18.5			17	0	No	No
SHP01	0735	03/10/2009	Temperature	7.26		F	19.07		F	7.3			25	0	No	Yes
SHP01	0897	03/09/2009	pH	7.55			9.01			7.75			22	0	Yes	No
SHP01	0940	03/09/2009	Oxidation Reduction Potential	210			209			0			22	0	Yes	No
SHP01	1104	03/11/2009	Oxidation Reduction Potential	-38			217.5			-10			7	0	Yes	No
SHP01	1109	03/10/2009	Oxidation Reduction Potential	290			284			54.1			33	0	No	No
SHP01	1110	03/11/2009	Specific Conductance	14685			20467			15485			6	0	Yes	No
SHP01	1114	03/10/2009	Oxidation Reduction Potential	17.6		F	300		F	52.9		F	8	0	Yes	No
SHP01	1115	03/10/2009	Oxidation Reduction Potential	313.1		F	308		F	60.9		F	8	0	Yes	No
SHP01	1117	03/10/2009	Temperature	8.25		F	1956			8.49		F	7	0	No	No
SHP01	1118	03/09/2009	Specific Conductance	9320			9193			7352			6	0	Yes	No
SHP01	1205	03/09/2009	pH	7.67			8.99			7.97			19	0	Yes	No

Data Validation Outliers Report - Field Parameters Only
Laboratory: Field Measurements
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	0603	03/12/2009	Oxidation Reduction Potential	305		F	284			178		F	14	0	Yes	No
SHP02	0603	03/12/2009	Temperature	14.9		F	18.5		F	15.5			14	0	Yes	No
SHP02	0725	03/11/2009	Oxidation Reduction Potential	102		F	479			122			16	0	No	No
SHP02	0731	03/10/2009	Turbidity	7.74		F	110		L	8			9	0	Yes	No
SHP02	0813	03/11/2009	Oxidation Reduction Potential	272		F	260		F	144			12	0	Yes	No
SHP02	0813	03/11/2009	Specific Conductance	26690		F	26080		F	1922	J		12	0	No	No
SHP02	0815	03/11/2009	Oxidation Reduction Potential	247		F	225			121			11	0	No	No
SHP02	0815	03/11/2009	Specific Conductance	22500		F	22200		F	1705			11	0	No	No
SHP02	0816	03/12/2009	Temperature	13.4		FQ	20.5		F	14.03		F	10	0	Yes	No
SHP02	0817	03/10/2009	Specific Conductance	21840		FQ	21511		F	11650		FQ	16	0	No	No
SHP02	0818	03/10/2009	pH	7.79			7.23		F	6.42			15	0	Yes	No
SHP02	0818	03/10/2009	Temperature	11.6			18.5		F	14.21			13	0	Yes	No
SHP02	0819	03/10/2009	Specific Conductance	20500		FQ	19935		F	17000		F	9	0	Yes	No
SHP02	0826	03/10/2009	Specific Conductance	19835		FQ	19346		F	13060			11	0	Yes	No
SHP02	0827	03/10/2009	Temperature	13.3		FQ	20.2		L	13.99		FQ	11	0	Yes	No
SHP02	0833	03/12/2009	Turbidity	2.39		F	43.2		FQ	5.73			9	0	No	No
SHP02	0837	03/11/2009	Specific Conductance	3703		F	3640		F	2590			10	0	Yes	No
SHP02	0837	03/11/2009	Turbidity	4.18		F	39.8			4.47		F	9	0	Yes (log)	No

Data Validation Outliers Report - Field Parameters Only
Laboratory: Field Measurements
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	0843	03/11/2009	Oxidation Reduction Potential	6.2		F	236			63			10	0	Yes	No
SHP02	0846	03/10/2009	pH	7.4		FQ	7.29		F	6.59			23	0	Yes	No
SHP02	1059	03/10/2009	Turbidity	5.35		FQ	466		L	8.39		FQ	6	0	Yes (log)	No
SHP02	1071	03/10/2009	Oxidation Reduction Potential	249			236			94			11	0	Yes	No
SHP02	1071	03/10/2009	Specific Conductance	26360			24470		F	13200			11	0	Yes	No
SHP02	1078	03/11/2009	Oxidation Reduction Potential	276			246			118			11	0	Yes	No
SHP02	1078	03/11/2009	Temperature	12.5			21.3			15.06			11	0	Yes	Yes
SHP02	1078	03/11/2009	Turbidity	7.83			7.14			0.43			11	0	Yes	No
SHP02	1088	03/10/2009	Turbidity	2.32			74.6			3.23			8	0	Yes (log)	No
SHP02	1091	03/10/2009	Temperature	8.64			26.31			9.73			10	0	Yes	No
SHP02	1092	03/11/2009	Oxidation Reduction Potential	339			253			-49.9			10	0	Yes	No
SHP02	1092	03/11/2009	Temperature	8.8			23.3		F	11.2			10	0	Yes	No
SHP02	1092	03/11/2009	Turbidity	108			10.1			3.35			8	0	Yes	Yes
SHP02	1096	03/10/2009	Turbidity	9.2			8.74			2.93			5	0	Yes	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Normally Distributed	Statistical Outlier
				Result	Qualifiers Lab	Qualifiers Data	Result	Qualifiers Lab	Qualifiers Data	Result	Qualifiers Lab	Qualifiers Data	N	N Below Detect		
SHP01	0608	03/10/2009	Ammonia Total as N	100		F	420		JF	160			15	0	Yes (log)	Yes
SHP01	0608	03/10/2009	Calcium	280		F	520			350		F	45	0	Yes	Yes
SHP01	0608	03/10/2009	Chloride	120		F	525	H	J	210		F	44	0	Yes	Yes
SHP01	0608	03/10/2009	Magnesium	500		F	2620			750		F	43	0	No	Yes
SHP01	0608	03/10/2009	Manganese	2.3		F	9.85			2.9		F	42	0	No	No
SHP01	0608	03/10/2009	Nitrate + Nitrite as Nitrogen	120		F	650		F	220		F	10	0	Yes	No
SHP01	0608	03/10/2009	Potassium	66		F	200	E		87			42	0	Yes	Yes
SHP01	0608	03/10/2009	Selenium	0.0038		F	0.25			0.0046		F	42	6	No	No
SHP01	0608	03/10/2009	Sodium	720		F	3300			1200		F	45	0	Yes	Yes
SHP01	0608	03/10/2009	Strontium	4.5		F	15.8			8.1		F	40	0	No	Yes
SHP01	0608	03/10/2009	Sulfate	3600		F	15400			6200		F	46	0	No	Yes
SHP01	0608	03/10/2009	Total Dissolved Solids	6300		F	26500	H	J	12000		F	36	0	No	Yes
SHP01	0608	03/10/2009	Uranium	0.69		F	3.73			0.97		F	47	0	Yes (log)	No
SHP01	0615	03/11/2009	Ammonia Total as N	0.35		F	54		JF	1	U		15	1	No	No
SHP01	0615	03/11/2009	Chloride	87		F	1034			91		F	37	0	Yes	No
SHP01	0615	03/11/2009	Magnesium	420		F	3800			460		F	37	0	Yes	No
SHP01	0615	03/11/2009	Manganese	0.46		F	9.75			0.48		F	31	0	No	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP01	0615	03/11/2009	Potassium	48		F	300		F	67			35	0	Yes (log)	No
SHP01	0615	03/11/2009	Sodium	590		F	6900			630		F	37	0	Yes	No
SHP01	0615	03/11/2009	Strontium	4.8		F	17		F	6		F	31	0	Yes	No
SHP01	0615	03/11/2009	Sulfate	3500		F	30868			4300		F	37	0	Yes	No
SHP01	0615	03/11/2009	Total Dissolved Solids	6200		F	43500		F	11000		F	30	0	Yes	No
SHP01	0615	03/11/2009	Uranium	0.83		F	4.8		F	0.93		F	37	0	Yes	No
SHP01	0619	03/12/2009	Calcium	240		F	490			260		F	44	0	Yes	No
SHP01	0619	03/12/2009	Calcium	250		F	490			260		F	44	0	Yes	No
SHP01	0619	03/12/2009	Chloride	80		F	1300			91			44	0	No	No
SHP01	0619	03/12/2009	Chloride	75		F	1300			91			44	0	No	No
SHP01	0619	03/12/2009	Magnesium	110		F	2210			140			44	0	Yes	No
SHP01	0619	03/12/2009	Manganese	1.2		F	8.65			1.3			43	0	Yes	No
SHP01	0619	03/12/2009	Manganese	1.1		F	8.65			1.3			43	0	Yes	No
SHP01	0619	03/12/2009	Selenium	0.00036		F	0.481			0.00041		F	43	1	No	No
SHP01	0619	03/12/2009	Selenium	0.0003		F	0.481			0.00041		F	43	1	No	No
SHP01	0619	03/12/2009	Sulfate	3000		F	15800	H	J	3300			44	0	No	No
SHP01	0619	03/12/2009	Total Dissolved Solids	5100		F	26300	H	J	5300			38	0	No	No
SHP01	0619	03/12/2009	Uranium	0.14		F	3.14			0.18			44	0	Yes (log)	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current	Qualifiers		Historical Maximum	Qualifiers		Historical Minimum	Qualifiers		Number of Data Points		Normally Distributed	Statistical Outlier
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0619	03/12/2009	Uranium	0.17		F	3.14			0.18			44	0	Yes (log)	No
SHP01	0626	03/12/2009	Magnesium	46		F	938			49		F	27	0	No	No
SHP01	0626	03/12/2009	Selenium	0.00037		F	0.24			0.00046		F	27	2	No	No
SHP01	0630	03/12/2009	Calcium	170		F	480			194			20	0	Yes	No
SHP01	0630	03/12/2009	Magnesium	36		F	264			37		F	18	0	Yes	No
SHP01	0630	03/12/2009	Selenium	0.0046		F	0.196	S*		0.021			19	0	Yes	No
SHP01	0630	03/12/2009	Sulfate	2200		F	4860			2500		F	19	0	Yes	No
SHP01	0630	03/12/2009	Total Dissolved Solids	3700		F	7870		J	3900		F	17	0	Yes	No
SHP01	0630	03/12/2009	Uranium	0.026		F	0.557			0.0307			20	0	Yes (log)	Yes
SHP01	0655	03/09/2009	Selenium	0.0012			0.0836			0.0016			19	0	No	No
SHP01	0735	03/10/2009	Selenium	0.022		F	0.27		F	0.024		F	32	1	Yes (log)	No
SHP01	0736	03/12/2009	Chloride	99		F	663			100		F	23	0	Yes (log)	No
SHP01	0736	03/12/2009	Magnesium	160		F	1670			185			22	0	No	No
SHP01	0773	03/10/2009	Sulfate	2800		F	5630			3900			5	0	No	No
SHP01	0773	03/10/2009	Uranium	0.68		F	0.9184			0.697			5	0	Yes	No
SHP01	0797	03/11/2009	Nitrate + Nitrite as Nitrogen	0.11		FQ	0.067		FQ	0.01			10	0	Yes	Yes
SHP01	0853	03/11/2009	Total Dissolved Solids	880		F	3250			980		F	6	0	Yes	No
SHP01	0855	03/12/2009	Calcium	220		F	432			268			10	0	Yes	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP01	0855	03/12/2009	Chloride	72		F	160		F	75.9			10	0	Yes (log)	Yes
SHP01	0855	03/12/2009	Sulfate	2700		F	5300		F	3100		F	11	0	No	No
SHP01	0855	03/12/2009	Total Dissolved Solids	4500		F	6230			5100		F	9	0	Yes	No
SHP01	0856	03/12/2009	Manganese	2		F	1.7		F	1.3		F	8	0	Yes	No
SHP01	0856	03/12/2009	Strontium	6.8		F	5.1		F	3.84			8	0	Yes (log)	No
SHP01	0856	03/12/2009	Total Dissolved Solids	4700		F	5510			4900		F	7	0	Yes	No
SHP01	0959	03/12/2009	Nitrate + Nitrite as Nitrogen	51			5.7			0.22			9	0	No	Yes
SHP01	1089	03/11/2009	Selenium	0.019			0.094		F	0.022			7	0	Yes (log)	No
SHP01	1109	03/10/2009	Nitrate + Nitrite as Nitrogen	33			110			34			5	0	Yes	No
SHP01	1110	03/11/2009	Ammonia Total as N	2.5			16			5			6	0	Yes	No
SHP01	1110	03/11/2009	Calcium	380			450			410			6	0	Yes	No
SHP01	1110	03/11/2009	Chloride	330			590			450			6	0	Yes	No
SHP01	1110	03/11/2009	Magnesium	970			2000			1400			6	0	Yes	No
SHP01	1110	03/11/2009	Manganese	1.1			3			1.3			5	0	Yes	No
SHP01	1110	03/11/2009	Nitrate + Nitrite as Nitrogen	88			390			180			6	0	Yes	No
SHP01	1110	03/11/2009	Potassium	67			160			78			6	0	Yes	No
SHP01	1110	03/11/2009	Sodium	1800			3200			2300			6	0	Yes	No
SHP01	1110	03/11/2009	Strontium	8.9			11			10			5	0	No	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP01	1110	03/11/2009	Sulfate	7700			14000			11000			7	0	No	Yes
SHP01	1110	03/11/2009	Uranium	0.99			2.1			1.5			7	0	No	No
SHP01	1111	03/11/2009	Uranium	0.91		F	1.588			0.9156			6	0	Yes	No
SHP01	1114	03/10/2009	Potassium	34		F	176			37			8	0	Yes	No
SHP01	1115	03/10/2009	Ammonia Total as N	65		F	380			68		F	8	0	Yes	No
SHP01	1115	03/10/2009	Magnesium	190		F	2000			210		F	8	0	Yes	No
SHP01	1115	03/10/2009	Magnesium	200		F	2000			210		F	8	0	Yes	No
SHP01	1115	03/10/2009	Potassium	30		F	162			31		F	8	0	Yes	No
SHP01	1115	03/10/2009	Uranium	0.31		F	1.0403			0.36		F	8	0	Yes	No
SHP01	1115	03/10/2009	Uranium	0.32		F	1.0403			0.36		F	8	0	Yes	No
SHP01	1118	03/09/2009	Magnesium	580			520			350			6	0	Yes	No
SHP01	1118	03/09/2009	Nitrate + Nitrite as Nitrogen	26			71			29			6	0	Yes (log)	No
SHP01	1118	03/09/2009	Selenium	0.062			0.16			0.083			5	0	Yes	No
SHP01	1118	03/09/2009	Sodium	1300			1200			710			6	0	No	No
SHP02	0603	03/12/2009	Calcium	910		F	760		F	367			13	0	Yes (log)	Yes
SHP02	0603	03/12/2009	Strontium	4.7		F	4.09			2.33		F	13	0	Yes	Yes
SHP02	0603	03/12/2009	Uranium	0.0065		F	0.017			0.0073		F	15	0	Yes	No
SHP02	0648	03/12/2009	Manganese	0.084			0.1			0.086			11	0	No	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	0662	03/12/2009	Manganese	0.00048	U		0.075			0.0014	B		30	8	No	No
SHP02	0725	03/11/2009	Calcium	250		F	396			294			16	0	Yes	No
SHP02	0725	03/11/2009	Magnesium	65		F	240			94.4			14	0	Yes	No
SHP02	0725	03/11/2009	Sulfate	2800		F	4810			3080			18	0	No	No
SHP02	0725	03/11/2009	Total Dissolved Solids	4300		F	6390			4950			15	0	Yes	No
SHP02	0727	03/11/2009	Magnesium	1600		FQ	2390			1800		F	12	0	Yes	No
SHP02	0727	03/11/2009	Manganese	1		FQ	1.61			1.16			16	0	Yes	Yes
SHP02	0727	03/11/2009	Uranium	0.27		FQ	0.546			0.29		F	18	0	Yes	No
SHP02	0728	03/10/2009	Selenium	0.0016		F	0.084	+		0.0017		FQ	20	0	Yes	No
SHP02	0731	03/10/2009	Chloride	140		F	627			190		F	10	0	Yes	No
SHP02	0731	03/10/2009	Magnesium	470		F	856			490		F	9	0	Yes	No
SHP02	0731	03/10/2009	Total Dissolved Solids	8200		F	12600			8490			9	0	Yes	No
SHP02	0812	03/11/2009	Manganese	0.0048	U	FQ	0.693		L	0.0219		L	10	0	Yes	No
SHP02	0813	03/11/2009	Calcium	660		F	648		F	506			10	0	Yes	Yes
SHP02	0813	03/11/2009	Magnesium	3400		F	3220			2630			10	0	Yes	No
SHP02	0813	03/11/2009	Potassium	180		F	170		F	87.3			10	0	Yes	Yes
SHP02	0815	03/11/2009	Chloride	610		F	866			650		FQ	7	0	Yes	No
SHP02	0817	03/10/2009	Nitrate + Nitrite as Nitrogen	300		FQ	1400		F	370		F	10	0	Yes (log)	Yes

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current	Qualifiers		Historical Maximum	Qualifiers		Historical Minimum	Qualifiers		Number of Data Points		Normally Distributed	Statistical Outlier
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	0818	03/10/2009	Ammonia Total as N	59			150			72			12	0	Yes	No
SHP02	0818	03/10/2009	Calcium	470			687			480			11	0	Yes	No
SHP02	0818	03/10/2009	Magnesium	2100			2780			2200		F	11	0	Yes	No
SHP02	0818	03/10/2009	Manganese	2.5			2.4		F	0.438			11	0	No	Yes
SHP02	0818	03/10/2009	Nitrate + Nitrite as Nitrogen	950			1900			990		F	11	0	Yes	No
SHP02	0818	03/10/2009	Sodium	4000			3800		F	2600			11	0	Yes	No
SHP02	0826	03/10/2009	Chloride	610		FQ	792			620		F	11	0	Yes	No
SHP02	0826	03/10/2009	Magnesium	3000		FQ	2700		F	2190			10	0	Yes	Yes
SHP02	0826	03/10/2009	Manganese	2.9		FQ	2.86		L	2.5		F	10	0	Yes	No
SHP02	0826	03/10/2009	Sodium	2300		FQ	2210			2000		F	10	0	Yes	No
SHP02	0826	03/10/2009	Strontium	13		FQ	12.8		L	11		F	10	0	Yes	No
SHP02	0826	03/10/2009	Uranium	3.8		FQ	3.6		F	2.38			11	0	Yes	No
SHP02	0827	03/10/2009	Calcium	420		FQ	510			427		L	9	0	Yes	No
SHP02	0827	03/10/2009	Manganese	0.27		FQ	1.63			0.395			11	0	Yes	No
SHP02	0827	03/10/2009	Selenium	0.064		FQ	0.0585			0.0024	B	L	11	0	Yes (log)	Yes
SHP02	0828	03/11/2009	Selenium	0.069		F	0.059			0.0034	B		8	0	Yes	No
SHP02	0828	03/11/2009	Sodium	280		F	693			292		F	7	0	Yes	No
SHP02	0828	03/11/2009	Uranium	0.21		F	0.449			0.24		F	9	0	Yes	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	0830	03/10/2009	Magnesium	67		F	60		F	32		F	14	0	Yes	No
SHP02	0830	03/10/2009	Manganese	5.6		F	4.4		F	1.5		F	15	0	Yes	No
SHP02	0833	03/12/2009	Calcium	430		F	735			450		F	7	0	Yes	No
SHP02	0837	03/11/2009	Chloride	55		F	52		F	16.5			9	0	No	No
SHP02	0837	03/11/2009	Selenium	0.14		F	0.11		F	0.0099			10	0	No	Yes
SHP02	0837	03/11/2009	Sodium	270		F	240		F	143			9	0	Yes	No
SHP02	0837	03/11/2009	Strontium	5.4		F	5.19			3.69			9	0	No	No
SHP02	0838	03/12/2009	Magnesium	260		F	240		F	87.6			21	0	Yes (log)	Yes
SHP02	0838	03/12/2009	Sodium	540		F	480		F	91.9			21	0	Yes (log)	Yes
SHP02	0838	03/12/2009	Strontium	8.3		F	7.9		F	3.51			21	0	Yes (log)	Yes
SHP02	0838	03/12/2009	Total Dissolved Solids	6000		F	5700		F	2000		F	18	0	Yes (log)	Yes
SHP02	0841	03/10/2009	Total Dissolved Solids	29000		F	28000		F	22100			18	0	Yes	No
SHP02	0843	03/11/2009	Chloride	60		F	58		F	24.7			8	0	No	No
SHP02	0843	03/11/2009	Sodium	330	E	FJ	320		FQ	174			8	0	Yes	No
SHP02	0843	03/11/2009	Uranium	0.033		F	0.0324			0.023		F	10	0	Yes	No
SHP02	0844	03/12/2009	Calcium	530		F	520		F	448			9	0	Yes	No
SHP02	0844	03/12/2009	Magnesium	1700		F	1600		F	355			9	0	No	No
SHP02	0844	03/12/2009	Sodium	2300		F	2200		F	397			9	0	No	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	0844	03/12/2009	Strontium	13		F	12		F	6.23			9	0	No	No
SHP02	0844	03/12/2009	Total Dissolved Solids	19000		F	18000		FQ	5040			9	0	No	No
SHP02	0844	03/12/2009	Uranium	0.16		F	0.15		F	0.0404			11	0	No	Yes
SHP02	0846	03/10/2009	Nitrate + Nitrite as Nitrogen	56		FQ	47		FQ	15		F	13	0	Yes (log)	Yes
SHP02	0848	03/10/2009	Sodium	6100		F	5900		FQ	1380			7	0	Yes (log)	No
SHP02	1058	03/10/2009	Sulfate	4900		FQ	4100		FQ	889		L	5	0	Yes	No
SHP02	1059	03/10/2009	Potassium	36		FQ	32		FQ	25.7		L	6	0	Yes	No
SHP02	1059	03/10/2009	Selenium	0.016		FQ	0.225			0.0201	N	JL	7	0	Yes (log)	No
SHP02	1071	03/10/2009	Ammonia Total as N	900			580		F	7.6			11	0	Yes	Yes
SHP02	1071	03/10/2009	Magnesium	2800			2300		F	1100			8	0	No	No
SHP02	1071	03/10/2009	Manganese	3.1			2.1			0.076			8	0	Yes	No
SHP02	1071	03/10/2009	Potassium	270			250		F	53.3	E	J	8	0	Yes	No
SHP02	1071	03/10/2009	Strontium	16			13		F	9.1			8	0	Yes	No
SHP02	1071	03/10/2009	Total Dissolved Solids	27000			26000			20000			6	0	Yes	No
SHP02	1078	03/11/2009	Calcium	390			440			400			9	0	Yes	No
SHP02	1078	03/11/2009	Manganese	0.07			0.134			0.075			9	0	Yes	No
SHP02	1078	03/11/2009	Sodium	6400			5800			4200			9	0	Yes	No
SHP02	1088	03/10/2009	Calcium	450			420			380			9	0	Yes	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	1088	03/10/2009	Magnesium	1500			1300			874			9	0	Yes	No
SHP02	1088	03/10/2009	Sodium	8000			7000			5500			9	0	Yes	No
SHP02	1091	03/10/2009	Ammonia Total as N	280			220		F	0.47			11	1	No	Yes
SHP02	1091	03/10/2009	Calcium	650			560		F	460			6	0	Yes	No
SHP02	1091	03/10/2009	Chloride	1100			1377			1200		F	13	0	Yes	No
SHP02	1091	03/10/2009	Manganese	15			6.7		F	1.1			6	0	No	Yes
SHP02	1091	03/10/2009	Sodium	3100			4000			3300		F	6	0	Yes	No
SHP02	1091	03/10/2009	Total Dissolved Solids	26000			32000			28000			5	0	Yes	No
SHP02	1091	03/10/2009	Uranium	0.092			0.13			0.103			16	0	Yes	No
SHP02	1092	03/11/2009	Chloride	640			1584			650		F	13	0	No	No
SHP02	1092	03/11/2009	Manganese	35			32		F	0.94			6	0	No	No
SHP02	1092	03/11/2009	Sulfate	5300			14642			5500		F	17	0	No	Yes
SHP02	1092	03/11/2009	Total Dissolved Solids	23000			31000		J	24000			5	0	Yes	No
SHP02	1095	03/10/2009	Sulfate	5900			7500			6600			5	0	Yes	No
SHP02	1095	03/10/2009	Uranium	0.059			0.07			0.06			5	0	Yes	No
SHP02	1096	03/10/2009	Ammonia Total as N	12			23		F	14			5	0	Yes	No
SHP02	1096	03/10/2009	Calcium	390			420		F	400			5	0	Yes	No
SHP02	1096	03/10/2009	Potassium	78			110			85			5	0	Yes	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 09032136
Comparison: All Historical Data
Report Date: 5/29/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers *Lab*	Current Qualifiers *Data*	Historical Maximum Result	Historical Maximum Qualifiers *Lab*	Historical Maximum Qualifiers *Data*	Historical Minimum Result	Historical Minimum Qualifiers *Lab*	Historical Minimum Qualifiers *Data*	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	1096	03/10/2009	Selenium	2.9			2.8			2.1			5	0	Yes	No

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

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

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

STATISTICAL TESTS:
The distribution of the data is tested for normality or lognormality using the Shapiro-Wilk Test
Outliers are identified using Dixon's Test when there are 25 or fewer data points.
Outliers are identified using Rosner's Test when there are 26 or more data points.
See Data Quality Assessment: Statistical Methods for Practitioners, EPA QC/G-9S, February 2006.

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Attachment 2
Data Presentation

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Groundwater Quality Data
Floodplain Locations

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Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/10/2009	N001	10	-	15	100		F	#	20	
Calcium	mg/L	03/10/2009	N001	10	-	15	280		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	10	-	15	120		F	#	20	
Magnesium	mg/L	03/10/2009	N001	10	-	15	500		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	10	-	15	2.3		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	10	-	15	120		F	#	1	
Oxidation Reduction Potential	mV	03/10/2009	N001	10	-	15	61.9		F	#		
pH	s.u.	03/10/2009	N001	10	-	15	7.03		F	#		
Potassium	mg/L	03/10/2009	N001	10	-	15	66		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	10	-	15	0.0038		F	#	0.000017	
Sodium	mg/L	03/10/2009	N001	10	-	15	720		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	10	-	15	7218		F	#		
Strontium	mg/L	03/10/2009	N001	10	-	15	4.5		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	10	-	15	3600		F	#	50	
Temperature	C	03/10/2009	N001	10	-	15	10.03		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	10	-	15	6300		F	#	200	
Turbidity	NTU	03/10/2009	N001	10	-	15	7.16		F	#		
Uranium	mg/L	03/10/2009	N001	10	-	15	0.69		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0612 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
Ammonia Total as N	mg/L	03/10/2009	N001	5	-	10	0.91		F	#	0.1	
Calcium	mg/L	03/10/2009	N001	5	-	10	270		F	#	0.0081	
Chloride	mg/L	03/10/2009	N001	5	-	10	74		F	#	10	
Magnesium	mg/L	03/10/2009	N001	5	-	10	170		F	#	0.011	
Manganese	mg/L	03/10/2009	N001	5	-	10	2.8		F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	5	-	10	0.027		F	#	0.01	
Oxidation Reduction Potential	mV	03/10/2009	N001	5	-	10	-200.7		F	#		
pH	s.u.	03/10/2009	N001	5	-	10	7.2		F	#		
Potassium	mg/L	03/10/2009	N001	5	-	10	15		F	#	0.17	
Selenium	mg/L	03/10/2009	N001	5	-	10	0.00033		F	#	0.000017	
Sodium	mg/L	03/10/2009	N001	5	-	10	410		F	#	0.008	
Specific Conductance	umhos /cm	03/10/2009	N001	5	-	10	3696		F	#		
Strontium	mg/L	03/10/2009	N001	5	-	10	3.2		F	#	0.000089	
Sulfate	mg/L	03/10/2009	N001	5	-	10	1800		F	#	25	
Temperature	C	03/10/2009	N001	5	-	10	9.95		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	5	-	10	3300		F	#	80	
Turbidity	NTU	03/10/2009	N001	5	-	10	0.53		F	#		
Uranium	mg/L	03/10/2009	N001	5	-	10	0.18		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/11/2009	N001	10	-	15	37		F	#	2	
Calcium	mg/L	03/11/2009	N001	10	-	15	420		F	#	0.04	
Chloride	mg/L	03/11/2009	N001	10	-	15	350		F	#	40	
Magnesium	mg/L	03/11/2009	N001	10	-	15	1700		F	#	0.054	
Manganese	mg/L	03/11/2009	N001	10	-	15	2.7		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	10	-	15	390		F	#	5	
Oxidation Reduction Potential	mV	03/11/2009	N001	10	-	15	207		F	#		
pH	s.u.	03/11/2009	N001	10	-	15	7.03		F	#		
Potassium	mg/L	03/11/2009	N001	10	-	15	160		F	#	0.85	
Selenium	mg/L	03/11/2009	N001	10	-	15	0.31		F	#	0.0017	
Sodium	mg/L	03/11/2009	N001	10	-	15	2000		F	#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	10	-	15	15928		F	#		
Strontium	mg/L	03/11/2009	N001	10	-	15	9.3		F	#	0.00044	
Sulfate	mg/L	03/11/2009	N001	10	-	15	10000		F	#	100	
Temperature	C	03/11/2009	N001	10	-	15	10.65		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	10	-	15	18000		F	#	400	
Turbidity	NTU	03/11/2009	N001	10	-	15	1.42		F	#		
Uranium	mg/L	03/11/2009	N001	10	-	15	1.8		F	#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/11/2009	N001	4.5	-	9.5	0.35		F	#	0.1	
Calcium	mg/L	03/11/2009	N001	4.5	-	9.5	480		F	#	0.02	
Chloride	mg/L	03/11/2009	N001	4.5	-	9.5	87		F	#	20	
Magnesium	mg/L	03/11/2009	N001	4.5	-	9.5	420		F	#	0.027	
Manganese	mg/L	03/11/2009	N001	4.5	-	9.5	0.46		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	4.5	-	9.5	37		F	#	0.2	
Oxidation Reduction Potential	mV	03/11/2009	N001	4.5	-	9.5	96.1		F	#		
pH	s.u.	03/11/2009	N001	4.5	-	9.5	7.09		F	#		
Potassium	mg/L	03/11/2009	N001	4.5	-	9.5	48		F	#	0.43	
Selenium	mg/L	03/11/2009	N001	4.5	-	9.5	0.23		F	#	0.00084	
Sodium	mg/L	03/11/2009	N001	4.5	-	9.5	590		F	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	4.5	-	9.5	5939		F	#		
Strontium	mg/L	03/11/2009	N001	4.5	-	9.5	4.8		F	#	0.00022	
Sulfate	mg/L	03/11/2009	N001	4.5	-	9.5	3500		F	#	50	
Temperature	C	03/11/2009	N001	4.5	-	9.5	10.89		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	4.5	-	9.5	6200		F	#	80	
Turbidity	NTU	03/11/2009	N001	4.5	-	9.5	4.81		F	#		
Uranium	mg/L	03/11/2009	N001	4.5	-	9.5	0.83		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/11/2009	N001	11	-	16	45		F	#	2	
Calcium	mg/L	03/11/2009	N001	11	-	16	480		F	#	0.04	
Chloride	mg/L	03/11/2009	N001	11	-	16	640		F	#	40	
Magnesium	mg/L	03/11/2009	N001	11	-	16	2000		F	#	0.054	
Manganese	mg/L	03/11/2009	N001	11	-	16	9.7		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	11	-	16	330		F	#	2	
Oxidation Reduction Potential	mV	03/11/2009	N001	11	-	16	68.6		F	#		
pH	s.u.	03/11/2009	N001	11	-	16	6.78		F	#		
Potassium	mg/L	03/11/2009	N001	11	-	16	130		F	#	0.85	
Selenium	mg/L	03/11/2009	N001	11	-	16	0.16		F	#	0.00084	
Sodium	mg/L	03/11/2009	N001	11	-	16	2900		F	#	0.4	
Specific Conductance	umhos /cm	03/11/2009	N001	11	-	16	20527		F	#		
Strontium	mg/L	03/11/2009	N001	11	-	16	11		F	#	0.00044	
Sulfate	mg/L	03/11/2009	N001	11	-	16	13000		F	#	100	
Temperature	C	03/11/2009	N001	11	-	16	13.95		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	11	-	16	24000		F	#	400	
Turbidity	NTU	03/11/2009	N001	11	-	16	3.32		F	#		
Uranium	mg/L	03/11/2009	N001	11	-	16	2.4		F	#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/12/2009	0002	8	-	13	0.39		F	#	0.1	
Ammonia Total as N	mg/L	03/12/2009	N001	8	-	13	0.42		F	#	0.1	
Calcium	mg/L	03/12/2009	0002	8	-	13	240		F	#	0.02	
Calcium	mg/L	03/12/2009	N001	8	-	13	250		F	#	0.02	
Chloride	mg/L	03/12/2009	0002	8	-	13	80		F	#	20	
Chloride	mg/L	03/12/2009	N001	8	-	13	75		F	#	20	
Magnesium	mg/L	03/12/2009	0002	8	-	13	110		F	#	0.027	
Magnesium	mg/L	03/12/2009	N001	8	-	13	110		F	#	0.027	
Manganese	mg/L	03/12/2009	0002	8	-	13	1.1		F	#	0.00048	
Manganese	mg/L	03/12/2009	N001	8	-	13	1.2		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	0002	8	-	13	0.08		F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	8	-	13	0.1		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	8	-	13	147.5		F	#		
pH	s.u.	03/12/2009	N001	8	-	13	7.11		F	#		
Potassium	mg/L	03/12/2009	0002	8	-	13	27		F	#	0.43	
Potassium	mg/L	03/12/2009	N001	8	-	13	28		F	#	0.43	
Selenium	mg/L	03/12/2009	0002	8	-	13	0.00036		F	#	0.000017	
Selenium	mg/L	03/12/2009	N001	8	-	13	0.0003		F	#	0.000017	
Sodium	mg/L	03/12/2009	0002	8	-	13	1100		F	#	0.02	
Sodium	mg/L	03/12/2009	N001	8	-	13	1100		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	8	-	13	6042		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Strontium	mg/L	03/12/2009	0002	8	-	13	5.9		F	#	0.00022	
Strontium	mg/L	03/12/2009	N001	8	-	13	5.9		F	#	0.00022	
Sulfate	mg/L	03/12/2009	0002	8	-	13	3000		F	#	50	
Sulfate	mg/L	03/12/2009	N001	8	-	13	3000		F	#	50	
Temperature	C	03/12/2009	N001	8	-	13	11.8		F	#		
Total Dissolved Solids	mg/L	03/12/2009	0002	8	-	13	5100		F	#	80	
Total Dissolved Solids	mg/L	03/12/2009	N001	8	-	13	5100		F	#	80	
Turbidity	NTU	03/12/2009	N001	8	-	13	5.56		F	#		
Uranium	mg/L	03/12/2009	0002	8	-	13	0.14		F	#	0.000015	
Uranium	mg/L	03/12/2009	N001	8	-	13	0.17		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0625 WELL Center of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	4.5	-	9.5	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	4.5	-	9.5	240		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	4.5	-	9.5	76		F	#	20	
Magnesium	mg/L	03/12/2009	N001	4.5	-	9.5	55		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	4.5	-	9.5	5.1		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	4.5	-	9.5	0.038		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	4.5	-	9.5	124.2		F	#		
pH	s.u.	03/12/2009	N001	4.5	-	9.5	7.07		F	#		
Potassium	mg/L	03/12/2009	N001	4.5	-	9.5	17		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	4.5	-	9.5	0.0018		F	#	0.000017	
Sodium	mg/L	03/12/2009	N001	4.5	-	9.5	1000		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	4.5	-	9.5	5557		F	#		
Strontium	mg/L	03/12/2009	N001	4.5	-	9.5	8.8		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	4.5	-	9.5	2600		F	#	50	
Temperature	C	03/12/2009	N001	4.5	-	9.5	11.65		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	4.5	-	9.5	4500		F	#	80	
Turbidity	NTU	03/12/2009	N001	4.5	-	9.5	9.57		F	#		
Uranium	mg/L	03/12/2009	N001	4.5	-	9.5	0.054		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0626 WELL Center of floodplain, just NE of wetland

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	9.5	-	14.5	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	9.5	-	14.5	220		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	9.5	-	14.5	76		F	#	20	
Magnesium	mg/L	03/12/2009	N001	9.5	-	14.5	46		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	9.5	-	14.5	3.5		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	9.5	-	14.5	0.013		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	9.5	-	14.5	-85.9		F	#		
pH	s.u.	03/12/2009	N001	9.5	-	14.5	7.15		F	#		
Potassium	mg/L	03/12/2009	N001	9.5	-	14.5	15		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	9.5	-	14.5	0.00037		F	#	0.000017	
Sodium	mg/L	03/12/2009	N001	9.5	-	14.5	1100		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	9.5	-	14.5	5923		F	#		
Strontium	mg/L	03/12/2009	N001	9.5	-	14.5	10		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	9.5	-	14.5	2800		F	#	50	
Temperature	C	03/12/2009	N001	9.5	-	14.5	10.42		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	9.5	-	14.5	4700		F	#	80	
Turbidity	NTU	03/12/2009	N001	9.5	-	14.5	6.48		F	#		
Uranium	mg/L	03/12/2009	N001	9.5	-	14.5	0.043		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0628 WELL Center of floodplain, well nest, just N of wetland

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	6	-	10	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	6	-	10	220		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	6	-	10	140		F	#	20	
Magnesium	mg/L	03/12/2009	N001	6	-	10	92		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	6	-	10	4.1		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	6	-	10	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	6	-	10	-66.6		F	#		
pH	s.u.	03/12/2009	N001	6	-	10	7.34		F	#		
Potassium	mg/L	03/12/2009	N001	6	-	10	20		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	6	-	10	0.002		F	#	0.000017	
Sodium	mg/L	03/12/2009	N001	6	-	10	1600		F	#	0.4	
Specific Conductance	umhos /cm	03/12/2009	N001	6	-	10	9056		F	#		
Strontium	mg/L	03/12/2009	N001	6	-	10	12		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	6	-	10	4800		F	#	50	
Temperature	C	03/12/2009	N001	6	-	10	8.23		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	6	-	10	7600		F	#	200	
Turbidity	NTU	03/12/2009	N001	6	-	10	9.08		F	#		
Uranium	mg/L	03/12/2009	N001	6	-	10	0.08		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0630 WELL Just N of mouth of Bob Lee Wash, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	5	-	10	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	5	-	10	170		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	5	-	10	67		F	#	20	
Magnesium	mg/L	03/12/2009	N001	5	-	10	36		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	5	-	10	1.2		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	5	-	10	0.019		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	5	-	10	-51.1		F	#		
pH	s.u.	03/12/2009	N001	5	-	10	7.55		F	#		
Potassium	mg/L	03/12/2009	N001	5	-	10	11		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	5	-	10	0.0046		F	#	0.000017	
Sodium	mg/L	03/12/2009	N001	5	-	10	850		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	5	-	10	4630		F	#		
Strontium	mg/L	03/12/2009	N001	5	-	10	9.2		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	5	-	10	2200		F	#	50	
Temperature	C	03/12/2009	N001	5	-	10	9.63		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	5	-	10	3700		F	#	80	
Turbidity	NTU	03/12/2009	N001	5	-	10	3.4		F	#		
Uranium	mg/L	03/12/2009	N001	5	-	10	0.026		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0734 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	0001	2	-	4	0.1	U	FQ	#	0.1	
Calcium	mg/L	03/12/2009	0001	2	-	4	390		FQ	#	0.04	
Chloride	mg/L	03/12/2009	0001	2	-	4	230		FQ	#	40	
Magnesium	mg/L	03/12/2009	0001	2	-	4	400		FQ	#	0.054	
Manganese	mg/L	03/12/2009	0001	2	-	4	1.6		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	0001	2	-	4	3.2		FQ	#	0.05	
Oxidation Reduction Potential	mV	03/12/2009	N001	2	-	4	183		FQ	#		
pH	s.u.	03/12/2009	N001	2	-	4	7.15		FQ	#		
Potassium	mg/L	03/12/2009	0001	2	-	4	27		FQ	#	0.85	
Selenium	mg/L	03/12/2009	0001	2	-	4	0.016		FQ	#	0.000017	
Sodium	mg/L	03/12/2009	0001	2	-	4	2300		FQ	#	0.04	
Specific Conductance	umhos /cm	03/12/2009	N001	2	-	4	12400		FQ	#		
Strontium	mg/L	03/12/2009	0001	2	-	4	11		FQ	#	0.00044	
Sulfate	mg/L	03/12/2009	0001	2	-	4	7500		FQ	#	100	
Temperature	C	03/12/2009	N001	2	-	4	11.6		FQ	#		
Total Dissolved Solids	mg/L	03/12/2009	0001	2	-	4	12000		FQ	#	200	
Turbidity	NTU	03/12/2009	N001	2	-	4	12.1		FQ	#		
Uranium	mg/L	03/12/2009	0001	2	-	4	0.12		FQ	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0735 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	3	-	8	16		F	#	2	
Calcium	mg/L	03/10/2009	N001	3	-	8	510		F	#	0.04	
Chloride	mg/L	03/10/2009	N001	3	-	8	680		F	#	40	
Magnesium	mg/L	03/10/2009	N001	3	-	8	1400		F	#	0.054	
Manganese	mg/L	03/10/2009	N001	3	-	8	3.3		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	3	-	8	790		F	#	5	
Oxidation Reduction Potential	mV	03/10/2009	N001	3	-	8	269.5		F	#		
pH	s.u.	03/10/2009	N001	3	-	8	7.01		F	#		
Potassium	mg/L	03/10/2009	N001	3	-	8	74		F	#	0.85	
Selenium	mg/L	03/10/2009	N001	3	-	8	0.022		F	#	0.00017	
Sodium	mg/L	03/10/2009	N001	3	-	8	3900		F	#	0.4	
Specific Conductance	umhos /cm	03/10/2009	N001	3	-	8	21411		F	#		
Strontium	mg/L	03/10/2009	N001	3	-	8	12		F	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	3	-	8	12000		F	#	100	
Temperature	C	03/10/2009	N001	3	-	8	7.26		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	3	-	8	23000		F	#	400	
Turbidity	NTU	03/10/2009	N001	3	-	8	4.09		F	#		
Uranium	mg/L	03/10/2009	N001	3	-	8	0.44		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0736 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	3	-	5	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	3	-	5	380		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	3	-	5	99		F	#	20	
Magnesium	mg/L	03/12/2009	N001	3	-	5	160		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	3	-	5	0.54		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	3	-	5	0.026		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	3	-	5	-70.8		F	#		
pH	s.u.	03/12/2009	N001	3	-	5	7.34		F	#		
Potassium	mg/L	03/12/2009	N001	3	-	5	45		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	3	-	5	0.00012		UF	#	0.000017	
Sodium	mg/L	03/12/2009	N001	3	-	5	1300		F	#	0.2	
Specific Conductance	umhos /cm	03/12/2009	N001	3	-	5	8079		F	#		
Strontium	mg/L	03/12/2009	N001	3	-	5	6		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	3	-	5	4600		F	#	50	
Temperature	C	03/12/2009	N001	3	-	5	11.96		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	3	-	5	7100		F	#	200	
Turbidity	NTU	03/12/2009	N001	3	-	5	3.88		F	#		
Uranium	mg/L	03/12/2009	N001	3	-	5	0.081		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0768 WELL Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	4.58	-	7.08	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	4.58	-	7.08	380		F	#	0.04	
Chloride	mg/L	03/12/2009	N001	4.58	-	7.08	350		F	#	40	
Magnesium	mg/L	03/12/2009	N001	4.58	-	7.08	620		F	#	0.054	
Manganese	mg/L	03/12/2009	N001	4.58	-	7.08	0.96		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	4.58	-	7.08	0.034		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	4.58	-	7.08	-92.2		F	#		
pH	s.u.	03/12/2009	N001	4.58	-	7.08	7.39		F	#		
Potassium	mg/L	03/12/2009	N001	4.58	-	7.08	170		F	#	0.85	
Selenium	mg/L	03/12/2009	N001	4.58	-	7.08	0.0057		F	#	0.000017	
Sodium	mg/L	03/12/2009	N001	4.58	-	7.08	4900		F	#	0.4	
Specific Conductance	umhos /cm	03/12/2009	N001	4.58	-	7.08	21522		F	#		
Strontium	mg/L	03/12/2009	N001	4.58	-	7.08	11		F	#	0.00044	
Sulfate	mg/L	03/12/2009	N001	4.58	-	7.08	14000		F	#	100	
Temperature	C	03/12/2009	N001	4.58	-	7.08	10.63		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	4.58	-	7.08	22000		F	#	400	
Turbidity	NTU	03/12/2009	N001	4.58	-	7.08	9.23		F	#		
Uranium	mg/L	03/12/2009	N001	4.58	-	7.08	0.66		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0773 WELL Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	4	-	6.5	1.9		F	#	0.1	
Calcium	mg/L	03/10/2009	N001	4	-	6.5	450		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	4	-	6.5	60		F	#	10	
Magnesium	mg/L	03/10/2009	N001	4	-	6.5	300		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	4	-	6.5	0.012	B	UF	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	4	-	6.5	26		F	#	0.2	
Oxidation Reduction Potential	mV	03/10/2009	N001	4	-	6.5	81.6		F	#		
pH	s.u.	03/10/2009	N001	4	-	6.5	7.32		F	#		
Potassium	mg/L	03/10/2009	N001	4	-	6.5	44		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	4	-	6.5	0.032		F	#	0.00017	
Sodium	mg/L	03/10/2009	N001	4	-	6.5	430		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	4	-	6.5	4789		F	#		
Strontium	mg/L	03/10/2009	N001	4	-	6.5	3.4		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	4	-	6.5	2800		F	#	25	
Temperature	C	03/10/2009	N001	4	-	6.5	10.99		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	4	-	6.5	4800		F	#	80	
Turbidity	NTU	03/10/2009	N001	4	-	6.5	0.84		F	#		
Uranium	mg/L	03/10/2009	N001	4	-	6.5	0.68		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0775 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	4.25	-	6.75	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	N001	4.25	-	6.75	400		F	#	0.02	
Chloride	mg/L	03/11/2009	N001	4.25	-	6.75	170		F	#	20	
Magnesium	mg/L	03/11/2009	N001	4.25	-	6.75	410		F	#	0.027	
Manganese	mg/L	03/11/2009	N001	4.25	-	6.75	0.47		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	4.25	-	6.75	0.049		F	#	0.01	
Oxidation Reduction Potential	mV	03/11/2009	N001	4.25	-	6.75	-11.1		F	#		
pH	s.u.	03/11/2009	N001	4.25	-	6.75	7.37		F	#		
Potassium	mg/L	03/11/2009	N001	4.25	-	6.75	79		F	#	0.43	
Selenium	mg/L	03/11/2009	N001	4.25	-	6.75	0.0039		F	#	0.000017	
Sodium	mg/L	03/11/2009	N001	4.25	-	6.75	2000		F	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	4.25	-	6.75	11503		F	#		
Strontium	mg/L	03/11/2009	N001	4.25	-	6.75	6.3		F	#	0.00022	
Sulfate	mg/L	03/11/2009	N001	4.25	-	6.75	7100		F	#	50	
Temperature	C	03/11/2009	N001	4.25	-	6.75	13.05		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	4.25	-	6.75	11000		F	#	200	
Turbidity	NTU	03/11/2009	N001	4.25	-	6.75	3.04		F	#		
Uranium	mg/L	03/11/2009	N001	4.25	-	6.75	0.65		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0779 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	7	-	9.5	0.96		F	#	0.1	
Calcium	mg/L	03/11/2009	N001	7	-	9.5	280		F	#	0.04	
Chloride	mg/L	03/11/2009	N001	7	-	9.5	340		F	#	40	
Magnesium	mg/L	03/11/2009	N001	7	-	9.5	830		F	#	0.054	
Manganese	mg/L	03/11/2009	N001	7	-	9.5	2.8		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	7	-	9.5	34		F	#	0.2	
Oxidation Reduction Potential	mV	03/11/2009	N001	7	-	9.5	-181.5		F	#		
pH	s.u.	03/11/2009	N001	7	-	9.5	7.16		F	#		
Potassium	mg/L	03/11/2009	N001	7	-	9.5	98		F	#	0.85	
Selenium	mg/L	03/11/2009	N001	7	-	9.5	0.0093		F	#	0.000017	
Sodium	mg/L	03/11/2009	N001	7	-	9.5	2100		F	#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	7	-	9.5	12922		F	#		
Strontium	mg/L	03/11/2009	N001	7	-	9.5	7.9		F	#	0.00044	
Sulfate	mg/L	03/11/2009	N001	7	-	9.5	7600		F	#	100	
Temperature	C	03/11/2009	N001	7	-	9.5	12.3		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	7	-	9.5	13000		F	#	200	
Turbidity	NTU	03/11/2009	N001	7	-	9.5	1.29		F	#		
Uranium	mg/L	03/11/2009	N001	7	-	9.5	1.1		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0782R WELL Island area NW of US Hwy 666 bridge.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	4.71	-	9.46	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	4.71	-	9.46	94		F	#	0.004	
Chloride	mg/L	03/12/2009	N001	4.71	-	9.46	19		F	#	4	
Magnesium	mg/L	03/12/2009	N001	4.71	-	9.46	27		F	#	0.0054	
Manganese	mg/L	03/12/2009	N001	4.71	-	9.46	2.1		F	#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	4.71	-	9.46	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	4.71	-	9.46	32.3		F	#		
pH	s.u.	03/12/2009	N001	4.71	-	9.46	7.33		F	#		
Potassium	mg/L	03/12/2009	N001	4.71	-	9.46	3.4		F	#	0.085	
Selenium	mg/L	03/12/2009	N001	4.71	-	9.46	0.000074	B	UF	#	0.000017	
Sodium	mg/L	03/12/2009	N001	4.71	-	9.46	80	E	FJ	#	0.004	
Specific Conductance	umhos /cm	03/12/2009	N001	4.71	-	9.46	1160		F	#		
Strontium	mg/L	03/12/2009	N001	4.71	-	9.46	1.1		F	#	0.000044	
Sulfate	mg/L	03/12/2009	N001	4.71	-	9.46	380		F	#	10	
Temperature	C	03/12/2009	N001	4.71	-	9.46	9.96		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	4.71	-	9.46	720		F	#	20	
Turbidity	NTU	03/12/2009	N001	4.71	-	9.46	9.39		F	#		
Uranium	mg/L	03/12/2009	N001	4.71	-	9.46	0.0054		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0783R WELL Island area NW of US Hwy 666 bridge.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	4.375	-	9.375	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	4.375	-	9.375	71		F	#	0.004	
Chloride	mg/L	03/12/2009	N001	4.375	-	9.375	14		F	#	2	
Magnesium	mg/L	03/12/2009	N001	4.375	-	9.375	25		F	#	0.0054	
Manganese	mg/L	03/12/2009	N001	4.375	-	9.375	0.39		F	#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	4.375	-	9.375	0.012		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	4.375	-	9.375	77.6		F	#		
pH	s.u.	03/12/2009	N001	4.375	-	9.375	7.58		F	#		
Potassium	mg/L	03/12/2009	N001	4.375	-	9.375	3.2		F	#	0.085	
Selenium	mg/L	03/12/2009	N001	4.375	-	9.375	0.0012	E	F	#	0.000017	
Sodium	mg/L	03/12/2009	N001	4.375	-	9.375	100		F	#	0.004	
Specific Conductance	umhos /cm	03/12/2009	N001	4.375	-	9.375	964		F	#		
Strontium	mg/L	03/12/2009	N001	4.375	-	9.375	0.86		F	#	0.000044	
Sulfate	mg/L	03/12/2009	N001	4.375	-	9.375	340		F	#	5	
Temperature	C	03/12/2009	N001	4.375	-	9.375	11.9		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	4.375	-	9.375	680		F	#	20	
Turbidity	NTU	03/12/2009	N001	4.375	-	9.375	9.92		F	#		
Uranium	mg/L	03/12/2009	N001	4.375	-	9.375	0.007		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0792 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	6	-	8	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	N001	6	-	8	360		F	#	0.04	
Chloride	mg/L	03/11/2009	N001	6	-	8	290		F	#	40	
Magnesium	mg/L	03/11/2009	N001	6	-	8	670		F	#	0.054	
Manganese	mg/L	03/11/2009	N001	6	-	8	1.7		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	6	-	8	0.039		F	#	0.01	
Oxidation Reduction Potential	mV	03/11/2009	N001	6	-	8	41.1		F	#		
pH	s.u.	03/11/2009	N001	6	-	8	7.53		F	#		
Potassium	mg/L	03/11/2009	N001	6	-	8	89		F	#	0.85	
Selenium	mg/L	03/11/2009	N001	6	-	8	0.0062		F	#	0.000033	
Sodium	mg/L	03/11/2009	N001	6	-	8	3000		F	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	6	-	8	15050		F	#		
Strontium	mg/L	03/11/2009	N001	6	-	8	9.4		F	#	0.00044	
Sulfate	mg/L	03/11/2009	N001	6	-	8	9600		F	#	100	
Temperature	C	03/11/2009	N001	6	-	8	11.43		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	6	-	8	15000		F	#	400	
Turbidity	NTU	03/11/2009	N001	6	-	8	9.5		F	#		
Uranium	mg/L	03/11/2009	N001	6	-	8	0.92		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0797 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	7.3	-	9.3	0.1	UN	FQJ	#	0.1	
Calcium	mg/L	03/11/2009	N001	7.3	-	9.3	400		FQ	#	0.02	
Chloride	mg/L	03/11/2009	N001	7.3	-	9.3	210		FQ	#	20	
Magnesium	mg/L	03/11/2009	N001	7.3	-	9.3	96		FQ	#	0.027	
Manganese	mg/L	03/11/2009	N001	7.3	-	9.3	0.28		FQ	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	7.3	-	9.3	0.11		FQ	#	0.01	
Oxidation Reduction Potential	mV	03/11/2009	N001	7.3	-	9.3	158.6		FQ	#		
pH	s.u.	03/11/2009	N001	7.3	-	9.3	7.48		FQ	#		
Potassium	mg/L	03/11/2009	N001	7.3	-	9.3	11		FQ	#	0.43	
Selenium	mg/L	03/11/2009	N001	7.3	-	9.3	0.00015		FQ	#	0.000017	
Sodium	mg/L	03/11/2009	N001	7.3	-	9.3	1200		FQ	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	7.3	-	9.3	6763		FQ	#		
Strontium	mg/L	03/11/2009	N001	7.3	-	9.3	6.6		FQ	#	0.00022	
Sulfate	mg/L	03/11/2009	N001	7.3	-	9.3	3600		FQ	#	50	
Temperature	C	03/11/2009	N001	7.3	-	9.3	14.49		FQ	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	7.3	-	9.3	6100		FQ	#	200	
Turbidity	NTU	03/11/2009	N001	7.3	-	9.3	6.16		FQ	#		
Uranium	mg/L	03/11/2009	N001	7.3	-	9.3	0.026		FQ	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/11/2009	0001	5.6	-	15.4	0.1	U	FQ	#	0.1	
Calcium	mg/L	03/11/2009	0001	5.6	-	15.4	85		FQ	#	0.02	
Chloride	mg/L	03/11/2009	0001	5.6	-	15.4	74		FQ	#	10	
Magnesium	mg/L	03/11/2009	0001	5.6	-	15.4	21		FQ	#	0.027	
Manganese	mg/L	03/11/2009	0001	5.6	-	15.4	0.1		FQ	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	5.6	-	15.4	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	03/11/2009	N001	5.6	-	15.4	32.1		FQ	#		
pH	s.u.	03/11/2009	N001	5.6	-	15.4	7.49		FQ	#		
Potassium	mg/L	03/11/2009	0001	5.6	-	15.4	5.4		FQ	#	0.43	
Selenium	mg/L	03/11/2009	0001	5.6	-	15.4	0.0026		FQ	#	0.000017	
Sodium	mg/L	03/11/2009	0001	5.6	-	15.4	720		FQ	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	5.6	-	15.4	3919		FQ	#		
Strontium	mg/L	03/11/2009	0001	5.6	-	15.4	1.4		FQ	#	0.00022	
Sulfate	mg/L	03/11/2009	0001	5.6	-	15.4	1500		FQ	#	25	
Temperature	C	03/11/2009	N001	5.6	-	15.4	15.27		FQ	#		
Total Dissolved Solids	mg/L	03/11/2009	0001	5.6	-	15.4	2800		FQ	#	80	
Turbidity	NTU	03/11/2009	N001	5.6	-	15.4	187		FQ	#		
Uranium	mg/L	03/11/2009	0001	5.6	-	15.4	0.064		FQ	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0853 WELL S of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	10	-	15	13		F	#	2	
Calcium	mg/L	03/11/2009	N001	10	-	15	120		F	#	0.004	
Chloride	mg/L	03/11/2009	N001	10	-	15	16		F	#	4	
Magnesium	mg/L	03/11/2009	N001	10	-	15	34		F	#	0.0054	
Manganese	mg/L	03/11/2009	N001	10	-	15	0.49		F	#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	10	-	15	0.05		F	#	0.01	
Oxidation Reduction Potential	mV	03/11/2009	N001	10	-	15	-5.8		F	#		
pH	s.u.	03/11/2009	N001	10	-	15	7.38		F	#		
Potassium	mg/L	03/11/2009	N001	10	-	15	11	E	FJ	#	0.085	
Selenium	mg/L	03/11/2009	N001	10	-	15	0.000091	B	UF	#	0.000017	
Sodium	mg/L	03/11/2009	N001	10	-	15	84	E	FJ	#	0.004	
Specific Conductance	umhos /cm	03/11/2009	N001	10	-	15	1303		F	#		
Strontium	mg/L	03/11/2009	N001	10	-	15	1.3		F	#	0.000044	
Sulfate	mg/L	03/11/2009	N001	10	-	15	480		F	#	10	
Temperature	C	03/11/2009	N001	10	-	15	12.27		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	10	-	15	880		F	#	20	
Turbidity	NTU	03/11/2009	N001	10	-	15	2.28		F	#		
Uranium	mg/L	03/11/2009	N001	10	-	15	0.051		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0855 WELL NW part of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	4.9	-	14.9	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	4.9	-	14.9	220		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	4.9	-	14.9	72		F	#	20	
Magnesium	mg/L	03/12/2009	N001	4.9	-	14.9	67		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	4.9	-	14.9	1.2		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	4.9	-	14.9	0.29		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	4.9	-	14.9	158		F	#		
pH	s.u.	03/12/2009	N001	4.9	-	14.9	7.38		F	#		
Potassium	mg/L	03/12/2009	N001	4.9	-	14.9	12		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	4.9	-	14.9	0.02		F	#	0.000084	
Sodium	mg/L	03/12/2009	N001	4.9	-	14.9	930		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	4.9	-	14.9	5360		F	#		
Strontium	mg/L	03/12/2009	N001	4.9	-	14.9	6.9		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	4.9	-	14.9	2700		F	#	50	
Temperature	C	03/12/2009	N001	4.9	-	14.9	8.3		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	4.9	-	14.9	4500		F	#	80	
Turbidity	NTU	03/12/2009	N001	4.9	-	14.9	2.43		F	#		
Uranium	mg/L	03/12/2009	N001	4.9	-	14.9	0.07		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0856 WELL NW part of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	18.8	-	23.8	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	18.8	-	23.8	240		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	18.8	-	23.8	85		F	#	20	
Magnesium	mg/L	03/12/2009	N001	18.8	-	23.8	67		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	18.8	-	23.8	2		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	18.8	-	23.8	0.043		F	#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	18.8	-	23.8	163		F	#		
pH	s.u.	03/12/2009	N001	18.8	-	23.8	7.38		F	#		
Potassium	mg/L	03/12/2009	N001	18.8	-	23.8	17		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	18.8	-	23.8	0.00064		F	#	0.000017	
Sodium	mg/L	03/12/2009	N001	18.8	-	23.8	1000		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	18.8	-	23.8	5510		F	#		
Strontium	mg/L	03/12/2009	N001	18.8	-	23.8	6.8		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	18.8	-	23.8	2900		F	#	50	
Temperature	C	03/12/2009	N001	18.8	-	23.8	12.7		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	18.8	-	23.8	4700		F	#	80	
Turbidity	NTU	03/12/2009	N001	18.8	-	23.8	5.07		F	#		
Uranium	mg/L	03/12/2009	N001	18.8	-	23.8	0.079		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1089 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	4.8	-	14.8	0.62			#	0.1	
Calcium	mg/L	03/11/2009	N001	4.8	-	14.8	390			#	0.04	
Chloride	mg/L	03/11/2009	N001	4.8	-	14.8	250			#	40	
Magnesium	mg/L	03/11/2009	N001	4.8	-	14.8	630			#	0.054	
Manganese	mg/L	03/11/2009	N001	4.8	-	14.8	1.1			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	4.8	-	14.8	18			#	0.2	
Oxidation Reduction Potential	mV	03/11/2009	N001	4.8	-	14.8	65.4			#		
pH	s.u.	03/11/2009	N001	4.8	-	14.8	7.3			#		
Potassium	mg/L	03/11/2009	N001	4.8	-	14.8	64			#	0.85	
Selenium	mg/L	03/11/2009	N001	4.8	-	14.8	0.019			#	0.000084	
Sodium	mg/L	03/11/2009	N001	4.8	-	14.8	2100			#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	4.8	-	14.8	12046			#		
Strontium	mg/L	03/11/2009	N001	4.8	-	14.8	7			#	0.00044	
Sulfate	mg/L	03/11/2009	N001	4.8	-	14.8	7700			#	100	
Temperature	C	03/11/2009	N001	4.8	-	14.8	12.02			#		
Total Dissolved Solids	mg/L	03/11/2009	N001	4.8	-	14.8	12000			#	200	
Turbidity	NTU	03/11/2009	N001	4.8	-	14.8	1.01			#		
Uranium	mg/L	03/11/2009	N001	4.8	-	14.8	0.79			#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1104 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	-	3.4			#	0.1	
Calcium	mg/L	03/11/2009	N001	-	440			#	0.04	
Chloride	mg/L	03/11/2009	N001	-	540			#	40	
Magnesium	mg/L	03/11/2009	N001	-	1400			#	0.054	
Manganese	mg/L	03/11/2009	N001	-	2.5			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	-	95			#	1	
Oxidation Reduction Potential	mV	03/11/2009	N001	-	-38			#		
pH	s.u.	03/11/2009	N001	-	7.32			#		
Potassium	mg/L	03/11/2009	N001	-	87			#	0.85	
Selenium	mg/L	03/11/2009	N001	-	0.037			#	0.000084	
Sodium	mg/L	03/11/2009	N001	-	2600			#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	-	14026			#		
Strontium	mg/L	03/11/2009	N001	-	9.7			#	0.00044	
Sulfate	mg/L	03/11/2009	N001	-	12000			#	100	
Temperature	C	03/11/2009	N001	-	11.69			#		
Total Dissolved Solids	mg/L	03/11/2009	N001	-	20000			#	400	
Turbidity	NTU	03/11/2009	N001	-	1.89			#		
Uranium	mg/L	03/11/2009	N001	-	1.8			#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1105 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	4.5	-	14.5	18		F	#	2	
Calcium	mg/L	03/11/2009	N001	4.5	-	14.5	420		F	#	0.04	
Chloride	mg/L	03/11/2009	N001	4.5	-	14.5	370		F	#	40	
Magnesium	mg/L	03/11/2009	N001	4.5	-	14.5	1400		F	#	0.054	
Manganese	mg/L	03/11/2009	N001	4.5	-	14.5	3.9		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	4.5	-	14.5	380		F	#	2	
Oxidation Reduction Potential	mV	03/11/2009	N001	4.5	-	14.5	114.5		F	#		
pH	s.u.	03/11/2009	N001	4.5	-	14.5	6.87		F	#		
Potassium	mg/L	03/11/2009	N001	4.5	-	14.5	100		F	#	0.85	
Selenium	mg/L	03/11/2009	N001	4.5	-	14.5	0.069		F	#	0.00017	
Sodium	mg/L	03/11/2009	N001	4.5	-	14.5	2000		F	#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	4.5	-	14.5	15869		F	#		
Strontium	mg/L	03/11/2009	N001	4.5	-	14.5	9.7		F	#	0.00044	
Sulfate	mg/L	03/11/2009	N001	4.5	-	14.5	9900		F	#	100	
Temperature	C	03/11/2009	N001	4.5	-	14.5	13.26		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	4.5	-	14.5	17000		F	#	400	
Turbidity	NTU	03/11/2009	N001	4.5	-	14.5	0.98		F	#		
Uranium	mg/L	03/11/2009	N001	4.5	-	14.5	1.6		F	#	0.00015	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1109 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	0	-	0	20			#	2	
Calcium	mg/L	03/10/2009	N001	0	-	0	85			#	0.004	
Chloride	mg/L	03/10/2009	N001	0	-	0	39			#	4	
Magnesium	mg/L	03/10/2009	N001	0	-	0	120			#	0.0054	
Manganese	mg/L	03/10/2009	N001	0	-	0	0.39			#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	0	-	0	33			#	0.5	
Oxidation Reduction Potential	mV	03/10/2009	N001	0	-	0	290			#		
pH	s.u.	03/10/2009	N001	0	-	0	7.53			#		
Potassium	mg/L	03/10/2009	N001	0	-	0	13			#	0.085	
Selenium	mg/L	03/10/2009	N001	0	-	0	0.009			#	0.000084	
Sodium	mg/L	03/10/2009	N001	0	-	0	160			#	0.004	
Specific Conductance	umhos /cm	03/10/2009	N001	0	-	0	2075			#		
Strontium	mg/L	03/10/2009	N001	0	-	0	1.2			#	0.000044	
Sulfate	mg/L	03/10/2009	N001	0	-	0	730			#	10	
Temperature	C	03/10/2009	N001	0	-	0	10.48			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	0	-	0	1400			#	40	
Turbidity	NTU	03/10/2009	N001	0	-	0	8.75			#		
Uranium	mg/L	03/10/2009	N001	0	-	0	0.12			#	0.000015	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1110 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	0	-	0	2.5			#	0.1	
Calcium	mg/L	03/11/2009	N001	0	-	0	380			#	0.04	
Chloride	mg/L	03/11/2009	N001	0	-	0	330			#	40	
Magnesium	mg/L	03/11/2009	N001	0	-	0	970			#	0.054	
Manganese	mg/L	03/11/2009	N001	0	-	0	1.1			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	0	-	0	88			#	1	
Oxidation Reduction Potential	mV	03/11/2009	N001	0	-	0	145.6			#		
pH	s.u.	03/11/2009	N001	0	-	0	7.4			#		
Potassium	mg/L	03/11/2009	N001	0	-	0	67			#	0.85	
Selenium	mg/L	03/11/2009	N001	0	-	0	0.51			#	0.0017	
Sodium	mg/L	03/11/2009	N001	0	-	0	1800			#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	0	-	0	14685			#		
Strontium	mg/L	03/11/2009	N001	0	-	0	8.9			#	0.00044	
Sulfate	mg/L	03/11/2009	N001	0	-	0	7700			#	100	
Temperature	C	03/11/2009	N001	0	-	0	10.66			#		
Total Dissolved Solids	mg/L	03/11/2009	N001	0	-	0	14000			#	200	
Turbidity	NTU	03/11/2009	N001	0	-	0	6.48			#		
Uranium	mg/L	03/11/2009	N001	0	-	0	0.99			#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1111 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	7	-	12	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	N001	7	-	12	380		F	#	0.04	
Chloride	mg/L	03/11/2009	N001	7	-	12	380		F	#	40	
Magnesium	mg/L	03/11/2009	N001	7	-	12	1000		F	#	0.054	
Manganese	mg/L	03/11/2009	N001	7	-	12	0.48		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	7	-	12	14		F	#	0.2	
Oxidation Reduction Potential	mV	03/11/2009	N001	7	-	12	146		F	#		
pH	s.u.	03/11/2009	N001	7	-	12	6.91		F	#		
Potassium	mg/L	03/11/2009	N001	7	-	12	60		F	#	0.85	
Selenium	mg/L	03/11/2009	N001	7	-	12	0.51		F	#	0.0017	
Sodium	mg/L	03/11/2009	N001	7	-	12	2000		F	#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	7	-	12	13216		F	#		
Strontium	mg/L	03/11/2009	N001	7	-	12	10		F	#	0.00044	
Sulfate	mg/L	03/11/2009	N001	7	-	12	8300		F	#	100	
Temperature	C	03/11/2009	N001	7	-	12	9.12		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	7	-	12	14000		F	#	200	
Turbidity	NTU	03/11/2009	N001	7	-	12	1.74		F	#		
Uranium	mg/L	03/11/2009	N001	7	-	12	0.91		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1112 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0002	7	-	12	30		F	#	2	
Ammonia Total as N	mg/L	03/11/2009	N001	7	-	12	31		F	#	2	
Calcium	mg/L	03/11/2009	0002	7	-	12	390		F	#	0.04	
Calcium	mg/L	03/11/2009	N001	7	-	12	400		F	#	0.04	
Chloride	mg/L	03/11/2009	0002	7	-	12	370		F	#	40	
Chloride	mg/L	03/11/2009	N001	7	-	12	360		F	#	40	
Magnesium	mg/L	03/11/2009	0002	7	-	12	1600		F	#	0.054	
Magnesium	mg/L	03/11/2009	N001	7	-	12	1700		F	#	0.054	
Manganese	mg/L	03/11/2009	0002	7	-	12	2.5		F	#	0.00097	
Manganese	mg/L	03/11/2009	N001	7	-	12	3		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0002	7	-	12	540		F	#	5	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	7	-	12	560		F	#	5	
Oxidation Reduction Potential	mV	03/11/2009	N001	7	-	12	165.5		F	#		
pH	s.u.	03/11/2009	N001	7	-	12	6.94		F	#		
Potassium	mg/L	03/11/2009	0002	7	-	12	130		F	#	0.85	
Potassium	mg/L	03/11/2009	N001	7	-	12	130		F	#	0.85	
Selenium	mg/L	03/11/2009	0002	7	-	12	0.49		FJ	#	0.0017	
Selenium	mg/L	03/11/2009	N001	7	-	12	0.33		F	#	0.00084	
Sodium	mg/L	03/11/2009	0002	7	-	12	2000		F	#	0.04	
Sodium	mg/L	03/11/2009	N001	7	-	12	1900		F	#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	7	-	12	16492		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1112 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Strontium	mg/L	03/11/2009	0002	7	-	12	9.2		F	#	0.00044	
Strontium	mg/L	03/11/2009	N001	7	-	12	9.7		F	#	0.00044	
Sulfate	mg/L	03/11/2009	0002	7	-	12	10000		F	#	100	
Sulfate	mg/L	03/11/2009	N001	7	-	12	9900		F	#	100	
Temperature	C	03/11/2009	N001	7	-	12	9.1		F	#		
Total Dissolved Solids	mg/L	03/11/2009	0002	7	-	12	18000		F	#	400	
Total Dissolved Solids	mg/L	03/11/2009	N001	7	-	12	18000		F	#	400	
Turbidity	NTU	03/11/2009	N001	7	-	12	1.59		F	#		
Uranium	mg/L	03/11/2009	0002	7	-	12	1.7		F	#	0.00015	
Uranium	mg/L	03/11/2009	N001	7	-	12	1.7		F	#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1113 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	7	-	12	0.83		F	#	0.1	
Calcium	mg/L	03/10/2009	N001	7	-	12	430		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	7	-	12	190		F	#	20	
Magnesium	mg/L	03/10/2009	N001	7	-	12	920		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	7	-	12	0.045		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	7	-	12	380		F	#	2	
Oxidation Reduction Potential	mV	03/10/2009	N001	7	-	12	79.6		F	#		
pH	s.u.	03/10/2009	N001	7	-	12	7.3		F	#		
Potassium	mg/L	03/10/2009	N001	7	-	12	130		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	7	-	12	0.0087		F	#	0.000017	
Sodium	mg/L	03/10/2009	N001	7	-	12	1100		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	7	-	12	10498		F	#		
Strontium	mg/L	03/10/2009	N001	7	-	12	7.8		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	7	-	12	5400		F	#	50	
Temperature	C	03/10/2009	N001	7	-	12	7.53		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	7	-	12	11000		F	#	200	
Turbidity	NTU	03/10/2009	N001	7	-	12	7.63		F	#		
Uranium	mg/L	03/10/2009	N001	7	-	12	1.1		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1114 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	7	-	12	84		F	#	10	
Calcium	mg/L	03/10/2009	N001	7	-	12	150		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	7	-	12	77		F	#	10	
Magnesium	mg/L	03/10/2009	N001	7	-	12	260		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	7	-	12	1.5		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	7	-	12	27		F	#	1	
Oxidation Reduction Potential	mV	03/10/2009	N001	7	-	12	17.6		F	#		
pH	s.u.	03/10/2009	N001	7	-	12	7.25		F	#		
Potassium	mg/L	03/10/2009	N001	7	-	12	34		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	7	-	12	0.0042		F	#	0.000017	
Sodium	mg/L	03/10/2009	N001	7	-	12	270		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	7	-	12	4055		F	#		
Strontium	mg/L	03/10/2009	N001	7	-	12	2.8		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	7	-	12	1800		F	#	25	
Temperature	C	03/10/2009	N001	7	-	12	8		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	7	-	12	3000		F	#	80	
Turbidity	NTU	03/10/2009	N001	7	-	12	8.36		F	#		
Uranium	mg/L	03/10/2009	N001	7	-	12	0.52		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1115 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	0002	7	-	12	65		F	#	10	
Ammonia Total as N	mg/L	03/10/2009	N001	7	-	12	65		F	#	20	
Calcium	mg/L	03/10/2009	0002	7	-	12	140		F	#	0.02	
Calcium	mg/L	03/10/2009	N001	7	-	12	140		F	#	0.02	
Chloride	mg/L	03/10/2009	0002	7	-	12	62		F	#	10	
Chloride	mg/L	03/10/2009	N001	7	-	12	66		F	#	10	
Magnesium	mg/L	03/10/2009	0002	7	-	12	190		F	#	0.027	
Magnesium	mg/L	03/10/2009	N001	7	-	12	200		F	#	0.027	
Manganese	mg/L	03/10/2009	0002	7	-	12	0.88		F	#	0.00048	
Manganese	mg/L	03/10/2009	N001	7	-	12	0.87		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	0002	7	-	12	47		F	#	0.5	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	7	-	12	48		F	#	0.5	
Oxidation Reduction Potential	mV	03/10/2009	N001	7	-	12	313.1		F	#		
pH	s.u.	03/10/2009	N001	7	-	12	7.17		F	#		
Potassium	mg/L	03/10/2009	0002	7	-	12	33		F	#	0.43	
Potassium	mg/L	03/10/2009	N001	7	-	12	30		F	#	0.43	
Selenium	mg/L	03/10/2009	0002	7	-	12	0.018		F	#	0.000084	
Selenium	mg/L	03/10/2009	N001	7	-	12	0.015		F	#	0.000084	
Sodium	mg/L	03/10/2009	0002	7	-	12	320		F	#	0.02	
Sodium	mg/L	03/10/2009	N001	7	-	12	300		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	7	-	12	3734		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1115 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Strontium	mg/L	03/10/2009	0002	7	-	12	2.2		F	#	0.00022	
Strontium	mg/L	03/10/2009	N001	7	-	12	2.1		F	#	0.00022	
Sulfate	mg/L	03/10/2009	0002	7	-	12	1500		F	#	25	
Sulfate	mg/L	03/10/2009	N001	7	-	12	1500		F	#	25	
Temperature	C	03/10/2009	N001	7	-	12	10.71		F	#		
Total Dissolved Solids	mg/L	03/10/2009	0002	7	-	12	2900		F	#	80	
Total Dissolved Solids	mg/L	03/10/2009	N001	7	-	12	2800		F	#	80	
Turbidity	NTU	03/10/2009	N001	7	-	12	2.02		F	#		
Uranium	mg/L	03/10/2009	0002	7	-	12	0.32		F	#	0.000031	
Uranium	mg/L	03/10/2009	N001	7	-	12	0.31		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1116 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	0001	7	-	12	520		FQ	#	20	
Calcium	mg/L	03/10/2009	0001	7	-	12	450		FQ	#	0.04	
Chloride	mg/L	03/10/2009	0001	7	-	12	360		FQ	#	40	
Magnesium	mg/L	03/10/2009	0001	7	-	12	1600		FQ	#	0.054	
Manganese	mg/L	03/10/2009	0001	7	-	12	4.2		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	0001	7	-	12	600		FQ	#	5	
Oxidation Reduction Potential	mV	03/10/2009	N001	7	-	12	276.7		FQ	#		
pH	s.u.	03/10/2009	N001	7	-	12	6.55		FQ	#		
Potassium	mg/L	03/10/2009	0001	7	-	12	180		FQ	#	0.85	
Selenium	mg/L	03/10/2009	0001	7	-	12	0.019		FQ	#	0.000017	
Sodium	mg/L	03/10/2009	0001	7	-	12	1700		FQ	#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	7	-	12	17265		FQ	#		
Strontium	mg/L	03/10/2009	0001	7	-	12	9.4		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	0001	7	-	12	9400		FQ	#	100	
Temperature	C	03/10/2009	N001	7	-	12	10.23		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	0001	7	-	12	17000		FQ	#	400	
Turbidity	NTU	03/10/2009	N001	7	-	12	23.5		FQ	#		
Uranium	mg/L	03/10/2009	0001	7	-	12	1.6		FQ	#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1117 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	7	-	12	0.1	U	F	#	0.1	
Calcium	mg/L	03/10/2009	N001	7	-	12	69		F	#	0.004	
Chloride	mg/L	03/10/2009	N001	7	-	12	15		F	#	1	
Magnesium	mg/L	03/10/2009	N001	7	-	12	12		F	#	0.0054	
Manganese	mg/L	03/10/2009	N001	7	-	12	0.8		F	#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	7	-	12	0.49		F	#	0.01	
Oxidation Reduction Potential	mV	03/10/2009	N001	7	-	12	211		F	#		
pH	s.u.	03/10/2009	N001	7	-	12	7.48		F	#		
Potassium	mg/L	03/10/2009	N001	7	-	12	1.8		F	#	0.085	
Selenium	mg/L	03/10/2009	N001	7	-	12	0.0048		F	#	0.000017	
Sodium	mg/L	03/10/2009	N001	7	-	12	38		FJ	#	0.004	
Specific Conductance	umhos /cm	03/10/2009	N001	7	-	12	637		F	#		
Strontium	mg/L	03/10/2009	N001	7	-	12	0.74		F	#	0.000044	
Sulfate	mg/L	03/10/2009	N001	7	-	12	160		F	#	2.5	
Temperature	C	03/10/2009	N001	7	-	12	8.25		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	7	-	12	400		F	#	20	
Turbidity	NTU	03/10/2009	N001	7	-	12	2.11		F	#		
Uranium	mg/L	03/10/2009	N001	7	-	12	0.0078	E	F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1132 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	6.07	-	11.07	1.1		F	#	0.1	
Calcium	mg/L	03/10/2009	N001	6.07	-	11.07	56		F	#	0.004	
Chloride	mg/L	03/10/2009	N001	6.07	-	11.07	15		F	#	1	
Magnesium	mg/L	03/10/2009	N001	6.07	-	11.07	20		F	#	0.0054	
Manganese	mg/L	03/10/2009	N001	6.07	-	11.07	0.29		F	#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	6.07	-	11.07	0.16		F	#	0.01	
Oxidation Reduction Potential	mV	03/10/2009	N001	6.07	-	11.07	-111.5		F	#		
pH	s.u.	03/10/2009	N001	6.07	-	11.07	7.74		F	#		
Potassium	mg/L	03/10/2009	N001	6.07	-	11.07	2.4		F	#	0.085	
Selenium	mg/L	03/10/2009	N001	6.07	-	11.07	0.00092	E	F	#	0.000017	
Sodium	mg/L	03/10/2009	N001	6.07	-	11.07	37		F	#	0.004	
Specific Conductance	umhos /cm	03/10/2009	N001	6.07	-	11.07	624		F	#		
Strontium	mg/L	03/10/2009	N001	6.07	-	11.07	0.71		F	#	0.000044	
Sulfate	mg/L	03/10/2009	N001	6.07	-	11.07	160		F	#	2.5	
Temperature	C	03/10/2009	N001	6.07	-	11.07	9.87		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	6.07	-	11.07	390		F	#	20	
Turbidity	NTU	03/10/2009	N001	6.07	-	11.07	3.11		F	#		
Uranium	mg/L	03/10/2009	N001	6.07	-	11.07	0.018		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1133 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	6.24	-	11.24	140		F	#	20	
Calcium	mg/L	03/10/2009	N001	6.24	-	11.24	290		F	#	0.04	
Chloride	mg/L	03/10/2009	N001	6.24	-	11.24	340		F	#	40	
Magnesium	mg/L	03/10/2009	N001	6.24	-	11.24	1000		F	#	0.054	
Manganese	mg/L	03/10/2009	N001	6.24	-	11.24	2.4		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	6.24	-	11.24	480		F	#	5	
Oxidation Reduction Potential	mV	03/10/2009	N001	6.24	-	11.24	356.2		F	#		
pH	s.u.	03/10/2009	N001	6.24	-	11.24	6.89		F	#		
Potassium	mg/L	03/10/2009	N001	6.24	-	11.24	80		F	#	0.85	
Selenium	mg/L	03/10/2009	N001	6.24	-	11.24	0.025		F	#	0.000084	
Sodium	mg/L	03/10/2009	N001	6.24	-	11.24	1400		F	#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	6.24	-	11.24	12464		F	#		
Strontium	mg/L	03/10/2009	N001	6.24	-	11.24	5.6		F	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	6.24	-	11.24	6600		F	#	100	
Temperature	C	03/10/2009	N001	6.24	-	11.24	10.93		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	6.24	-	11.24	12000		F	#	200	
Turbidity	NTU	03/10/2009	N001	6.24	-	11.24	2.51		F	#		
Uranium	mg/L	03/10/2009	N001	6.24	-	11.24	0.92		F	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1134 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	8.16	-	13.16	0.59		F	#	0.1	
Calcium	mg/L	03/10/2009	N001	8.16	-	13.16	74		F	#	0.004	
Chloride	mg/L	03/10/2009	N001	8.16	-	13.16	17		F	#	1	
Magnesium	mg/L	03/10/2009	N001	8.16	-	13.16	17		F	#	0.0054	
Manganese	mg/L	03/10/2009	N001	8.16	-	13.16	0.49		F	#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	8.16	-	13.16	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	03/10/2009	N001	8.16	-	13.16	-111		F	#		
pH	s.u.	03/10/2009	N001	8.16	-	13.16	7.37		F	#		
Potassium	mg/L	03/10/2009	N001	8.16	-	13.16	2.3		F	#	0.085	
Selenium	mg/L	03/10/2009	N001	8.16	-	13.16	0.000099	B	UF	#	0.000017	
Sodium	mg/L	03/10/2009	N001	8.16	-	13.16	44		F	#	0.004	
Specific Conductance	umhos /cm	03/10/2009	N001	8.16	-	13.16	692		F	#		
Strontium	mg/L	03/10/2009	N001	8.16	-	13.16	0.89		F	#	0.000044	
Sulfate	mg/L	03/10/2009	N001	8.16	-	13.16	120		F	#	2.5	
Temperature	C	03/10/2009	N001	8.16	-	13.16	10.92		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	8.16	-	13.16	440		F	#	20	
Turbidity	NTU	03/10/2009	N001	8.16	-	13.16	0.81		F	#		
Uranium	mg/L	03/10/2009	N001	8.16	-	13.16	0.013		F	#	0.0000031	

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.

Groundwater Quality Data
Terrace Locations

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Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0603 WELL Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	25.9	-	35.9	920		F	#	20	
Calcium	mg/L	03/12/2009	N001	25.9	-	35.9	910		F	#	0.04	
Chloride	mg/L	03/12/2009	N001	25.9	-	35.9	180		F	#	40	
Magnesium	mg/L	03/12/2009	N001	25.9	-	35.9	640		F	#	0.054	
Manganese	mg/L	03/12/2009	N001	25.9	-	35.9	55		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	25.9	-	35.9	2000		F	#	20	
Oxidation Reduction Potential	mV	03/12/2009	N001	25.9	-	35.9	305		F	#		
pH	s.u.	03/12/2009	N001	25.9	-	35.9	6.32		F	#		
Potassium	mg/L	03/12/2009	N001	25.9	-	35.9	150		F	#	0.85	
Selenium	mg/L	03/12/2009	N001	25.9	-	35.9	0.087		F	#	0.00017	
Sodium	mg/L	03/12/2009	N001	25.9	-	35.9	700		F	#	0.04	
Specific Conductance	umhos /cm	03/12/2009	N001	25.9	-	35.9	17375		F	#		
Strontium	mg/L	03/12/2009	N001	25.9	-	35.9	4.7		F	#	0.00044	
Sulfate	mg/L	03/12/2009	N001	25.9	-	35.9	3000		F	#	100	
Temperature	C	03/12/2009	N001	25.9	-	35.9	14.9		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	25.9	-	35.9	14000		F	#	400	
Turbidity	NTU	03/12/2009	N001	25.9	-	35.9	1.18		F	#		
Uranium	mg/L	03/12/2009	N001	25.9	-	35.9	0.0065		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0648 WELL Artesian well W of Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	1482	-	1777	0.49			#	0.1	
Calcium	mg/L	03/12/2009	N001	1482	-	1777	110			#	0.02	
Chloride	mg/L	03/12/2009	N001	1482	-	1777	56			#	10	
Magnesium	mg/L	03/12/2009	N001	1482	-	1777	13			#	0.027	
Manganese	mg/L	03/12/2009	N001	1482	-	1777	0.084			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	1482	-	1777	0.01	U		#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	1482	-	1777	159			#		
pH	s.u.	03/12/2009	N001	1482	-	1777	7.83			#		
Potassium	mg/L	03/12/2009	N001	1482	-	1777	11			#	0.43	
Selenium	mg/L	03/12/2009	N001	1482	-	1777	0.000037	B	U	#	0.000017	
Sodium	mg/L	03/12/2009	N001	1482	-	1777	770			#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	1482	-	1777	4020			#		
Strontium	mg/L	03/12/2009	N001	1482	-	1777	12			#	0.00022	
Sulfate	mg/L	03/12/2009	N001	1482	-	1777	2200			#	25	
Temperature	C	03/12/2009	N001	1482	-	1777	28.6			#		
Total Dissolved Solids	mg/L	03/12/2009	N001	1482	-	1777	3100			#	80	
Turbidity	NTU	03/12/2009	N001	1482	-	1777	0.79			#		
Uranium	mg/L	03/12/2009	N001	1482	-	1777	0.000029	B	U	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0725 WELL West side, lower Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	7.5	-	17.5	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	N001	7.5	-	17.5	250		F	#	0.02	
Chloride	mg/L	03/11/2009	N001	7.5	-	17.5	69		F	#	10	
Magnesium	mg/L	03/11/2009	N001	7.5	-	17.5	65		F	#	0.027	
Manganese	mg/L	03/11/2009	N001	7.5	-	17.5	0.03		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	7.5	-	17.5	2.3		F	#	0.05	
Oxidation Reduction Potential	mV	03/11/2009	N001	7.5	-	17.5	102		F	#		
pH	s.u.	03/11/2009	N001	7.5	-	17.5	7.24		F	#		
Potassium	mg/L	03/11/2009	N001	7.5	-	17.5	11		F	#	0.43	
Selenium	mg/L	03/11/2009	N001	7.5	-	17.5	0.0065		F	#	0.000017	
Sodium	mg/L	03/11/2009	N001	7.5	-	17.5	910		F	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	7.5	-	17.5	5115		F	#		
Strontium	mg/L	03/11/2009	N001	7.5	-	17.5	10		F	#	0.00022	
Sulfate	mg/L	03/11/2009	N001	7.5	-	17.5	2800		F	#	25	
Temperature	C	03/11/2009	N001	7.5	-	17.5	11.3		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	7.5	-	17.5	4300		F	#	80	
Turbidity	NTU	03/11/2009	N001	7.5	-	17.5	1.68		F	#		
Uranium	mg/L	03/11/2009	N001	7.5	-	17.5	0.062		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0726 WELL West side, upper Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	27.2	-	37.2	0.34		F	#	0.1	
Calcium	mg/L	03/11/2009	N001	27.2	-	37.2	350		F	#	0.02	
Chloride	mg/L	03/11/2009	N001	27.2	-	37.2	200		F	#	20	
Magnesium	mg/L	03/11/2009	N001	27.2	-	37.2	310		F	#	0.027	
Manganese	mg/L	03/11/2009	N001	27.2	-	37.2	0.61		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	27.2	-	37.2	2.2		F	#	0.05	
Oxidation Reduction Potential	mV	03/11/2009	N001	27.2	-	37.2	83		F	#		
pH	s.u.	03/11/2009	N001	27.2	-	37.2	7.04		F	#		
Potassium	mg/L	03/11/2009	N001	27.2	-	37.2	41		F	#	0.43	
Selenium	mg/L	03/11/2009	N001	27.2	-	37.2	0.0028		F	#	0.000017	
Sodium	mg/L	03/11/2009	N001	27.2	-	37.2	1300		F	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	27.2	-	37.2	8775		F	#		
Strontium	mg/L	03/11/2009	N001	27.2	-	37.2	6.4		F	#	0.00022	
Sulfate	mg/L	03/11/2009	N001	27.2	-	37.2	5200		F	#	50	
Temperature	C	03/11/2009	N001	27.2	-	37.2	16.3		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	27.2	-	37.2	8100		F	#	200	
Turbidity	NTU	03/11/2009	N001	27.2	-	37.2	6.3		F	#		
Uranium	mg/L	03/11/2009	N001	27.2	-	37.2	0.022		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0727 WELL West side, upper Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0001	6.7	-	16.7	0.59		FQ	#	0.1	
Calcium	mg/L	03/11/2009	0001	6.7	-	16.7	380		FQ	#	0.04	
Chloride	mg/L	03/11/2009	0001	6.7	-	16.7	420		FQ	#	40	
Magnesium	mg/L	03/11/2009	0001	6.7	-	16.7	1600		FQ	#	0.054	
Manganese	mg/L	03/11/2009	0001	6.7	-	16.7	1		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	6.7	-	16.7	150		FQ	#	1	
Oxidation Reduction Potential	mV	03/11/2009	N001	6.7	-	16.7	138		FQ	#		
pH	s.u.	03/11/2009	N001	6.7	-	16.7	6.55		FQ	#		
Potassium	mg/L	03/11/2009	0001	6.7	-	16.7	77		FQ	#	0.85	
Selenium	mg/L	03/11/2009	0001	6.7	-	16.7	0.0012		FQ	#	0.000084	
Sodium	mg/L	03/11/2009	0001	6.7	-	16.7	2500		FQ	#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	6.7	-	16.7	16950		FQ	#		
Strontium	mg/L	03/11/2009	0001	6.7	-	16.7	12		FQ	#	0.00044	
Sulfate	mg/L	03/11/2009	0001	6.7	-	16.7	12000		FQ	#	100	
Temperature	C	03/11/2009	N001	6.7	-	16.7	15		FQ	#		
Total Dissolved Solids	mg/L	03/11/2009	0001	6.7	-	16.7	20000		FQ	#	400	
Turbidity	NTU	03/11/2009	N001	6.7	-	16.7	12.7		FQ	#		
Uranium	mg/L	03/11/2009	0001	6.7	-	16.7	0.27		FQ	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0728 WELL W of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	17	-	27	97		F	#	20	
Calcium	mg/L	03/10/2009	N001	17	-	27	490		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	17	-	27	82		F	#	20	
Magnesium	mg/L	03/10/2009	N001	17	-	27	780		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	17	-	27	1.3		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	17	-	27	200		F	#	2	
Oxidation Reduction Potential	mV	03/10/2009	N001	17	-	27	230		F	#		
pH	s.u.	03/10/2009	N001	17	-	27	6.79		F	#		
Potassium	mg/L	03/10/2009	N001	17	-	27	95		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	17	-	27	0.0016		F	#	0.000017	
Sodium	mg/L	03/10/2009	N001	17	-	27	750		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	17	-	27	6925		F	#		
Strontium	mg/L	03/10/2009	N001	17	-	27	7		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	17	-	27	4900		F	#	50	
Temperature	C	03/10/2009	N001	17	-	27	14.4		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	17	-	27	8200		F	#	200	
Turbidity	NTU	03/10/2009	N001	17	-	27	1.85		F	#		
Uranium	mg/L	03/10/2009	N001	17	-	27	0.27		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0731 WELL SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	17	-	27	32		F	#	5	
Calcium	mg/L	03/10/2009	N001	17	-	27	450		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	17	-	27	140		F	#	20	
Magnesium	mg/L	03/10/2009	N001	17	-	27	470		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	17	-	27	0.14		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	17	-	27	140		F	#	1	
Oxidation Reduction Potential	mV	03/10/2009	N001	17	-	27	221		F	#		
pH	s.u.	03/10/2009	N001	17	-	27	7.02		F	#		
Potassium	mg/L	03/10/2009	N001	17	-	27	50		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	17	-	27	0.02		F	#	0.00017	
Sodium	mg/L	03/10/2009	N001	17	-	27	970		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	17	-	27	8140		F	#		
Strontium	mg/L	03/10/2009	N001	17	-	27	8.3		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	17	-	27	4600		F	#	50	
Temperature	C	03/10/2009	N001	17	-	27	15.2		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	17	-	27	8200		F	#	200	
Turbidity	NTU	03/10/2009	N001	17	-	27	7.74		F	#		
Uranium	mg/L	03/10/2009	N001	17	-	27	0.036		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0812 WELL 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
Ammonia Total as N	mg/L	03/11/2009	0001	51.3 - 61.3	0.1	U	FQ	#	0.1	
Calcium	mg/L	03/11/2009	0001	51.3 - 61.3	450		FQ	#	0.2	
Chloride	mg/L	03/11/2009	0001	51.3 - 61.3	2400		FQ	#	100	
Magnesium	mg/L	03/11/2009	0001	51.3 - 61.3	2200		FQ	#	0.27	
Manganese	mg/L	03/11/2009	0001	51.3 - 61.3	0.0048	U	FQ	#	0.0048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	51.3 - 61.3	1500		FQ	#	10	
Oxidation Reduction Potential	mV	03/11/2009	N001	51.3 - 61.3	256		FQ	#		
pH	s.u.	03/11/2009	N001	51.3 - 61.3	7.03		FQ	#		
Potassium	mg/L	03/11/2009	0001	51.3 - 61.3	78		FQ	#	4.3	
Selenium	mg/L	03/11/2009	0001	51.3 - 61.3	5.5		FQ	#	0.017	
Sodium	mg/L	03/11/2009	0001	51.3 - 61.3	5800		FQ	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	51.3 - 61.3	31450		FQ	#		
Strontium	mg/L	03/11/2009	0001	51.3 - 61.3	15		FQ	#	0.0022	
Sulfate	mg/L	03/11/2009	0001	51.3 - 61.3	16000		FQ	#	250	
Temperature	C	03/11/2009	N001	51.3 - 61.3	16.3		FQ	#		
Total Dissolved Solids	mg/L	03/11/2009	0001	51.3 - 61.3	36000		FQ	#	1000	
Turbidity	NTU	03/11/2009	N001	51.3 - 61.3	25.3		FQ	#		
Uranium	mg/L	03/11/2009	0001	51.3 - 61.3	0.14		FQ	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0813 WELL 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
Ammonia Total as N	mg/L	03/11/2009	0002	40.8	-	50.8	89		F	#	10	
Ammonia Total as N	mg/L	03/11/2009	N001	40.8	-	50.8	81		F	#	10	
Calcium	mg/L	03/11/2009	0002	40.8	-	50.8	620		F	#	0.04	
Calcium	mg/L	03/11/2009	N001	40.8	-	50.8	660		F	#	0.04	
Chloride	mg/L	03/11/2009	0002	40.8	-	50.8	680		F	#	40	
Chloride	mg/L	03/11/2009	N001	40.8	-	50.8	640		F	#	40	
Magnesium	mg/L	03/11/2009	0002	40.8	-	50.8	3200		F	#	0.054	
Magnesium	mg/L	03/11/2009	N001	40.8	-	50.8	3400		F	#	0.054	
Manganese	mg/L	03/11/2009	0002	40.8	-	50.8	0.29		F	#	0.00097	
Manganese	mg/L	03/11/2009	N001	40.8	-	50.8	0.31		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0002	40.8	-	50.8	2600		F	#	20	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	40.8	-	50.8	2600		F	#	20	
Oxidation Reduction Potential	mV	03/11/2009	N001	40.8	-	50.8	272		F	#		
pH	s.u.	03/11/2009	N001	40.8	-	50.8	6.61		F	#		
Potassium	mg/L	03/11/2009	0002	40.8	-	50.8	170		F	#	0.85	
Potassium	mg/L	03/11/2009	N001	40.8	-	50.8	180		F	#	0.85	
Selenium	mg/L	03/11/2009	0002	40.8	-	50.8	0.048		FJ	#	0.00017	
Selenium	mg/L	03/11/2009	N001	40.8	-	50.8	0.038		F	#	0.00017	
Sodium	mg/L	03/11/2009	0002	40.8	-	50.8	2500		F	#	0.04	
Sodium	mg/L	03/11/2009	N001	40.8	-	50.8	2500		F	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	40.8	-	50.8	26690		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0813 WELL 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
Strontium	mg/L	03/11/2009	0002	40.8	-	50.8	19		F	#	0.00044	
Strontium	mg/L	03/11/2009	N001	40.8	-	50.8	20		F	#	0.00044	
Sulfate	mg/L	03/11/2009	0002	40.8	-	50.8	10000		F	#	100	
Sulfate	mg/L	03/11/2009	N001	40.8	-	50.8	10000		F	#	100	
Temperature	C	03/11/2009	N001	40.8	-	50.8	14.9		F	#		
Total Dissolved Solids	mg/L	03/11/2009	0002	40.8	-	50.8	31000		F	#	400	
Total Dissolved Solids	mg/L	03/11/2009	N001	40.8	-	50.8	30000		F	#	400	
Turbidity	NTU	03/11/2009	N001	40.8	-	50.8	7.02		F	#		
Uranium	mg/L	03/11/2009	0002	40.8	-	50.8	0.12		F	#	0.000015	
Uranium	mg/L	03/11/2009	N001	40.8	-	50.8	0.14		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0815 WELL Fairgrounds, just N of Uranium Blvd., flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0002	22.3	-	32.3	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	03/11/2009	N001	22.3	-	32.3	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	0002	22.3	-	32.3	420		F	#	0.04	
Calcium	mg/L	03/11/2009	N001	22.3	-	32.3	420		F	#	0.04	
Chloride	mg/L	03/11/2009	0002	22.3	-	32.3	610		F	#	40	
Chloride	mg/L	03/11/2009	N001	22.3	-	32.3	670		F	#	40	
Magnesium	mg/L	03/11/2009	0002	22.3	-	32.3	2600		F	#	0.054	
Magnesium	mg/L	03/11/2009	N001	22.3	-	32.3	2500		F	#	0.054	
Manganese	mg/L	03/11/2009	0002	22.3	-	32.3	1.3		F	#	0.00097	
Manganese	mg/L	03/11/2009	N001	22.3	-	32.3	1.3		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0002	22.3	-	32.3	750		F	#	5	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	22.3	-	32.3	680		F	#	5	
Oxidation Reduction Potential	mV	03/11/2009	N001	22.3	-	32.3	247		F	#		
pH	s.u.	03/11/2009	N001	22.3	-	32.3	6.62		F	#		
Potassium	mg/L	03/11/2009	0002	22.3	-	32.3	110		F	#	0.85	
Potassium	mg/L	03/11/2009	N001	22.3	-	32.3	100		F	#	0.85	
Selenium	mg/L	03/11/2009	0002	22.3	-	32.3	0.061		F	#	0.00017	
Selenium	mg/L	03/11/2009	N001	22.3	-	32.3	0.06		F	#	0.00017	
Sodium	mg/L	03/11/2009	0002	22.3	-	32.3	2900		F	#	0.4	
Sodium	mg/L	03/11/2009	N001	22.3	-	32.3	3500		F	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	22.3	-	32.3	22500		F	#		

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0815 WELL Fairgrounds, just N of Uranium Blvd., flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Strontium	mg/L	03/11/2009	0002	22.3	-	32.3	12		F	#	0.00044	
Strontium	mg/L	03/11/2009	N001	22.3	-	32.3	12		F	#	0.00044	
Sulfate	mg/L	03/11/2009	0002	22.3	-	32.3	15000		F	#	100	
Sulfate	mg/L	03/11/2009	N001	22.3	-	32.3	15000		F	#	100	
Temperature	C	03/11/2009	N001	22.3	-	32.3	16.6		F	#		
Total Dissolved Solids	mg/L	03/11/2009	0002	22.3	-	32.3	26000		F	#	400	
Total Dissolved Solids	mg/L	03/11/2009	N001	22.3	-	32.3	27000		F	#	400	
Turbidity	NTU	03/11/2009	N001	22.3	-	32.3	6.52		F	#		
Uranium	mg/L	03/11/2009	0002	22.3	-	32.3	0.33		F	#	0.000015	
Uranium	mg/L	03/11/2009	N001	22.3	-	32.3	0.38		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0816 WELL N of artesian well 648

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	20.1	-	25.1	0.1	U	FQ	#	0.1	
Calcium	mg/L	03/12/2009	N001	20.1	-	25.1	190		FQ	#	0.02	
Chloride	mg/L	03/12/2009	N001	20.1	-	25.1	87		FQ	#	20	
Magnesium	mg/L	03/12/2009	N001	20.1	-	25.1	270		FQ	#	0.027	
Manganese	mg/L	03/12/2009	N001	20.1	-	25.1	0.0013	B	UFQ	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	20.1	-	25.1	40		FQ	#	0.5	
Oxidation Reduction Potential	mV	03/12/2009	N001	20.1	-	25.1	167		FQ	#		
pH	s.u.	03/12/2009	N001	20.1	-	25.1	7.64		FQ	#		
Potassium	mg/L	03/12/2009	N001	20.1	-	25.1	17		FQ	#	0.43	
Selenium	mg/L	03/12/2009	N001	20.1	-	25.1	0.027		FQ	#	0.000084	
Sodium	mg/L	03/12/2009	N001	20.1	-	25.1	720		FQ	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	20.1	-	25.1	5100		FQ	#		
Strontium	mg/L	03/12/2009	N001	20.1	-	25.1	3.9		FQ	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	20.1	-	25.1	2600		FQ	#	50	
Temperature	C	03/12/2009	N001	20.1	-	25.1	13.4		FQ	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	20.1	-	25.1	4600		FQ	#	80	
Turbidity	NTU	03/12/2009	N001	20.1	-	25.1	8.3		FQ	#		
Uranium	mg/L	03/12/2009	N001	20.1	-	25.1	0.032		FQ	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/10/2009	N001	21.6	-	31.62	910		FQ	#	20	
Calcium	mg/L	03/10/2009	N001	21.6	-	31.62	430		FQ	#	0.04	
Chloride	mg/L	03/10/2009	N001	21.6	-	31.62	560		FQ	#	40	
Magnesium	mg/L	03/10/2009	N001	21.6	-	31.62	2200		FQ	#	0.054	
Manganese	mg/L	03/10/2009	N001	21.6	-	31.62	2.3		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	21.6	-	31.62	300		FQ	#	2	
Oxidation Reduction Potential	mV	03/10/2009	N001	21.6	-	31.62	259		FQ	#		
pH	s.u.	03/10/2009	N001	21.6	-	31.62	6.53		FQ	#		
Potassium	mg/L	03/10/2009	N001	21.6	-	31.62	280		FQ	#	0.85	
Selenium	mg/L	03/10/2009	N001	21.6	-	31.62	0.0041		FQ	#	0.000017	
Sodium	mg/L	03/10/2009	N001	21.6	-	31.62	1900		FQ	#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	21.6	-	31.62	21840		FQ	#		
Strontium	mg/L	03/10/2009	N001	21.6	-	31.62	12		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	21.6	-	31.62	14000		FQ	#	100	
Temperature	C	03/10/2009	N001	21.6	-	31.62	15.9		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	21.6	-	31.62	22000		FQ	#	400	
Turbidity	NTU	03/10/2009	N001	21.6	-	31.62	9.17		FQ	#		
Uranium	mg/L	03/10/2009	N001	21.6	-	31.62	3.8		FQ	#	0.00031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/10/2009	N001	52	-	61.5	59			#	10	
Calcium	mg/L	03/10/2009	N001	52	-	61.5	470			#	0.04	
Chloride	mg/L	03/10/2009	N001	52	-	61.5	1300			#	40	
Magnesium	mg/L	03/10/2009	N001	52	-	61.5	2100			#	0.054	
Manganese	mg/L	03/10/2009	N001	52	-	61.5	2.5			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	52	-	61.5	950			#	5	
Oxidation Reduction Potential	mV	03/10/2009	N001	52	-	61.5	215			#		
pH	s.u.	03/10/2009	N001	52	-	61.5	7.79			#		
Potassium	mg/L	03/10/2009	N001	52	-	61.5	110			#	0.85	
Selenium	mg/L	03/10/2009	N001	52	-	61.5	2.2			#	0.0083	
Sodium	mg/L	03/10/2009	N001	52	-	61.5	4000			#	0.2	
Specific Conductance	umhos /cm	03/10/2009	N001	52	-	61.5	24307			#		
Strontium	mg/L	03/10/2009	N001	52	-	61.5	12			#	0.00044	
Sulfate	mg/L	03/10/2009	N001	52	-	61.5	14000			#	100	
Temperature	C	03/10/2009	N001	52	-	61.5	11.6			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	52	-	61.5	29000			#	400	
Turbidity	NTU	03/10/2009	N001	52	-	61.5	6.65			#		
Uranium	mg/L	03/10/2009	N001	52	-	61.5	0.14			#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0819 WELL Just W of Disposal Cell, NECA yard, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	15.67	-	25.67	460		FQ	#	20	
Calcium	mg/L	03/10/2009	N001	15.67	-	25.67	440		FQ	#	0.04	
Chloride	mg/L	03/10/2009	N001	15.67	-	25.67	770		FQ	#	40	
Magnesium	mg/L	03/10/2009	N001	15.67	-	25.67	1500		FQ	#	0.054	
Manganese	mg/L	03/10/2009	N001	15.67	-	25.67	2		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	15.67	-	25.67	42		FQ	#	0.5	
Oxidation Reduction Potential	mV	03/10/2009	N001	15.67	-	25.67	252		FQ	#		
pH	s.u.	03/10/2009	N001	15.67	-	25.67	6.51		FQ	#		
Potassium	mg/L	03/10/2009	N001	15.67	-	25.67	220		FQ	#	0.85	
Selenium	mg/L	03/10/2009	N001	15.67	-	25.67	0.019		FQ	#	0.000084	
Sodium	mg/L	03/10/2009	N001	15.67	-	25.67	2900		FQ	#	0.2	
Specific Conductance	umhos /cm	03/10/2009	N001	15.67	-	25.67	20500		FQ	#		
Strontium	mg/L	03/10/2009	N001	15.67	-	25.67	9.8		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	15.67	-	25.67	13000		FQ	#	100	
Temperature	C	03/10/2009	N001	15.67	-	25.67	15.4		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	15.67	-	25.67	21000		FQ	#	400	
Turbidity	NTU	03/10/2009	N001	15.67	-	25.67	9.44		FQ	#		
Uranium	mg/L	03/10/2009	N001	15.67	-	25.67	1.2		FQ	#	0.000062	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0826 WELL Just West of Disposal Cell, NECA yard, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	10	-	20	120		FQ	#	10	
Calcium	mg/L	03/10/2009	N001	10	-	20	420		FQ	#	0.04	
Chloride	mg/L	03/10/2009	N001	10	-	20	610		FQ	#	40	
Magnesium	mg/L	03/10/2009	N001	10	-	20	3000		FQ	#	0.054	
Manganese	mg/L	03/10/2009	N001	10	-	20	2.9		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	10	-	20	49		FQ	#	0.5	
Oxidation Reduction Potential	mV	03/10/2009	N001	10	-	20	242		FQ	#		
pH	s.u.	03/10/2009	N001	10	-	20	6.54		FQ	#		
Potassium	mg/L	03/10/2009	N001	10	-	20	170		FQ	#	0.85	
Selenium	mg/L	03/10/2009	N001	10	-	20	0.0039		FQ	#	0.000017	
Sodium	mg/L	03/10/2009	N001	10	-	20	2300		FQ	#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	10	-	20	19835		FQ	#		
Strontium	mg/L	03/10/2009	N001	10	-	20	13		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	10	-	20	16000		FQ	#	100	
Temperature	C	03/10/2009	N001	10	-	20	14.7		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	10	-	20	24000		FQ	#	400	
Turbidity	NTU	03/10/2009	N001	10	-	20	3.7		FQ	#		
Uranium	mg/L	03/10/2009	N001	10	-	20	3.8		FQ	#	0.00031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0827 WELL Just NW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	0001	19.9	-	29.9	3.3		FQ	#	0.1	
Calcium	mg/L	03/10/2009	0001	19.9	-	29.9	420		FQ	#	0.04	
Chloride	mg/L	03/10/2009	0001	19.9	-	29.9	430		FQ	#	40	
Magnesium	mg/L	03/10/2009	0001	19.9	-	29.9	1100		FQ	#	0.054	
Manganese	mg/L	03/10/2009	0001	19.9	-	29.9	0.27		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	0001	19.9	-	29.9	29		FQ	#	0.2	
Oxidation Reduction Potential	mV	03/10/2009	N001	19.9	-	29.9	152		FQ	#		
pH	s.u.	03/10/2009	N001	19.9	-	29.9	6.7		FQ	#		
Potassium	mg/L	03/10/2009	0001	19.9	-	29.9	57		FQ	#	0.85	
Selenium	mg/L	03/10/2009	0001	19.9	-	29.9	0.064		FQ	#	0.00017	
Sodium	mg/L	03/10/2009	0001	19.9	-	29.9	1900		FQ	#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	19.9	-	29.9	14650		FQ	#		
Strontium	mg/L	03/10/2009	0001	19.9	-	29.9	9.5		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	0001	19.9	-	29.9	8400		FQ	#	100	
Temperature	C	03/10/2009	N001	19.9	-	29.9	13.3		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	0001	19.9	-	29.9	15000		FQ	#	200	
Turbidity	NTU	03/10/2009	N001	19.9	-	29.9	14.2		FQ	#		
Uranium	mg/L	03/10/2009	0001	19.9	-	29.9	0.68		FQ	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0828 WELL Just E of upper Bob Lee Wash, NECA yard

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	5.3	-	15.3	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	N001	5.3	-	15.3	340		F	#	0.0081	
Chloride	mg/L	03/11/2009	N001	5.3	-	15.3	95		F	#	10	
Magnesium	mg/L	03/11/2009	N001	5.3	-	15.3	200		F	#	0.011	
Manganese	mg/L	03/11/2009	N001	5.3	-	15.3	0.0002	B	UF	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	5.3	-	15.3	48		F	#	0.5	
Oxidation Reduction Potential	mV	03/11/2009	N001	5.3	-	15.3	136		F	#		
pH	s.u.	03/11/2009	N001	5.3	-	15.3	7.04		F	#		
Potassium	mg/L	03/11/2009	N001	5.3	-	15.3	14		F	#	0.17	
Selenium	mg/L	03/11/2009	N001	5.3	-	15.3	0.069		F	#	0.00017	
Sodium	mg/L	03/11/2009	N001	5.3	-	15.3	280		F	#	0.008	
Specific Conductance	umhos /cm	03/11/2009	N001	5.3	-	15.3	3450		F	#		
Strontium	mg/L	03/11/2009	N001	5.3	-	15.3	4.5		F	#	0.000089	
Sulfate	mg/L	03/11/2009	N001	5.3	-	15.3	1700		F	#	25	
Temperature	C	03/11/2009	N001	5.3	-	15.3	14.9		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	5.3	-	15.3	3200		F	#	80	
Turbidity	NTU	03/11/2009	N001	5.3	-	15.3	2.7		F	#		
Uranium	mg/L	03/11/2009	N001	5.3	-	15.3	0.21		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0830 WELL Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	7.7	-	17.7	2.6		F	#	0.1	
Calcium	mg/L	03/10/2009	N001	7.7	-	17.7	640		F	#	0.0081	
Chloride	mg/L	03/10/2009	N001	7.7	-	17.7	64		F	#	10	
Magnesium	mg/L	03/10/2009	N001	7.7	-	17.7	67		F	#	0.011	
Manganese	mg/L	03/10/2009	N001	7.7	-	17.7	5.6		F	#	0.00019	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	7.7	-	17.7	93		F	#	0.5	
Oxidation Reduction Potential	mV	03/10/2009	N001	7.7	-	17.7	295		F	#		
pH	s.u.	03/10/2009	N001	7.7	-	17.7	3.89		F	#		
Potassium	mg/L	03/10/2009	N001	7.7	-	17.7	5.3		F	#	0.17	
Selenium	mg/L	03/10/2009	N001	7.7	-	17.7	0.03		F	#	0.000084	
Sodium	mg/L	03/10/2009	N001	7.7	-	17.7	160		F	#	0.008	
Specific Conductance	umhos /cm	03/10/2009	N001	7.7	-	17.7	3295		F	#		
Strontium	mg/L	03/10/2009	N001	7.7	-	17.7	0.31		F	#	0.000089	
Sulfate	mg/L	03/10/2009	N001	7.7	-	17.7	1700		F	#	25	
Temperature	C	03/10/2009	N001	7.7	-	17.7	13.5		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	7.7	-	17.7	3200		F	#	80	
Turbidity	NTU	03/10/2009	N001	7.7	-	17.7	3.21		F	#		
Uranium	mg/L	03/10/2009	N001	7.7	-	17.7	0.0089		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0833 WELL Just NE of Dine College tract

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	24.9	-	34.9	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	24.9	-	34.9	430		F	#	0.04	
Chloride	mg/L	03/12/2009	N001	24.9	-	34.9	580		F	#	40	
Magnesium	mg/L	03/12/2009	N001	24.9	-	34.9	1300		F	#	0.054	
Manganese	mg/L	03/12/2009	N001	24.9	-	34.9	0.033	B	F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	24.9	-	34.9	470		F	#	5	
Oxidation Reduction Potential	mV	03/12/2009	N001	24.9	-	34.9	162.6		F	#		
pH	s.u.	03/12/2009	N001	24.9	-	34.9	6.98		F	#		
Potassium	mg/L	03/12/2009	N001	24.9	-	34.9	40		F	#	0.85	
Selenium	mg/L	03/12/2009	N001	24.9	-	34.9	0.36		F	#	0.00084	
Sodium	mg/L	03/12/2009	N001	24.9	-	34.9	1900		F	#	0.04	
Specific Conductance	umhos /cm	03/12/2009	N001	24.9	-	34.9	13916		F	#		
Strontium	mg/L	03/12/2009	N001	24.9	-	34.9	10		F	#	0.00044	
Sulfate	mg/L	03/12/2009	N001	24.9	-	34.9	8800		F	#	100	
Temperature	C	03/12/2009	N001	24.9	-	34.9	16.49		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	24.9	-	34.9	16000		F	#	400	
Turbidity	NTU	03/12/2009	N001	24.9	-	34.9	2.39		F	#		
Uranium	mg/L	03/12/2009	N001	24.9	-	34.9	0.25		F	#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/12/2009	N001	21.9	-	31.9	0.1	UN	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	21.9	-	31.9	500		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	21.9	-	31.9	210		F	#	20	
Magnesium	mg/L	03/12/2009	N001	21.9	-	31.9	430		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	21.9	-	31.9	0.00071	B	UF	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	21.9	-	31.9	79		F	#	0.5	
Oxidation Reduction Potential	mV	03/12/2009	N001	21.9	-	31.9	240.1		F	#		
pH	s.u.	03/12/2009	N001	21.9	-	31.9	7.01		F	#		
Potassium	mg/L	03/12/2009	N001	21.9	-	31.9	17		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	21.9	-	31.9	0.28		F	#	0.00084	
Sodium	mg/L	03/12/2009	N001	21.9	-	31.9	890		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	21.9	-	31.9	6821		F	#		
Strontium	mg/L	03/12/2009	N001	21.9	-	31.9	6.2		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	21.9	-	31.9	3800		F	#	50	
Temperature	C	03/12/2009	N001	21.9	-	31.9	15.95		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	21.9	-	31.9	7200		F	#	200	
Turbidity	NTU	03/12/2009	N001	21.9	-	31.9	4.99		F	#		
Uranium	mg/L	03/12/2009	N001	21.9	-	31.9	0.083		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/11/2009	N001	26.8	-	36.8	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	N001	26.8	-	36.8	500		F	#	0.02	
Chloride	mg/L	03/11/2009	N001	26.8	-	36.8	34		F	#	10	
Magnesium	mg/L	03/11/2009	N001	26.8	-	36.8	270		F	#	0.027	
Manganese	mg/L	03/11/2009	N001	26.8	-	36.8	2		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	26.8	-	36.8	14		F	#	0.1	
Oxidation Reduction Potential	mV	03/11/2009	N001	26.8	-	36.8	227.1		F	#		
pH	s.u.	03/11/2009	N001	26.8	-	36.8	7.01		F	#		
Potassium	mg/L	03/11/2009	N001	26.8	-	36.8	6.6		F	#	0.43	
Selenium	mg/L	03/11/2009	N001	26.8	-	36.8	0.12		F	#	0.00017	
Sodium	mg/L	03/11/2009	N001	26.8	-	36.8	360		F	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	26.8	-	36.8	4206		F	#		
Strontium	mg/L	03/11/2009	N001	26.8	-	36.8	6.3		F	#	0.00022	
Sulfate	mg/L	03/11/2009	N001	26.8	-	36.8	2700		F	#	25	
Temperature	C	03/11/2009	N001	26.8	-	36.8	13.95		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	26.8	-	36.8	4500		F	#	80	
Turbidity	NTU	03/11/2009	N001	26.8	-	36.8	9.35		F	#		
Uranium	mg/L	03/11/2009	N001	26.8	-	36.8	0.042		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0837 WELL Center 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
Ammonia Total as N	mg/L	03/11/2009	0001	17	-	27.1	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	0001	17	-	27.1	530		F	#	0.02	
Chloride	mg/L	03/11/2009	0001	17	-	27.1	55		F	#	10	
Magnesium	mg/L	03/11/2009	0001	17	-	27.1	190		F	#	0.027	
Manganese	mg/L	03/11/2009	0001	17	-	27.1	3.6		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	17	-	27.1	5.9		F	#	0.05	
Oxidation Reduction Potential	mV	03/11/2009	N001	17	-	27.1	-88.7		F	#		
pH	s.u.	03/11/2009	N001	17	-	27.1	6.71		F	#		
Potassium	mg/L	03/11/2009	0001	17	-	27.1	8.3		F	#	0.43	
Selenium	mg/L	03/11/2009	0001	17	-	27.1	0.14		F	#	0.00084	
Sodium	mg/L	03/11/2009	0001	17	-	27.1	270		F	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	17	-	27.1	3703		F	#		
Strontium	mg/L	03/11/2009	0001	17	-	27.1	5.4		F	#	0.00022	
Sulfate	mg/L	03/11/2009	0001	17	-	27.1	2000		F	#	25	
Temperature	C	03/11/2009	N001	17	-	27.1	13.7		F	#		
Total Dissolved Solids	mg/L	03/11/2009	0001	17	-	27.1	3700		F	#	80	
Turbidity	NTU	03/11/2009	N001	17	-	27.1	4.18		F	#		
Uranium	mg/L	03/11/2009	0001	17	-	27.1	0.042		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/12/2009	N001	21.9	-	31.9	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	21.9	-	31.9	730		F	#	0.02	
Chloride	mg/L	03/12/2009	N001	21.9	-	31.9	180		F	#	20	
Magnesium	mg/L	03/12/2009	N001	21.9	-	31.9	260		F	#	0.027	
Manganese	mg/L	03/12/2009	N001	21.9	-	31.9	0.0088	B	F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	21.9	-	31.9	110		F	#	1	
Oxidation Reduction Potential	mV	03/12/2009	N001	21.9	-	31.9	210.3		F	#		
pH	s.u.	03/12/2009	N001	21.9	-	31.9	6.88		F	#		
Potassium	mg/L	03/12/2009	N001	21.9	-	31.9	14		F	#	0.43	
Selenium	mg/L	03/12/2009	N001	21.9	-	31.9	0.46		F	#	0.0017	
Sodium	mg/L	03/12/2009	N001	21.9	-	31.9	540		F	#	0.02	
Specific Conductance	umhos /cm	03/12/2009	N001	21.9	-	31.9	5688		F	#		
Strontium	mg/L	03/12/2009	N001	21.9	-	31.9	8.3		F	#	0.00022	
Sulfate	mg/L	03/12/2009	N001	21.9	-	31.9	3000		F	#	50	
Temperature	C	03/12/2009	N001	21.9	-	31.9	14.81		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	21.9	-	31.9	6000		F	#	80	
Turbidity	NTU	03/12/2009	N001	21.9	-	31.9	3.06		F	#		
Uranium	mg/L	03/12/2009	N001	21.9	-	31.9	0.045		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/10/2009	N001	42	-	52	0.1	U	F	#	0.1	
Calcium	mg/L	03/10/2009	N001	42	-	52	390		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	42	-	52	910		F	#	100	
Magnesium	mg/L	03/10/2009	N001	42	-	52	850		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	42	-	52	0.028		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	42	-	52	690		F	#	5	
Oxidation Reduction Potential	mV	03/10/2009	N001	42	-	52	208.7		F	#		
pH	s.u.	03/10/2009	N001	42	-	52	7.19		F	#		
Potassium	mg/L	03/10/2009	N001	42	-	52	91		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	42	-	52	3.2		F	#	0.0083	
Sodium	mg/L	03/10/2009	N001	42	-	52	6100		F	#	0.4	
Specific Conductance	umhos /cm	03/10/2009	N001	42	-	52	25146		F	#		
Strontium	mg/L	03/10/2009	N001	42	-	52	8.5		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	42	-	52	15000		F	#	250	
Temperature	C	03/10/2009	N001	42	-	52	15.77		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	42	-	52	29000		F	#	400	
Turbidity	NTU	03/10/2009	N001	42	-	52	7.63		F	#		
Uranium	mg/L	03/10/2009	N001	42	-	52	0.14		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0843 WELL E 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
Ammonia Total as N	mg/L	03/11/2009	N001	11.9	-	21.9	0.1	U	F	#	0.1	
Calcium	mg/L	03/11/2009	N001	11.9	-	21.9	450		F	#	0.02	
Chloride	mg/L	03/11/2009	N001	11.9	-	21.9	60		F	#	10	
Magnesium	mg/L	03/11/2009	N001	11.9	-	21.9	150		F	#	0.027	
Manganese	mg/L	03/11/2009	N001	11.9	-	21.9	2.7		F	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	11.9	-	21.9	25		F	#	0.2	
Oxidation Reduction Potential	mV	03/11/2009	N001	11.9	-	21.9	6.2		F	#		
pH	s.u.	03/11/2009	N001	11.9	-	21.9	6.88		F	#		
Potassium	mg/L	03/11/2009	N001	11.9	-	21.9	12		F	#	0.43	
Selenium	mg/L	03/11/2009	N001	11.9	-	21.9	0.22		F	#	0.00084	
Sodium	mg/L	03/11/2009	N001	11.9	-	21.9	330	E	FJ	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	11.9	-	21.9	3593		F	#		
Strontium	mg/L	03/11/2009	N001	11.9	-	21.9	5.2		F	#	0.00022	
Sulfate	mg/L	03/11/2009	N001	11.9	-	21.9	1900		F	#	25	
Temperature	C	03/11/2009	N001	11.9	-	21.9	13.53		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	11.9	-	21.9	3600		F	#	80	
Turbidity	NTU	03/11/2009	N001	11.9	-	21.9	7.32		F	#		
Uranium	mg/L	03/11/2009	N001	11.9	-	21.9	0.033		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0844 WELL W part of Multipurpose Center tract, W of US Hwy 666, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	28.91	-	38.91	0.1	U	F	#	0.1	
Calcium	mg/L	03/12/2009	N001	28.91	-	38.91	530		F	#	0.04	
Chloride	mg/L	03/12/2009	N001	28.91	-	38.91	830		F	#	40	
Magnesium	mg/L	03/12/2009	N001	28.91	-	38.91	1700		F	#	0.054	
Manganese	mg/L	03/12/2009	N001	28.91	-	38.91	0.016	B	F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	28.91	-	38.91	750		F	#	5	
Oxidation Reduction Potential	mV	03/12/2009	N001	28.91	-	38.91	174.1		F	#		
pH	s.u.	03/12/2009	N001	28.91	-	38.91	7.27		F	#		
Potassium	mg/L	03/12/2009	N001	28.91	-	38.91	58		F	#	0.85	
Selenium	mg/L	03/12/2009	N001	28.91	-	38.91	1.8		F	#	0.0033	
Sodium	mg/L	03/12/2009	N001	28.91	-	38.91	2300		F	#	0.04	
Specific Conductance	umhos /cm	03/12/2009	N001	28.91	-	38.91	16647		F	#		
Strontium	mg/L	03/12/2009	N001	28.91	-	38.91	13		F	#	0.00044	
Sulfate	mg/L	03/12/2009	N001	28.91	-	38.91	9300		F	#	100	
Temperature	C	03/12/2009	N001	28.91	-	38.91	16.62		F	#		
Total Dissolved Solids	mg/L	03/12/2009	N001	28.91	-	38.91	19000		F	#	400	
Turbidity	NTU	03/12/2009	N001	28.91	-	38.91	9.06		F	#		
Uranium	mg/L	03/12/2009	N001	28.91	-	38.91	0.16		F	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/10/2009	0001	17.9	-	27.9	0.1	U	FQ	#	0.1	
Calcium	mg/L	03/10/2009	0001	17.9	-	27.9	560		FQ	#	0.02	
Chloride	mg/L	03/10/2009	0001	17.9	-	27.9	69		FQ	#	10	
Magnesium	mg/L	03/10/2009	0001	17.9	-	27.9	180		FQ	#	0.027	
Manganese	mg/L	03/10/2009	0001	17.9	-	27.9	0.0024	B	UFQ	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	0001	17.9	-	27.9	56		FQ	#	0.5	
Oxidation Reduction Potential	mV	03/10/2009	N001	17.9	-	27.9	118.9		FQ	#		
pH	s.u.	03/10/2009	N001	17.9	-	27.9	7.4		FQ	#		
Potassium	mg/L	03/10/2009	0001	17.9	-	27.9	8.5		FQ	#	0.43	
Selenium	mg/L	03/10/2009	0001	17.9	-	27.9	0.37		FQ	#	0.00084	
Sodium	mg/L	03/10/2009	0001	17.9	-	27.9	330		FQ	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	17.9	-	27.9	4106		FQ	#		
Strontium	mg/L	03/10/2009	0001	17.9	-	27.9	4.9		FQ	#	0.00022	
Sulfate	mg/L	03/10/2009	0001	17.9	-	27.9	2300		FQ	#	25	
Temperature	C	03/10/2009	N001	17.9	-	27.9	14.11		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	0001	17.9	-	27.9	4100		FQ	#	80	
Turbidity	NTU	03/10/2009	N001	17.9	-	27.9	175		FQ	#		
Uranium	mg/L	03/10/2009	0001	17.9	-	27.9	0.036		FQ	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0848 WELL Just W of Shiprock High School track, S of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	45	-	142.58	3.2		F	#	0.1	
Calcium	mg/L	03/10/2009	N001	45	-	142.58	380		F	#	0.04	
Chloride	mg/L	03/10/2009	N001	45	-	142.58	1100		F	#	40	
Magnesium	mg/L	03/10/2009	N001	45	-	142.58	530		F	#	0.054	
Manganese	mg/L	03/10/2009	N001	45	-	142.58	3.1		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	45	-	142.58	0.24		F	#	0.05	
Oxidation Reduction Potential	mV	03/10/2009	N001	45	-	142.58	9.9		F	#		
pH	s.u.	03/10/2009	N001	45	-	142.58	6.68		F	#		
Potassium	mg/L	03/10/2009	N001	45	-	142.58	47		F	#	0.85	
Selenium	mg/L	03/10/2009	N001	45	-	142.58	0.041		F	#	0.00017	
Sodium	mg/L	03/10/2009	N001	45	-	142.58	6100		F	#	0.4	
Specific Conductance	umhos /cm	03/10/2009	N001	45	-	142.58	24686		F	#		
Strontium	mg/L	03/10/2009	N001	45	-	142.58	20		F	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	45	-	142.58	16000		F	#	100	
Temperature	C	03/10/2009	N001	45	-	142.58	16.1		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	45	-	142.58	27000		F	#	400	
Turbidity	NTU	03/10/2009	N001	45	-	142.58	7.21		F	#		
Uranium	mg/L	03/10/2009	N001	45	-	142.58	0.024		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1058 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	41.7	-	51.2	1.2		FQ	#	0.1	
Calcium	mg/L	03/10/2009	N001	41.7	-	51.2	210		FQ	#	0.04	
Chloride	mg/L	03/10/2009	N001	41.7	-	51.2	1500		FQ	#	40	
Magnesium	mg/L	03/10/2009	N001	41.7	-	51.2	120		FQ	#	0.054	
Manganese	mg/L	03/10/2009	N001	41.7	-	51.2	0.17		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	41.7	-	51.2	0.74		FQ	#	0.01	
Oxidation Reduction Potential	mV	03/10/2009	N001	41.7	-	51.2	235		FQ	#		
pH	s.u.	03/10/2009	N001	41.7	-	51.2	7.38		FQ	#		
Potassium	mg/L	03/10/2009	N001	41.7	-	51.2	18		FQ	#	0.85	
Selenium	mg/L	03/10/2009	N001	41.7	-	51.2	0.0004		FQ	#	0.000017	
Sodium	mg/L	03/10/2009	N001	41.7	-	51.2	2200		FQ	#	0.4	
Specific Conductance	umhos /cm	03/10/2009	N001	41.7	-	51.2	12220		FQ	#		
Strontium	mg/L	03/10/2009	N001	41.7	-	51.2	9.2		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	41.7	-	51.2	4900		FQ	#	100	
Temperature	C	03/10/2009	N001	41.7	-	51.2	14.3		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	41.7	-	51.2	9800		FQ	#	200	
Turbidity	NTU	03/10/2009	N001	41.7	-	51.2	8.67		FQ	#		
Uranium	mg/L	03/10/2009	N001	41.7	-	51.2	0.0051		FQ	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1059 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	39.5	-	49	8.4		FQ	#	0.5	
Calcium	mg/L	03/10/2009	N001	39.5	-	49	360		FQ	#	0.04	
Chloride	mg/L	03/10/2009	N001	39.5	-	49	740		FQ	#	40	
Magnesium	mg/L	03/10/2009	N001	39.5	-	49	600		FQ	#	0.054	
Manganese	mg/L	03/10/2009	N001	39.5	-	49	0.14		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	39.5	-	49	380		FQ	#	2	
Oxidation Reduction Potential	mV	03/10/2009	N001	39.5	-	49	258		FQ	#		
pH	s.u.	03/10/2009	N001	39.5	-	49	7		FQ	#		
Potassium	mg/L	03/10/2009	N001	39.5	-	49	36		FQ	#	0.85	
Selenium	mg/L	03/10/2009	N001	39.5	-	49	0.016		FQ	#	0.000084	
Sodium	mg/L	03/10/2009	N001	39.5	-	49	3200		FQ	#	0.4	
Specific Conductance	umhos /cm	03/10/2009	N001	39.5	-	49	17570		FQ	#		
Strontium	mg/L	03/10/2009	N001	39.5	-	49	17		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	39.5	-	49	9600		FQ	#	100	
Temperature	C	03/10/2009	N001	39.5	-	49	15.2		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	39.5	-	49	18000		FQ	#	400	
Turbidity	NTU	03/10/2009	N001	39.5	-	49	5.35		FQ	#		
Uranium	mg/L	03/10/2009	N001	39.5	-	49	0.074		FQ	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1070 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	52.5	-	62	9.2			#	0.5	
Calcium	mg/L	03/10/2009	N001	52.5	-	62	420			#	0.1	
Chloride	mg/L	03/10/2009	N001	52.5	-	62	1400			#	100	
Magnesium	mg/L	03/10/2009	N001	52.5	-	62	1300			#	0.14	
Manganese	mg/L	03/10/2009	N001	52.5	-	62	0.34			#	0.0024	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	52.5	-	62	970			#	5	
Oxidation Reduction Potential	mV	03/10/2009	N001	52.5	-	62	221			#		
pH	s.u.	03/10/2009	N001	52.5	-	62	7.07			#		
Potassium	mg/L	03/10/2009	N001	52.5	-	62	84			#	2.1	
Selenium	mg/L	03/10/2009	N001	52.5	-	62	2.5			#	0.0033	
Sodium	mg/L	03/10/2009	N001	52.5	-	62	6200			#	0.1	
Specific Conductance	umhos /cm	03/10/2009	N001	52.5	-	62	27950			#		
Strontium	mg/L	03/10/2009	N001	52.5	-	62	11			#	0.0011	
Sulfate	mg/L	03/10/2009	N001	52.5	-	62	16000			#	250	
Temperature	C	03/10/2009	N001	52.5	-	62	13.8			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	52.5	-	62	31000			#	1000	
Turbidity	NTU	03/10/2009	N001	52.5	-	62	8.62			#		
Uranium	mg/L	03/10/2009	N001	52.5	-	62	0.1			#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1071 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	36.5	-	46	900			#	20	
Calcium	mg/L	03/10/2009	N001	36.5	-	46	650			#	0.1	
Chloride	mg/L	03/10/2009	N001	36.5	-	46	470			#	100	
Magnesium	mg/L	03/10/2009	N001	36.5	-	46	2800			#	0.14	
Manganese	mg/L	03/10/2009	N001	36.5	-	46	3.1			#	0.0024	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	36.5	-	46	2300			#	20	
Oxidation Reduction Potential	mV	03/10/2009	N001	36.5	-	46	249			#		
pH	s.u.	03/10/2009	N001	36.5	-	46	6.67			#		
Potassium	mg/L	03/10/2009	N001	36.5	-	46	270			#	2.1	
Selenium	mg/L	03/10/2009	N001	36.5	-	46	0.18			#	0.00084	
Sodium	mg/L	03/10/2009	N001	36.5	-	46	2100			#	0.1	
Specific Conductance	umhos /cm	03/10/2009	N001	36.5	-	46	26360			#		
Strontium	mg/L	03/10/2009	N001	36.5	-	46	16			#	0.0011	
Sulfate	mg/L	03/10/2009	N001	36.5	-	46	11000			#	250	
Temperature	C	03/10/2009	N001	36.5	-	46	10.4			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	36.5	-	46	27000			#	400	
Turbidity	NTU	03/10/2009	N001	36.5	-	46	9.41			#		
Uranium	mg/L	03/10/2009	N001	36.5	-	46	0.14			#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1073 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0001	40.5	-	50	150		FQ	#	20	
Calcium	mg/L	03/11/2009	0001	40.5	-	50	500		FQ	#	0.04	
Chloride	mg/L	03/11/2009	0001	40.5	-	50	1100		FQ	#	40	
Magnesium	mg/L	03/11/2009	0001	40.5	-	50	1600		FQ	#	0.054	
Manganese	mg/L	03/11/2009	0001	40.5	-	50	1.1		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	40.5	-	50	1500		FQ	#	10	
Oxidation Reduction Potential	mV	03/11/2009	N001	40.5	-	50	252		FQ	#		
pH	s.u.	03/11/2009	N001	40.5	-	50	7.1		FQ	#		
Potassium	mg/L	03/11/2009	0001	40.5	-	50	140		FQ	#	0.85	
Selenium	mg/L	03/11/2009	0001	40.5	-	50	2		FQ	#	0.0033	
Sodium	mg/L	03/11/2009	0001	40.5	-	50	2500		FQ	#	0.2	
Specific Conductance	umhos /cm	03/11/2009	N001	40.5	-	50	22625		FQ	#		
Strontium	mg/L	03/11/2009	0001	40.5	-	50	10		FQ	#	0.00044	
Sulfate	mg/L	03/11/2009	0001	40.5	-	50	9200		FQ	#	100	
Temperature	C	03/11/2009	N001	40.5	-	50	15.8		FQ	#		
Total Dissolved Solids	mg/L	03/11/2009	0001	40.5	-	50	23000		FQ	#	400	
Turbidity	NTU	03/11/2009	N001	40.5	-	50	43.2		FQ	#		
Uranium	mg/L	03/11/2009	0001	40.5	-	50	0.069		FQ	#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1074 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	27	-	36.5	4.3		FQ	#	0.1	
Calcium	mg/L	03/10/2009	N001	27	-	36.5	550		FQ	#	0.04	
Chloride	mg/L	03/10/2009	N001	27	-	36.5	1100		FQ	#	40	
Magnesium	mg/L	03/10/2009	N001	27	-	36.5	2200		FQ	#	0.054	
Manganese	mg/L	03/10/2009	N001	27	-	36.5	1.5		FQ	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	27	-	36.5	1400		FQ	#	10	
Oxidation Reduction Potential	mV	03/10/2009	N001	27	-	36.5	143		FQ	#		
pH	s.u.	03/10/2009	N001	27	-	36.5	6.8		FQ	#		
Potassium	mg/L	03/10/2009	N001	27	-	36.5	60		FQ	#	0.85	
Selenium	mg/L	03/10/2009	N001	27	-	36.5	0.25		FQ	#	0.00084	
Sodium	mg/L	03/10/2009	N001	27	-	36.5	2300		FQ	#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	27	-	36.5	20300		FQ	#		
Strontium	mg/L	03/10/2009	N001	27	-	36.5	11		FQ	#	0.00044	
Sulfate	mg/L	03/10/2009	N001	27	-	36.5	8700		FQ	#	100	
Temperature	C	03/10/2009	N001	27	-	36.5	15		FQ	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	27	-	36.5	22000		FQ	#	400	
Turbidity	NTU	03/10/2009	N001	27	-	36.5	8.03		FQ	#		
Uranium	mg/L	03/10/2009	N001	27	-	36.5	1.9		FQ	#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1078 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0002	35.5	-	45	2.9			#	0.1	
Ammonia Total as N	mg/L	03/11/2009	N001	35.5	-	45	2.6			#	0.1	
Calcium	mg/L	03/11/2009	0002	35.5	-	45	390			#	0.04	
Calcium	mg/L	03/11/2009	N001	35.5	-	45	410			#	0.04	
Chloride	mg/L	03/11/2009	0002	35.5	-	45	1200			#	40	
Chloride	mg/L	03/11/2009	N001	35.5	-	45	1200			#	40	
Magnesium	mg/L	03/11/2009	0002	35.5	-	45	1100			#	0.054	
Magnesium	mg/L	03/11/2009	N001	35.5	-	45	1100			#	0.054	
Manganese	mg/L	03/11/2009	0002	35.5	-	45	0.07		J	#	0.00097	
Manganese	mg/L	03/11/2009	N001	35.5	-	45	0.09			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0002	35.5	-	45	700			#	5	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	35.5	-	45	680			#	5	
Oxidation Reduction Potential	mV	03/11/2009	N001	35.5	-	45	276			#		
pH	s.u.	03/11/2009	N001	35.5	-	45	7.55			#		
Potassium	mg/L	03/11/2009	0002	35.5	-	45	78			#	0.85	
Potassium	mg/L	03/11/2009	N001	35.5	-	45	78			#	0.85	
Selenium	mg/L	03/11/2009	0002	35.5	-	45	2.9			#	0.017	
Selenium	mg/L	03/11/2009	N001	35.5	-	45	3.2			#	0.0033	
Sodium	mg/L	03/11/2009	0002	35.5	-	45	4800		J	#	0.4	
Sodium	mg/L	03/11/2009	N001	35.5	-	45	6400			#	0.4	
Specific Conductance	umhos /cm	03/11/2009	N001	35.5	-	45	24600			#		

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1078 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Strontium	mg/L	03/11/2009	0002	35.5	-	45	10			#	0.00044	
Strontium	mg/L	03/11/2009	N001	35.5	-	45	10			#	0.00044	
Sulfate	mg/L	03/11/2009	0002	35.5	-	45	15000			#	100	
Sulfate	mg/L	03/11/2009	N001	35.5	-	45	15000			#	100	
Temperature	C	03/11/2009	N001	35.5	-	45	12.5			#		
Total Dissolved Solids	mg/L	03/11/2009	0002	35.5	-	45	28000			#	400	
Total Dissolved Solids	mg/L	03/11/2009	N001	35.5	-	45	28000			#	400	
Turbidity	NTU	03/11/2009	N001	35.5	-	45	7.83			#		
Uranium	mg/L	03/11/2009	0002	35.5	-	45	0.14			#	0.000015	
Uranium	mg/L	03/11/2009	N001	35.5	-	45	0.13			#	0.000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1079 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	10.5	-	20	0.1	U	F	#	0.1	
Calcium	mg/L	03/10/2009	N001	10.5	-	20	570		F	#	0.02	
Chloride	mg/L	03/10/2009	N001	10.5	-	20	83		F	#	10	
Magnesium	mg/L	03/10/2009	N001	10.5	-	20	120		F	#	0.027	
Manganese	mg/L	03/10/2009	N001	10.5	-	20	0.0095	B	UF	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	10.5	-	20	55		F	#	0.5	
Oxidation Reduction Potential	mV	03/10/2009	N001	10.5	-	20	80.7		F	#		
pH	s.u.	03/10/2009	N001	10.5	-	20	6.69		F	#		
Potassium	mg/L	03/10/2009	N001	10.5	-	20	8.6		F	#	0.43	
Selenium	mg/L	03/10/2009	N001	10.5	-	20	0.26		F	#	0.00084	
Sodium	mg/L	03/10/2009	N001	10.5	-	20	270		F	#	0.02	
Specific Conductance	umhos /cm	03/10/2009	N001	10.5	-	20	3818		F	#		
Strontium	mg/L	03/10/2009	N001	10.5	-	20	5.3		F	#	0.00022	
Sulfate	mg/L	03/10/2009	N001	10.5	-	20	1900		F	#	25	
Temperature	C	03/10/2009	N001	10.5	-	20	15.27		F	#		
Total Dissolved Solids	mg/L	03/10/2009	N001	10.5	-	20	3600		F	#	80	
Turbidity	NTU	03/10/2009	N001	10.5	-	20	2.42		F	#		
Uranium	mg/L	03/10/2009	N001	10.5	-	20	0.028		F	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1091 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	33	-	43	280			#	20	
Calcium	mg/L	03/10/2009	N001	33	-	43	650			#	0.04	
Chloride	mg/L	03/10/2009	N001	33	-	43	1100			#	40	
Magnesium	mg/L	03/10/2009	N001	33	-	43	2200			#	0.054	
Manganese	mg/L	03/10/2009	N001	33	-	43	15			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	33	-	43	2100			#	20	
Oxidation Reduction Potential	mV	03/10/2009	N001	33	-	43	259			#		
pH	s.u.	03/10/2009	N001	33	-	43	6.68			#		
Potassium	mg/L	03/10/2009	N001	33	-	43	120			#	0.85	
Selenium	mg/L	03/10/2009	N001	33	-	43	0.76			#	0.0017	
Sodium	mg/L	03/10/2009	N001	33	-	43	3100			#	0.4	
Specific Conductance	umhos /cm	03/10/2009	N001	33	-	43	24890			#		
Strontium	mg/L	03/10/2009	N001	33	-	43	13			#	0.00044	
Sulfate	mg/L	03/10/2009	N001	33	-	43	10000			#	100	
Temperature	C	03/10/2009	N001	33	-	43	8.64			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	33	-	43	26000			#	400	
Turbidity	NTU	03/10/2009	N001	33	-	43	7.95			#		
Uranium	mg/L	03/10/2009	N001	33	-	43	0.092			#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1092 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0001	33	-	43	630			#	20	
Calcium	mg/L	03/11/2009	0001	33	-	43	890			#	0.04	
Chloride	mg/L	03/11/2009	0001	33	-	43	640			#	40	
Magnesium	mg/L	03/11/2009	0001	33	-	43	1700			#	0.054	
Manganese	mg/L	03/11/2009	0001	33	-	43	35			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	33	-	43	2700			#	20	
Oxidation Reduction Potential	mV	03/11/2009	N001	33	-	43	339			#		
pH	s.u.	03/11/2009	N001	33	-	43	6.83			#		
Potassium	mg/L	03/11/2009	0001	33	-	43	220			#	0.85	
Selenium	mg/L	03/11/2009	0001	33	-	43	0.52			#	0.0017	
Sodium	mg/L	03/11/2009	0001	33	-	43	1800			#	0.04	
Specific Conductance	umhos /cm	03/11/2009	N001	33	-	43	24650			#		
Strontium	mg/L	03/11/2009	0001	33	-	43	11			#	0.00044	
Sulfate	mg/L	03/11/2009	0001	33	-	43	5300			#	100	
Temperature	C	03/11/2009	N001	33	-	43	8.8			#		
Total Dissolved Solids	mg/L	03/11/2009	0001	33	-	43	23000			#	400	
Turbidity	NTU	03/11/2009	N001	33	-	43	108		R	#		
Uranium	mg/L	03/11/2009	0001	33	-	43	0.11			#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1093R WELL a replacement extraction well for 1093

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	34	-	38	670			#	20	
Calcium	mg/L	03/10/2009	N001	34	-	38	990			#	0.04	
Chloride	mg/L	03/10/2009	N001	34	-	38	640			#	40	
Magnesium	mg/L	03/10/2009	N001	34	-	38	1900			#	0.054	
Manganese	mg/L	03/10/2009	N001	34	-	38	34			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	34	-	38	2900			#	20	
Oxidation Reduction Potential	mV	03/10/2009	N001	34	-	38	253			#		
pH	s.u.	03/10/2009	N001	34	-	38	6.56			#		
Potassium	mg/L	03/10/2009	N001	34	-	38	230			#	0.85	
Selenium	mg/L	03/10/2009	N001	34	-	38	0.51			#	0.00084	
Sodium	mg/L	03/10/2009	N001	34	-	38	1900			#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	34	-	38	25365			#		
Strontium	mg/L	03/10/2009	N001	34	-	38	11			#	0.00044	
Sulfate	mg/L	03/10/2009	N001	34	-	38	5700			#	100	
Temperature	C	03/10/2009	N001	34	-	38	11.6			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	34	-	38	24000			#	400	
Turbidity	NTU	03/10/2009	N001	34	-	38	3.45			#		
Uranium	mg/L	03/10/2009	N001	34	-	38	0.11			#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1095 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	39	-	49	700			#	20	
Calcium	mg/L	03/10/2009	N001	39	-	49	680			#	0.04	
Chloride	mg/L	03/10/2009	N001	39	-	49	370			#	40	
Magnesium	mg/L	03/10/2009	N001	39	-	49	1300			#	0.054	
Manganese	mg/L	03/10/2009	N001	39	-	49	29			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	39	-	49	1700			#	10	
Oxidation Reduction Potential	mV	03/10/2009	N001	39	-	49	246			#		
pH	s.u.	03/10/2009	N001	39	-	49	6.84			#		
Potassium	mg/L	03/10/2009	N001	39	-	49	170			#	0.85	
Selenium	mg/L	03/10/2009	N001	39	-	49	0.25			#	0.00084	
Sodium	mg/L	03/10/2009	N001	39	-	49	1200			#	0.04	
Specific Conductance	umhos /cm	03/10/2009	N001	39	-	49	19350			#		
Strontium	mg/L	03/10/2009	N001	39	-	49	7.6			#	0.00044	
Sulfate	mg/L	03/10/2009	N001	39	-	49	5900			#	100	
Temperature	C	03/10/2009	N001	39	-	49	15.1			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	39	-	49	17000			#	400	
Turbidity	NTU	03/10/2009	N001	39	-	49	3.11			#		
Uranium	mg/L	03/10/2009	N001	39	-	49	0.059			#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1096 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/10/2009	N001	57.5	-	66.5	12			#	0.5	
Calcium	mg/L	03/10/2009	N001	57.5	-	66.5	390			#	0.04	
Chloride	mg/L	03/10/2009	N001	57.5	-	66.5	1000			#	40	
Magnesium	mg/L	03/10/2009	N001	57.5	-	66.5	1200			#	0.054	
Manganese	mg/L	03/10/2009	N001	57.5	-	66.5	0.32			#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/10/2009	N001	57.5	-	66.5	640			#	5	
Oxidation Reduction Potential	mV	03/10/2009	N001	57.5	-	66.5	211			#		
pH	s.u.	03/10/2009	N001	57.5	-	66.5	7.03			#		
Potassium	mg/L	03/10/2009	N001	57.5	-	66.5	78			#	0.85	
Selenium	mg/L	03/10/2009	N001	57.5	-	66.5	2.9			#	0.0033	
Sodium	mg/L	03/10/2009	N001	57.5	-	66.5	4500			#	0.4	
Specific Conductance	umhos /cm	03/10/2009	N001	57.5	-	66.5	23930			#		
Strontium	mg/L	03/10/2009	N001	57.5	-	66.5	9.6			#	0.00044	
Sulfate	mg/L	03/10/2009	N001	57.5	-	66.5	14000			#	100	
Temperature	C	03/10/2009	N001	57.5	-	66.5	16.1			#		
Total Dissolved Solids	mg/L	03/10/2009	N001	57.5	-	66.5	26000			#	400	
Turbidity	NTU	03/10/2009	N001	57.5	-	66.5	9.2			#		
Uranium	mg/L	03/10/2009	N001	57.5	-	66.5	0.11			#	0.000015	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1120 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Calcium	mg/L	03/11/2009	0001	17.5	-	22.5	480		FQ	#	0.02	
Magnesium	mg/L	03/11/2009	0001	17.5	-	22.5	210		FQ	#	0.027	
Manganese	mg/L	03/11/2009	0001	17.5	-	22.5	0.032		FQ	#	0.00048	
Oxidation Reduction Potential	mV	03/11/2009	N001	17.5	-	22.5	204		FQ	#		
pH	s.u.	03/11/2009	N001	17.5	-	22.5	6.88		FQ	#		
Potassium	mg/L	03/11/2009	0001	17.5	-	22.5	6.4		FQ	#	0.43	
Selenium	mg/L	03/11/2009	0001	17.5	-	22.5	0.049		FQ	#	0.00017	
Sodium	mg/L	03/11/2009	0001	17.5	-	22.5	250		FQ	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	17.5	-	22.5	3618		FQ	#		
Strontium	mg/L	03/11/2009	0001	17.5	-	22.5	5.3		FQ	#	0.00022	
Temperature	C	03/11/2009	N001	17.5	-	22.5	11.83		FQ	#		
Turbidity	NTU	03/11/2009	N001	17.5	-	22.5	29.3		FQ	#		
Uranium	mg/L	03/11/2009	0001	17.5	-	22.5	0.05		FQ	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1122 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0001	17.5	-	22.5	0.1	U	FQ	#	0.1	
Calcium	mg/L	03/11/2009	0001	17.5	-	22.5	450		FQ	#	0.02	
Chloride	mg/L	03/11/2009	0001	17.5	-	22.5	130		FQ	#	40	
Magnesium	mg/L	03/11/2009	0001	17.5	-	22.5	210		FQ	#	0.027	
Manganese	mg/L	03/11/2009	0001	17.5	-	22.5	1.2		FQ	#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	17.5	-	22.5	5.7		FQ	#	0.2	
Oxidation Reduction Potential	mV	03/11/2009	N001	17.5	-	22.5	205.8		FQ	#		
pH	s.u.	03/11/2009	N001	17.5	-	22.5	6.95		FQ	#		
Potassium	mg/L	03/11/2009	0001	17.5	-	22.5	6.5		FQ	#	0.43	
Selenium	mg/L	03/11/2009	0001	17.5	-	22.5	0.074		FQ	#	0.00017	
Sodium	mg/L	03/11/2009	0001	17.5	-	22.5	280		FQ	#	0.02	
Specific Conductance	umhos /cm	03/11/2009	N001	17.5	-	22.5	3500		FQ	#		
Strontium	mg/L	03/11/2009	0001	17.5	-	22.5	5.1		FQ	#	0.00022	
Sulfate	mg/L	03/11/2009	0001	17.5	-	22.5	8200		FQ	#	100	
Temperature	C	03/11/2009	N001	17.5	-	22.5	12.15		FQ	#		
Total Dissolved Solids	mg/L	03/11/2009	0001	17.5	-	22.5	3500		FQ	#	80	
Turbidity	NTU	03/11/2009	N001	17.5	-	22.5	46.7		FQ	#		
Uranium	mg/L	03/11/2009	0001	17.5	-	22.5	0.048		FQ	#	0.0000031	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: DM7 WELL Just SW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	N001	38	-	53	0.71		F	#	0.1	
Calcium	mg/L	03/11/2009	N001	38	-	53	390		F	#	0.04	
Chloride	mg/L	03/11/2009	N001	38	-	53	1600		F	#	40	
Magnesium	mg/L	03/11/2009	N001	38	-	53	330		F	#	0.054	
Manganese	mg/L	03/11/2009	N001	38	-	53	0.15		F	#	0.00097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	N001	38	-	53	240		F	#	2	
Oxidation Reduction Potential	mV	03/11/2009	N001	38	-	53	167		F	#		
pH	s.u.	03/11/2009	N001	38	-	53	7.17		F	#		
Potassium	mg/L	03/11/2009	N001	38	-	53	34		F	#	0.85	
Selenium	mg/L	03/11/2009	N001	38	-	53	0.013		F	#	0.000017	
Sodium	mg/L	03/11/2009	N001	38	-	53	3800		F	#	0.4	
Specific Conductance	umhos /cm	03/11/2009	N001	38	-	53	19560		F	#		
Strontium	mg/L	03/11/2009	N001	38	-	53	16		F	#	0.00044	
Sulfate	mg/L	03/11/2009	N001	38	-	53	9800		F	#	100	
Temperature	C	03/11/2009	N001	38	-	53	15.4		F	#		
Total Dissolved Solids	mg/L	03/11/2009	N001	38	-	53	18000		F	#	400	
Turbidity	NTU	03/11/2009	N001	38	-	53	9.06		F	#		
Uranium	mg/L	03/11/2009	N001	38	-	53	0.047		F	#	0.000015	

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

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Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/09/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/09/2009	0001	70			#	0.004	
Chloride	mg/L	03/09/2009	0001	13			#	1	
Magnesium	mg/L	03/09/2009	0001	13			#	0.0054	
Manganese	mg/L	03/09/2009	0001	0.0089	E		#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	0001	0.47			#	0.01	
Oxidation Reduction Potential	mV	03/09/2009	N001	216			#		
pH	s.u.	03/09/2009	N001	7.62			#		
Potassium	mg/L	03/09/2009	0001	3	N	J	#	0.085	
Selenium	mg/L	03/09/2009	0001	0.0014	E		#	0.000017	
Sodium	mg/L	03/09/2009	0001	35	EN	J	#	0.004	
Specific Conductance	umhos/cm	03/09/2009	N001	578			#		
Strontium	mg/L	03/09/2009	0001	0.84			#	0.000044	
Sulfate	mg/L	03/09/2009	0001	150			#	2.5	
Temperature	C	03/09/2009	N001	11			#		
Turbidity	NTU	03/09/2009	N001	39.3			#		
Uranium	mg/L	03/09/2009	0001	0.0017			#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0655 SURFACE LOCATION Ditch in NW end of floodplain

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/09/2009	N001	0.1	U		#	0.1	
Calcium	mg/L	03/09/2009	N001	290			#	0.02	
Chloride	mg/L	03/09/2009	N001	99			#	20	
Magnesium	mg/L	03/09/2009	N001	71			#	0.027	
Manganese	mg/L	03/09/2009	N001	0.28			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	N001	0.33			#	0.01	
Oxidation Reduction Potential	mV	03/09/2009	N001	242			#		
pH	s.u.	03/09/2009	N001	7.47			#		
Potassium	mg/L	03/09/2009	N001	17			#	0.43	
Selenium	mg/L	03/09/2009	N001	0.0012			#	0.000017	
Sodium	mg/L	03/09/2009	N001	1200			#	0.02	
Specific Conductance	umhos/cm	03/09/2009	N001	6380			#		
Strontium	mg/L	03/09/2009	N001	11			#	0.00022	
Sulfate	mg/L	03/09/2009	N001	3300			#	50	
Temperature	C	03/09/2009	N001	9.7			#		
Turbidity	NTU	03/09/2009	N001	5.05			#		
Uranium	mg/L	03/09/2009	N001	0.052			#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/09/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/09/2009	0001	68	N	J	#	0.004	
Chloride	mg/L	03/09/2009	0001	13			#	1	
Magnesium	mg/L	03/09/2009	0001	13	N	J	#	0.0054	
Manganese	mg/L	03/09/2009	0001	0.0081	E		#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	0001	0.52			#	0.01	
Oxidation Reduction Potential	mV	03/09/2009	N001	212			#		
pH	s.u.	03/09/2009	N001	7.55			#		
Potassium	mg/L	03/09/2009	0001	2.9	N	J	#	0.085	
Selenium	mg/L	03/09/2009	0001	0.0014	E		#	0.000017	
Sodium	mg/L	03/09/2009	0001	36	EN	J	#	0.004	
Specific Conductance	umhos/cm	03/09/2009	N001	570			#		
Strontium	mg/L	03/09/2009	0001	0.83			#	0.000044	
Sulfate	mg/L	03/09/2009	0001	150			#	2.5	
Temperature	C	03/09/2009	N001	10.7			#		
Turbidity	NTU	03/09/2009	N001	59			#		
Uranium	mg/L	03/09/2009	0001	0.0017			#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/11/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/11/2009	0001	73			#	0.004	
Chloride	mg/L	03/11/2009	0001	14			#	1	
Magnesium	mg/L	03/11/2009	0001	14			#	0.0054	
Manganese	mg/L	03/11/2009	0001	0.021			#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	0.42			#	0.01	
Oxidation Reduction Potential	mV	03/11/2009	N001	72.9			#		
pH	s.u.	03/11/2009	N001	8.32			#		
Potassium	mg/L	03/11/2009	0001	3.2			#	0.085	
Selenium	mg/L	03/11/2009	0001	0.0013			#	0.000017	
Sodium	mg/L	03/11/2009	0001	39			#	0.004	
Specific Conductance	umhos/cm	03/11/2009	N001	730			#		
Strontium	mg/L	03/11/2009	0001	0.87			#	0.000044	
Sulfate	mg/L	03/11/2009	0001	160			#	2.5	
Temperature	C	03/11/2009	N001	12.94			#		
Turbidity	NTU	03/11/2009	N001	75.71			#		
Uranium	mg/L	03/11/2009	0001	0.0018			#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/09/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/09/2009	0001	66			#	0.004	
Chloride	mg/L	03/09/2009	0001	13			#	1	
Magnesium	mg/L	03/09/2009	0001	13			#	0.0054	
Manganese	mg/L	03/09/2009	0001	0.016			#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	0001	0.36			#	0.01	
Oxidation Reduction Potential	mV	03/09/2009	N001	210			#		
pH	s.u.	03/09/2009	N001	8.06			#		
Potassium	mg/L	03/09/2009	0001	2.9			#	0.085	
Selenium	mg/L	03/09/2009	0001	0.001			#	0.000017	
Sodium	mg/L	03/09/2009	0001	34			#	0.004	
Specific Conductance	umhos/cm	03/09/2009	N001	545			#		
Strontium	mg/L	03/09/2009	0001	0.81			#	0.000044	
Sulfate	mg/L	03/09/2009	0001	150			#	2.5	
Temperature	C	03/09/2009	N001	12.3			#		
Turbidity	NTU	03/09/2009	N001	36.2			#		
Uranium	mg/L	03/09/2009	0001	0.0017			#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0956 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/12/2009	0001	71			#	0.004	
Chloride	mg/L	03/12/2009	0001	14			#	1	
Magnesium	mg/L	03/12/2009	0001	13			#	0.0054	
Manganese	mg/L	03/12/2009	0001	0.021			#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	0001	0.45			#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	137			#		
pH	s.u.	03/12/2009	N001	8.06			#		
Potassium	mg/L	03/12/2009	0001	3.1			#	0.085	
Selenium	mg/L	03/12/2009	0001	0.0011			#	0.000017	
Sodium	mg/L	03/12/2009	0001	37			#	0.004	
Specific Conductance	umhos/cm	03/12/2009	N001	598			#		
Strontium	mg/L	03/12/2009	0001	0.85			#	0.000044	
Sulfate	mg/L	03/12/2009	0001	150			#	2.5	
Temperature	C	03/12/2009	N001	8.5			#		
Turbidity	NTU	03/12/2009	N001	40.1			#		
Uranium	mg/L	03/12/2009	0001	0.0017			#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0959 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	N001	0.1	U		#	0.1	
Calcium	mg/L	03/12/2009	N001	480			#	0.02	
Chloride	mg/L	03/12/2009	N001	190			#	20	
Magnesium	mg/L	03/12/2009	N001	430			#	0.027	
Manganese	mg/L	03/12/2009	N001	0.038			#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	N001	51			#	0.5	
Oxidation Reduction Potential	mV	03/12/2009	N001	121.5			#		
pH	s.u.	03/12/2009	N001	7.78			#		
Potassium	mg/L	03/12/2009	N001	17			#	0.43	
Selenium	mg/L	03/12/2009	N001	0.12			#	0.00017	
Sodium	mg/L	03/12/2009	N001	580			#	0.02	
Specific Conductance	umhos/cm	03/12/2009	N001	5784			#		
Strontium	mg/L	03/12/2009	N001	7.4			#	0.00022	
Sulfate	mg/L	03/12/2009	N001	3500			#	50	
Temperature	C	03/12/2009	N001	8.13			#		
Turbidity	NTU	03/12/2009	N001	6.62			#		
Uranium	mg/L	03/12/2009	N001	0.072			#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 0965 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/12/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/12/2009	0001	73			#	0.004	
Chloride	mg/L	03/12/2009	0001	14			#	1	
Magnesium	mg/L	03/12/2009	0001	13			#	0.0054	
Manganese	mg/L	03/12/2009	0001	0.016			#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	0001	0.49			#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	144			#		
pH	s.u.	03/12/2009	N001	8.01			#		
Potassium	mg/L	03/12/2009	0001	3.1			#	0.085	
Selenium	mg/L	03/12/2009	0001	0.0011			#	0.000017	
Sodium	mg/L	03/12/2009	0001	37			#	0.004	
Specific Conductance	umhos/cm	03/12/2009	N001	577			#		
Strontium	mg/L	03/12/2009	0001	0.86			#	0.000044	
Sulfate	mg/L	03/12/2009	0001	160			#	2.5	
Temperature	C	03/12/2009	N001	8.9			#		
Turbidity	NTU	03/12/2009	N001	42.7			#		
Uranium	mg/L	03/12/2009	0001	0.0018			#	0.0000031	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1118 TREATMENT SYSTEM Sump - seep vault

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/09/2009	N001	0	-	0	0.1	U		#	0.1	
Calcium	mg/L	03/09/2009	N001	0	-	0	410			#	0.02	
Chloride	mg/L	03/09/2009	N001	0	-	0	220			#	20	
Magnesium	mg/L	03/09/2009	N001	0	-	0	580			#	0.027	
Manganese	mg/L	03/09/2009	N001	0	-	0	0.019	B		#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	N001	0	-	0	26			#	0.2	
Oxidation Reduction Potential	mV	03/09/2009	N001	0	-	0	240			#		
pH	s.u.	03/09/2009	N001	0	-	0	7.74			#		
Potassium	mg/L	03/09/2009	N001	0	-	0	38			#	0.43	
Selenium	mg/L	03/09/2009	N001	0	-	0	0.062			#	0.000084	
Sodium	mg/L	03/09/2009	N001	0	-	0	1300			#	0.2	
Specific Conductance	umhos /cm	03/09/2009	N001	0	-	0	9320			#		
Strontium	mg/L	03/09/2009	N001	0	-	0	9.2			#	0.00022	
Sulfate	mg/L	03/09/2009	N001	0	-	0	5600			#	50	
Temperature	C	03/09/2009	N001	0	-	0	8.72			#		
Turbidity	NTU	03/09/2009	N001	0	-	0	8.9			#		
Uranium	mg/L	03/09/2009	N001	0	-	0	0.48			#	0.000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1203 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/09/2009	0001	0.1	U		#	0.1	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1118 TREATMENT SYSTEM Sump - seep vault

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Calcium	mg/L	03/09/2009	0001	69	#		0.004			
Chloride	mg/L	03/09/2009	0001	13	#		1			
Magnesium	mg/L	03/09/2009	0001	13	#		0.0054			
Manganese	mg/L	03/09/2009	0001	0.013	#		0.000097			
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	0001	0.43	#		0.01			
Oxidation Reduction Potential	mV	03/09/2009	N001	212	#					
pH	s.u.	03/09/2009	N001	7.75	#					
Potassium	mg/L	03/09/2009	0001	2.9	#		0.085			
Selenium	mg/L	03/09/2009	0001	0.001	#		0.000017			
Sodium	mg/L	03/09/2009	0001	34	#		0.004			
Specific Conductance	umhos/cm	03/09/2009	N001	560	#					
Strontium	mg/L	03/09/2009	0001	0.83	#		0.000044			
Sulfate	mg/L	03/09/2009	0001	150	#		2.5			
Temperature	C	03/09/2009	N001	11.8	#					
Turbidity	NTU	03/09/2009	N001	90.9	#					
Uranium	mg/L	03/09/2009	0001	0.0017	#		0.0000031			

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 6/4/2009
Location: 1205 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/09/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/09/2009	0001	67			#	0.004	
Chloride	mg/L	03/09/2009	0001	12			#	1	
Magnesium	mg/L	03/09/2009	0001	13			#	0.0054	
Manganese	mg/L	03/09/2009	0001	0.011			#	0.000097	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	0001	0.39			#	0.01	
Oxidation Reduction Potential	mV	03/09/2009	N001	218			#		
pH	s.u.	03/09/2009	N001	7.67			#		
Potassium	mg/L	03/09/2009	0001	2.8			#	0.085	
Selenium	mg/L	03/09/2009	0001	0.0011			#	0.000017	
Sodium	mg/L	03/09/2009	0001	34			#	0.004	
Specific Conductance	umhos/cm	03/09/2009	N001	553			#		
Strontium	mg/L	03/09/2009	0001	0.82			#	0.000044	
Sulfate	mg/L	03/09/2009	0001	150			#	2.5	
Temperature	C	03/09/2009	N001	10.4			#		
Turbidity	NTU	03/09/2009	N001	48			#		
Uranium	mg/L	03/09/2009	0001	0.0017			#	0.0000031	

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

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Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/12/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/12/2009	0001	110			#	0.02	
Chloride	mg/L	03/12/2009	0001	57			#	10	
Magnesium	mg/L	03/12/2009	0001	13			#	0.027	
Manganese	mg/L	03/12/2009	0001	0.00048	U		#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/12/2009	0001	0.39			#	0.01	
Oxidation Reduction Potential	mV	03/12/2009	N001	191			#		
pH	s.u.	03/12/2009	N001	7.65			#		
Potassium	mg/L	03/12/2009	0001	11			#	0.43	
Selenium	mg/L	03/12/2009	0001	0.000093	B	U	#	0.000017	
Sodium	mg/L	03/12/2009	0001	780			#	0.02	
Specific Conductance	umhos/cm	03/12/2009	N001	4020			#		
Strontium	mg/L	03/12/2009	0001	12			#	0.00022	
Sulfate	mg/L	03/12/2009	0001	2100			#	25	
Temperature	C	03/12/2009	N001	15.7			#		
Turbidity	NTU	03/12/2009	N001	15.7			#		
Uranium	mg/L	03/12/2009	0001	0.000074	B	U	#	0.0000031	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
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
Ammonia Total as N	mg/L	03/09/2009	N001	0.1	U		#	0.1	
Calcium	mg/L	03/09/2009	N001	460			#	0.2	
Chloride	mg/L	03/09/2009	N001	1800			#	100	
Magnesium	mg/L	03/09/2009	N001	1700			#	0.27	
Manganese	mg/L	03/09/2009	N001	0.018	B	U	#	0.0048	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	N001	730			#	5	
Oxidation Reduction Potential	mV	03/09/2009	N001	240			#		
pH	s.u.	03/09/2009	N001	8.34			#		
Potassium	mg/L	03/09/2009	N001	75			#	4.3	
Selenium	mg/L	03/09/2009	N001	1.6			#	0.0033	
Sodium	mg/L	03/09/2009	N001	9300			#	0.2	
Specific Conductance	umhos/cm	03/09/2009	N001	33900			#		
Strontium	mg/L	03/09/2009	N001	10			#	0.0022	
Sulfate	mg/L	03/09/2009	N001	21000			#	250	
Temperature	C	03/09/2009	N001	18			#		
Turbidity	NTU	03/09/2009	N001	9.17			#		
Uranium	mg/L	03/09/2009	N001	0.22			#	0.000015	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 0949 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/11/2009	0001	0.1	U		#	0.1	
Calcium	mg/L	03/11/2009	0001	510			#	0.02	
Chloride	mg/L	03/11/2009	0001	75			#	10	
Magnesium	mg/L	03/11/2009	0001	180			#	0.027	
Manganese	mg/L	03/11/2009	0001	0.015	B		#	0.00048	
Nitrate + Nitrite as Nitrogen	mg/L	03/11/2009	0001	42			#	0.5	
Oxidation Reduction Potential	mV	03/11/2009	N001	142.6			#		
pH	s.u.	03/11/2009	N001	7.85			#		
Potassium	mg/L	03/11/2009	0001	11			#	0.43	
Selenium	mg/L	03/11/2009	0001	0.27			#	0.00084	
Sodium	mg/L	03/11/2009	0001	500			#	0.02	
Specific Conductance	umhos/cm	03/11/2009	N001	4384			#		
Strontium	mg/L	03/11/2009	0001	5.6			#	0.00022	
Sulfate	mg/L	03/11/2009	0001	2600			#	25	
Temperature	C	03/11/2009	N001	13.94			#		
Turbidity	NTU	03/11/2009	N001	68.9			#		
Uranium	mg/L	03/11/2009	0001	0.035			#	0.000015	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 6/4/2009
Location: 1215 SURFACE LOCATION Evaporation Pond

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	03/09/2009	N001	35			#	2	
Calcium	mg/L	03/09/2009	N001	500			#	0.2	
Chloride	mg/L	03/09/2009	N001	1400			#	100	
Magnesium	mg/L	03/09/2009	N001	4300			#	0.27	
Manganese	mg/L	03/09/2009	N001	0.58			#	0.0048	
Nitrate + Nitrite as Nitrogen	mg/L	03/09/2009	N001	1100			#	10	
Oxidation Reduction Potential	mV	03/09/2009	N001	246			#		
pH	s.u.	03/09/2009	N001	8.13			#		
Potassium	mg/L	03/09/2009	N001	320			#	4.3	
Selenium	mg/L	03/09/2009	N001	1.3			#	0.0083	
Sodium	mg/L	03/09/2009	N001	8200			#	0.2	
Specific Conductance	umhos/cm	03/09/2009	N001	37060			#		
Strontium	mg/L	03/09/2009	N001	11			#	0.0022	
Sulfate	mg/L	03/09/2009	N001	27000			#	250	
Temperature	C	03/09/2009	N001	11.1			#		
Turbidity	NTU	03/09/2009	N001	2.65			#		
Uranium	mg/L	03/09/2009	N001	2.3			#	0.00015	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

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Equipment Blank Data

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BLANKS REPORT
LAB: PARAGON (Fort Collins, CO)
RIN: 09032136
Report Date: 6/4/2009

Parameter	Site Code	Location ID	Sample Date	ID	Units	Result	Qualifiers Lab	Qualifiers Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	SHP02	0999	03/12/2009	N001	mg/L	0.1	U		0.1		E
Calcium	SHP02	0999	03/12/2009	N001	mg/L	0.14	B		0.004		E
Chloride	SHP02	0999	03/12/2009	N001	mg/L	0.2	U		0.2		E
Magnesium	SHP02	0999	03/12/2009	N001	mg/L	0.0054	U		0.0054		E
Manganese	SHP02	0999	03/12/2009	N001	mg/L	0.000097	U		0.000097		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	03/12/2009	N001	mg/L	0.01	U		0.01		E
Potassium	SHP02	0999	03/12/2009	N001	mg/L	0.14	B		0.085		E
Selenium	SHP02	0999	03/12/2009	N001	mg/L	0.000022	B	U	0.000017		E
Sodium	SHP02	0999	03/12/2009	N001	mg/L	0.25	B	U	0.004		E
Strontium	SHP02	0999	03/12/2009	N001	mg/L	0.000044	U		0.000044		E
Sulfate	SHP02	0999	03/12/2009	N001	mg/L	4.6			0.5		E
Uranium	SHP02	0999	03/12/2009	N001	mg/L	0.000043	B	U	0.0000031		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.	G	Possible grout contamination, pH > 9.	J	Estimated value.
L	Less than 3 bore volumes purged prior to sampling.	Q	Qualitative result due to sampling technique.	R	Unusable result.
U	Parameter analyzed for but was not detected.	X	Location is undefined.		

SAMPLE TYPES:

E	Equipment Blank.

Static Water Level Data
Floodplain Locations

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Location 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	03/10/2009	15:54:46	6.35	4887	
0612	4893.35	03/10/2009	17:35:25	7.3	4886.05	
0614	4892.79	03/11/2009	09:35:28	7.89	4884.9	
0615	4892.23	03/11/2009	12:10:02	8.39	4883.84	
0618	4891.51	03/11/2009	15:08:57	7.2	4884.31	
0619	4892.19	03/12/2009	09:21:48	7.54	4884.65	
0625	4891.23	03/12/2009	09:59:37	6.19	4885.04	
0626	4891.4	03/12/2009	11:03:32	5.86	4885.54	
0628	4889.87	03/12/2009	11:38:22	4.2	4885.67	
0630	4887.62	03/12/2009	12:11:51	1.6	4886.02	
0734	4886.55	03/12/2009	12:05:48	6.21	4880.34	
0735	4895.85	03/10/2009	09:41:05	6.43	4889.42	
0736	4887.99	03/12/2009	13:00:21	6.08	4881.91	
0768	4892.33	03/12/2009	10:33:46	7.43	4884.9	
0773	4894.87	03/10/2009	17:05:10	7.77	4887.1	
0775	4892.2	03/11/2009	17:19:22	8.28	4883.92	
0779	4893.86	03/11/2009	15:56:37	7.35	4886.51	
0782R		03/12/2009	10:50:21	6.9		*
0783R		03/12/2009	11:45:50	7		*
0792	4891.52	03/11/2009	14:36:34	7.19	4884.33	
0797	4908.04	03/11/2009	14:30:17	8.84	4899.2	
0850	4907.51	03/11/2009	15:10:47	8.46	4899.05	
0853	4891.41	03/11/2009	13:53:39	7.13	4884.28	
0855	4888.18	03/12/2009	13:05:13	5.11	4883.07	
0856	4887.57	03/12/2009	12:35:21	6.46	4881.11	
1105		03/11/2009	11:47:58	8.34		*
1111	4889.85	03/11/2009	10:48:04	7.42	4882.43	
1112	4890.01	03/11/2009	10:25:48	7.06	4882.95	
1113	4892	03/10/2009	16:29:20	5.45	4886.55	
1114	4892.86	03/10/2009	15:26:20	5.98	4886.88	

Location Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
1115	4895.59	03/10/2009	13:14:52	10.18	4885.41	
1116	4898.84	03/10/2009	11:09:35	12.46	4886.38	
1117	4896.7	03/10/2009	10:40:24	10.07	4886.63	
1132	4894.5	03/10/2009	14:15:23	8.4	4886.1	
1133	4896.48	03/10/2009	12:47:43	10.7	4885.78	
1134	4895.88	03/10/2009	14:47:53	10.2	4885.68	

WATER LEVEL FLAGS:

* Top of casing elevation not available because the lack of survey data. Location survey is planned in 2010.

Static Water Level Data
Terrace Locations

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Location Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0603	4978.62	03/12/2009	09:20:58	30.79	4947.83	
0725	4908.58	03/11/2009	15:20:37	13.49	4895.09	
0726	4939.95	03/11/2009	14:50:47	26.32	4913.63	
0727	4940.65	03/11/2009	15:45:11	7.41	4933.24	
0728	4964.46	03/10/2009	16:45:29	25.32	4939.14	
0730	4977.75	03/10/2009	16:24:00			D
0731	4972.15	03/10/2009	12:25:12	25.22	4946.93	
0812	5004.98	03/11/2009	12:15:33	61	4943.98	
0813	4984.37	03/11/2009	11:25:31	43.91	4940.46	
0815	4953.67	03/11/2009	13:40:32	26.55	4927.12	
0816	4937.92	03/12/2009	10:45:00			E
0817	4957.34	03/10/2009	15:30:41	19.65	4937.69	
0819	4955.76	03/10/2009	15:40:58	20.81	4934.95	
0820	4954.95	03/10/2009	09:39:00	142.94	4812.01	
0821	4955.46	03/10/2009	11:07:00			E
0822	4954.42	03/10/2009	11:09:00	149.6	4804.82	
0823	4957.65	03/10/2009	11:10:00			E
0824	4958.21	03/10/2009	11:11:00	161.61	4796.6	
0825	4958.68	03/10/2009	11:11:00	134.58	4824.1	
0826	4950.73	03/10/2009	16:05:25	18.83	4931.9	
0827	4946.92	03/10/2009	09:30:36	27.18	4919.74	
0828	4949.34	03/11/2009	17:30:13	24.08	4925.26	
0829	4941.94	03/10/2009	11:12:00			E
0830	4960.77	03/10/2009	10:50:39	16.5	4944.27	
0832	4964.65	03/11/2009	10:54:00			D
0833	4940.52	03/12/2009	12:30:16	31.03	4909.49	
0835	4930.48	03/12/2009	09:37:28	21.39	4909.09	
0836	4901.74	03/11/2009	09:45:21	26.9	4874.84	
0837	4889.54	03/11/2009	12:00:10	18.77	4870.77	
0838	4937.7	03/12/2009	10:15:38	28.69	4909.01	

Location Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0841	4984.05	03/10/2009	14:15:45	46.9	4937.15	
0843	4883.56	03/11/2009	12:30:04	12.71	4870.85	
0844	4948.46	03/12/2009	13:10:58	32.05	4916.41	
0846	4934.57	03/10/2009	16:25:20	26.17	4908.4	
0848	4949.91	03/10/2009	15:20:41	41.15	4908.76	
1002	4957.63	03/10/2009	11:12:00			E
1003	4957.84	03/10/2009	11:13:00			E
1004	4957.61	03/10/2009	11:13:00			E
1006	4962.16	03/10/2009	11:14:00			E
1007	4962.01	03/10/2009	11:14:00	44.58	4917.43	
1011	4945.96	03/10/2009	11:16:00			E
1057	4984.83	03/10/2009	11:16:00	39.33	4945.5	
1058	4973.58	03/10/2009	11:50:25	45.59	4927.99	
1059	4970.52	03/10/2009	11:30:58	23.77	4946.75	
1060	4970.62	03/11/2009	10:57:00			D
1072	4985.3	03/10/2009	11:17:00	44.93	4940.37	
1073	4991.43	03/11/2009	12:45:13	50.65	4940.78	
1074	4959.52	03/10/2009	10:00:50	37.1	4922.42	
1078	4982.94	03/10/2009	11:23:00	7.55	4975.39	
1079	4925.22	03/10/2009	11:24:00			E
1079	4925.22	03/10/2009	15:50:49	17.98	4907.24	
1120		03/11/2009	10:50:28	23.05	-23.05	*
1122		03/11/2009	10:15:47	23.42	-23.42	*
DM7	4974.44	03/11/2009	18:10:29	51.07	4923.37	
MW1	4955.64	03/10/2009	11:18:00	50.44	4905.2	

WATER LEVEL FLAGS:
D Dry
E Water elevation may not be comparable to other water elevations at this site because the water level was below the top of the pump
* Top of casing elevation not available because the lack of survey data. Location survey is planned in 2010.

Time-Concentration Graphs
Floodplain Locations

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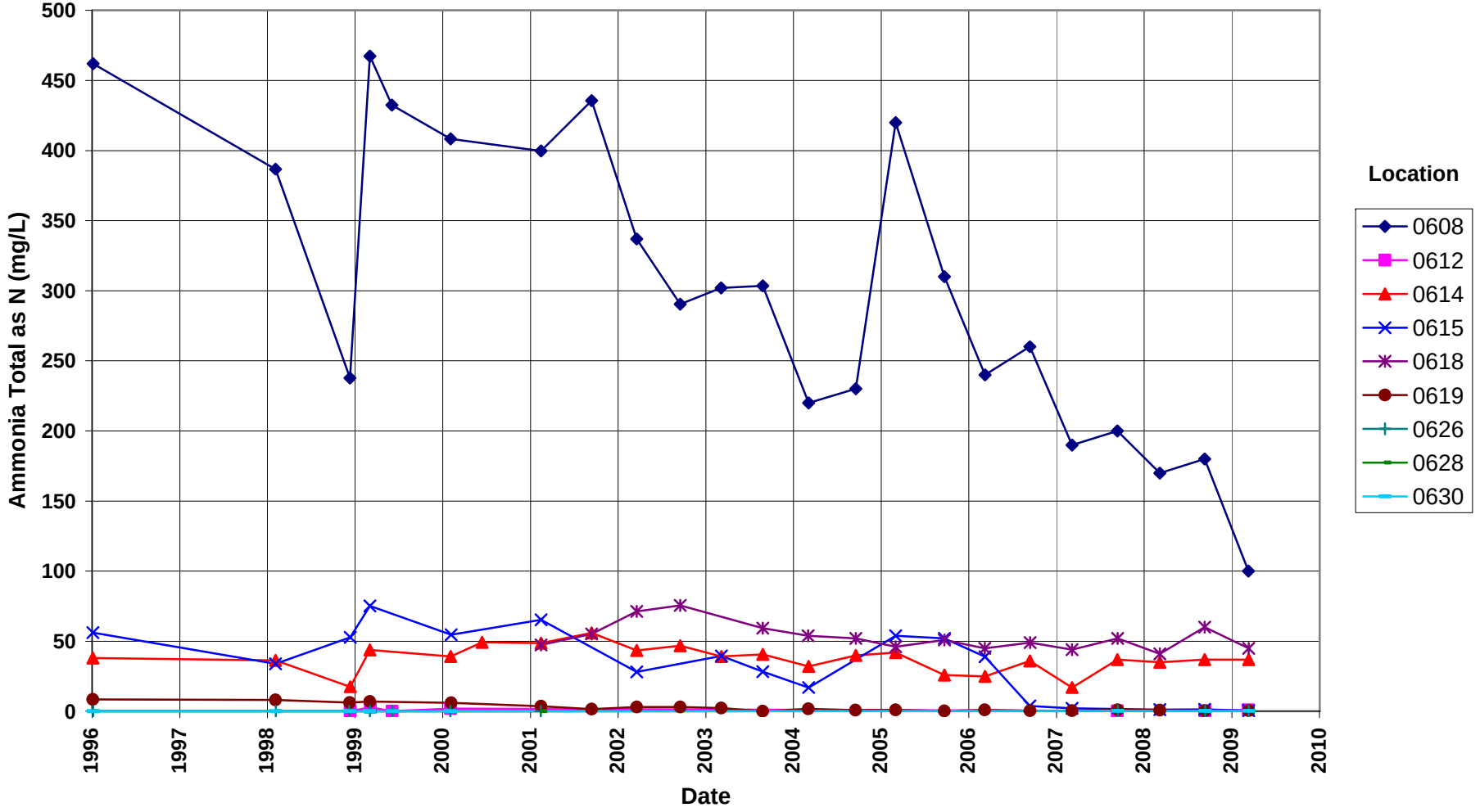
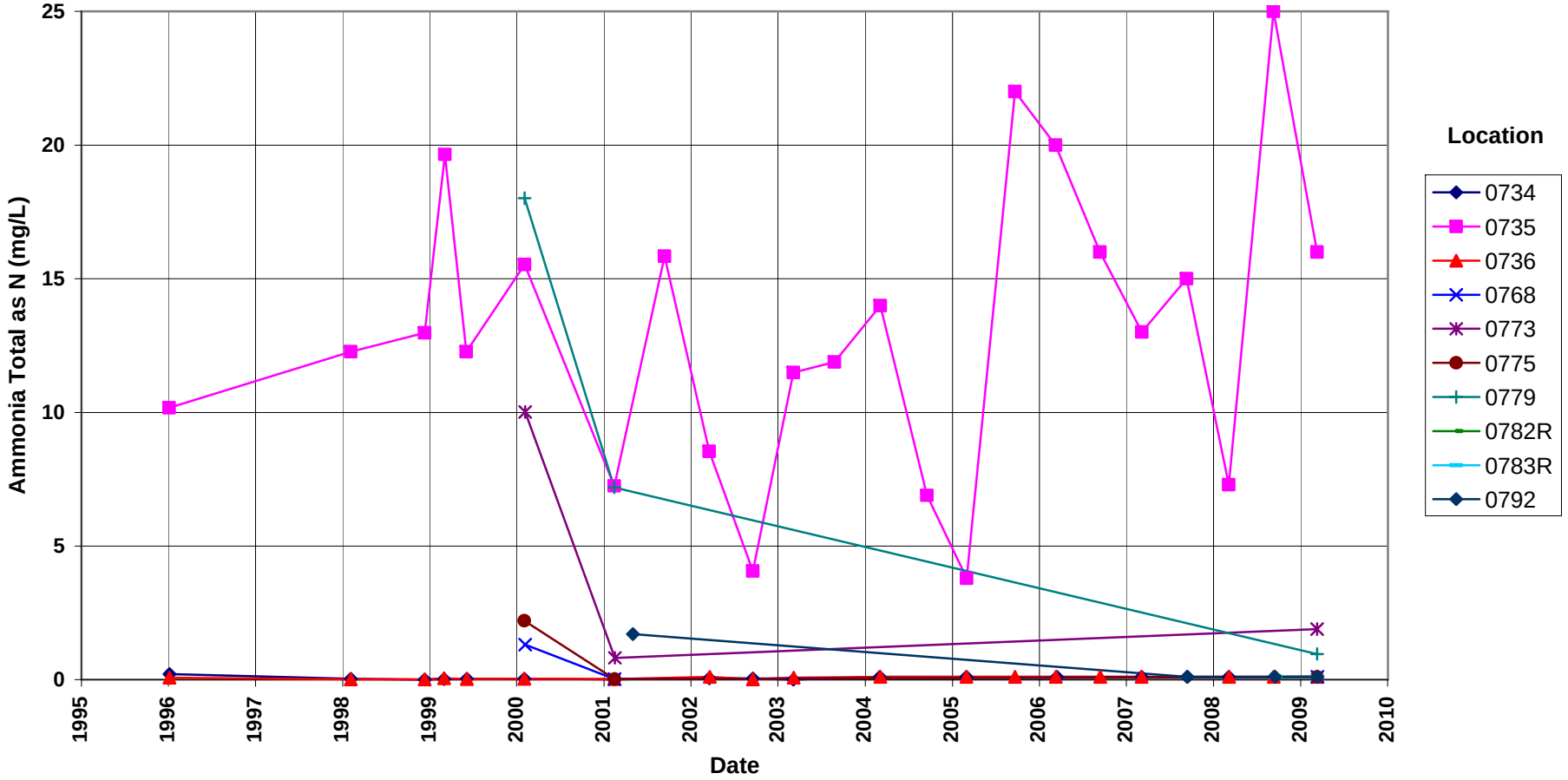
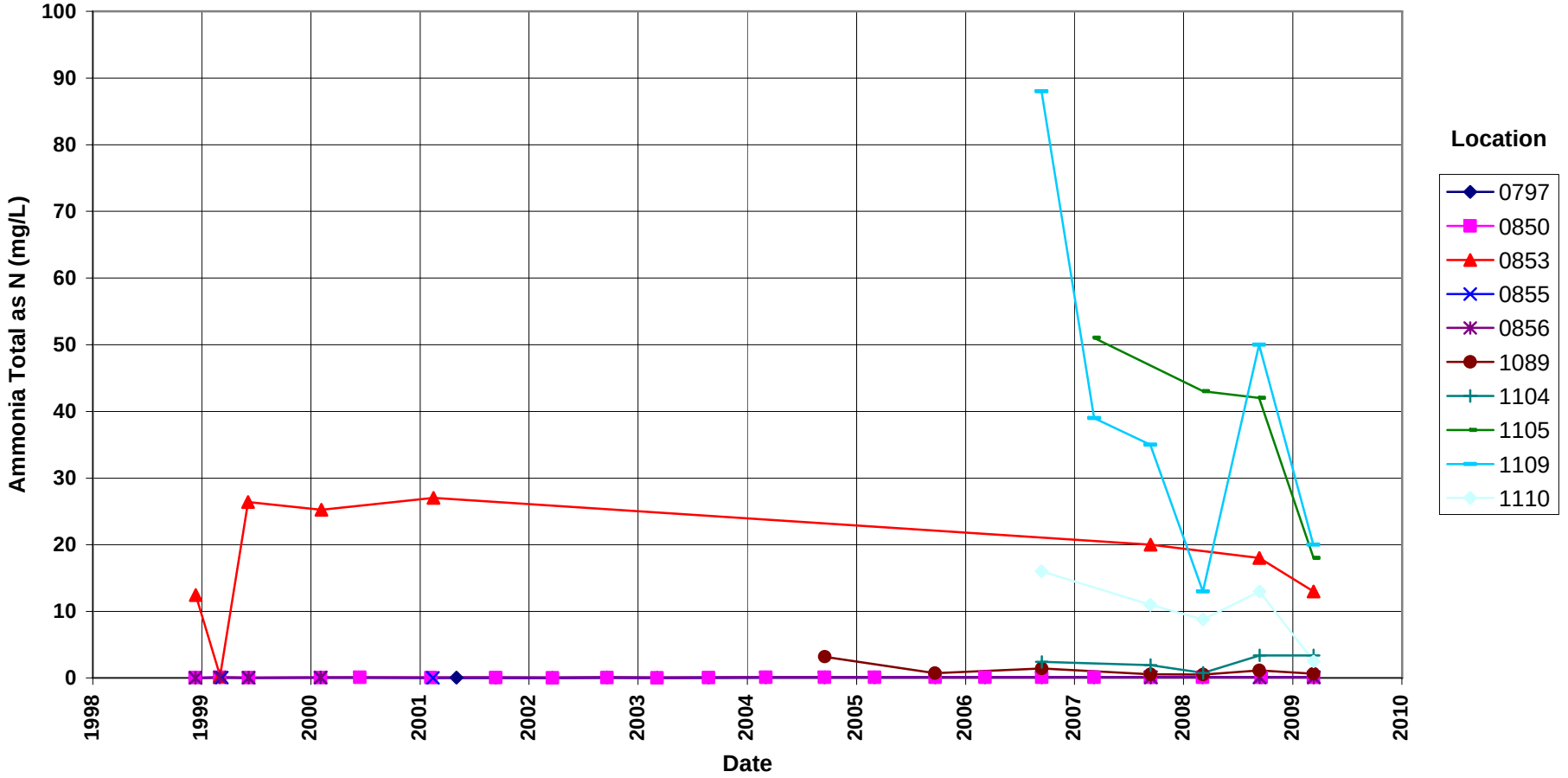
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration
No established groundwater standard



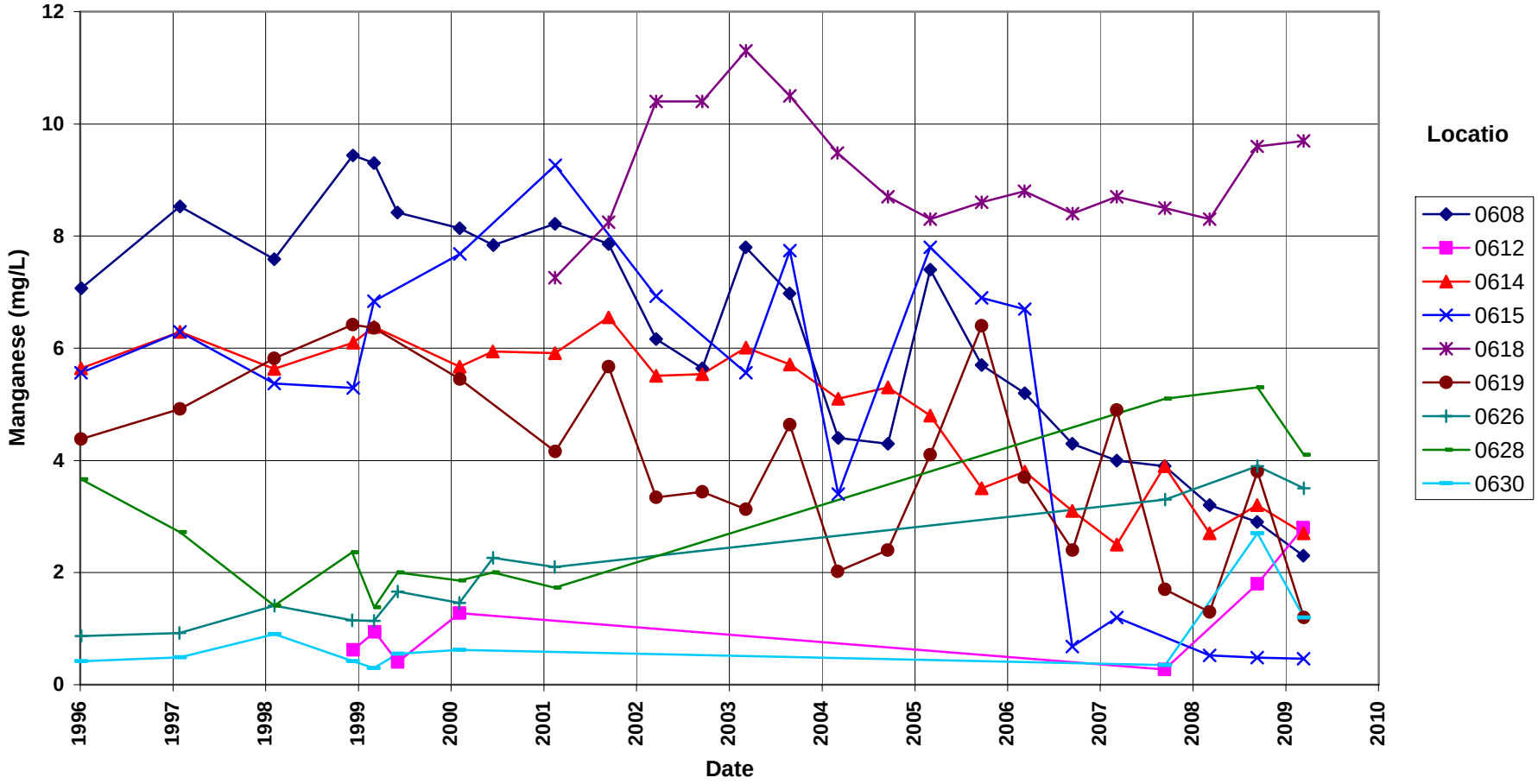
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration
No established groundwater standard



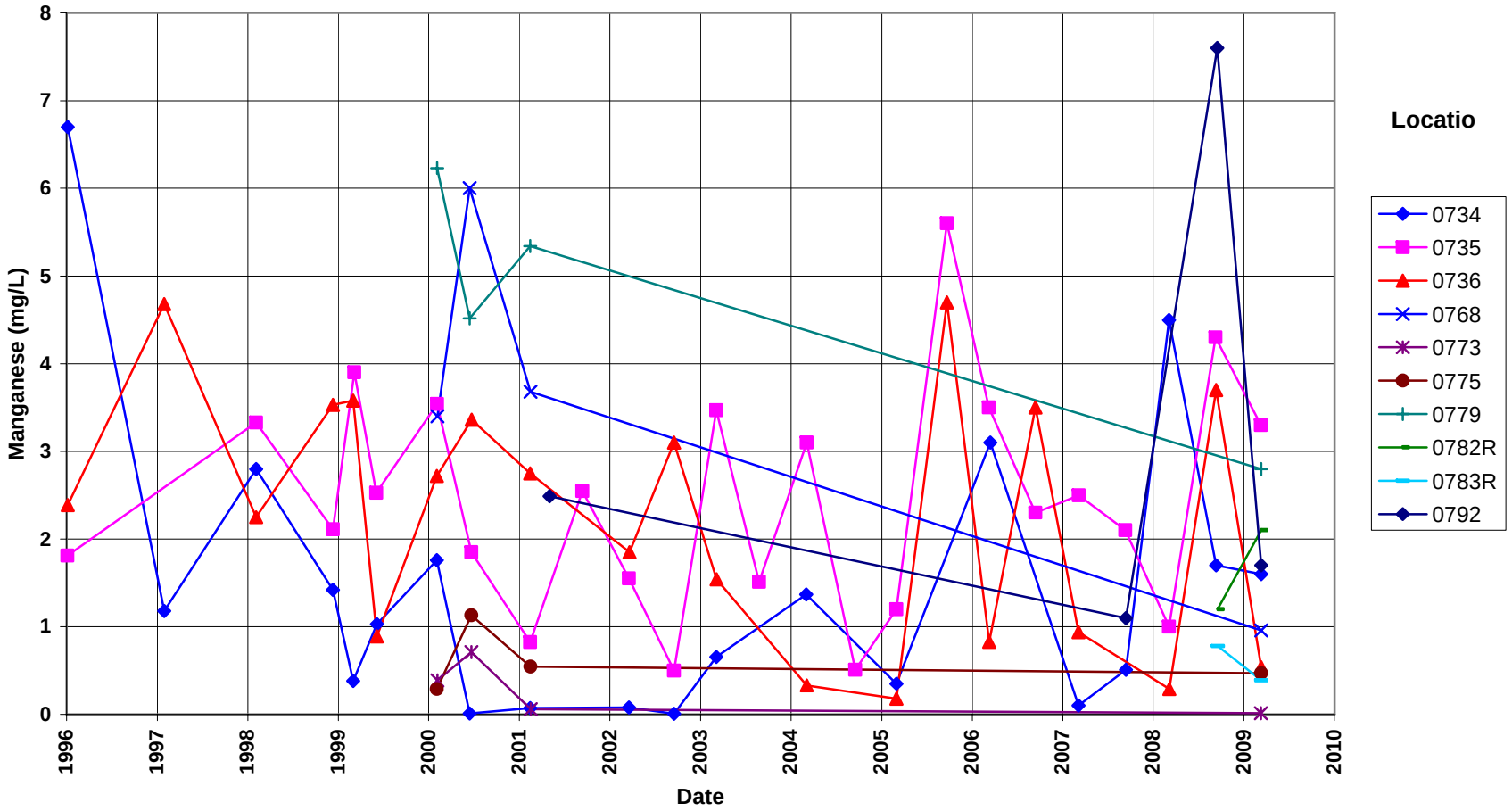
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration
No established groundwater standard



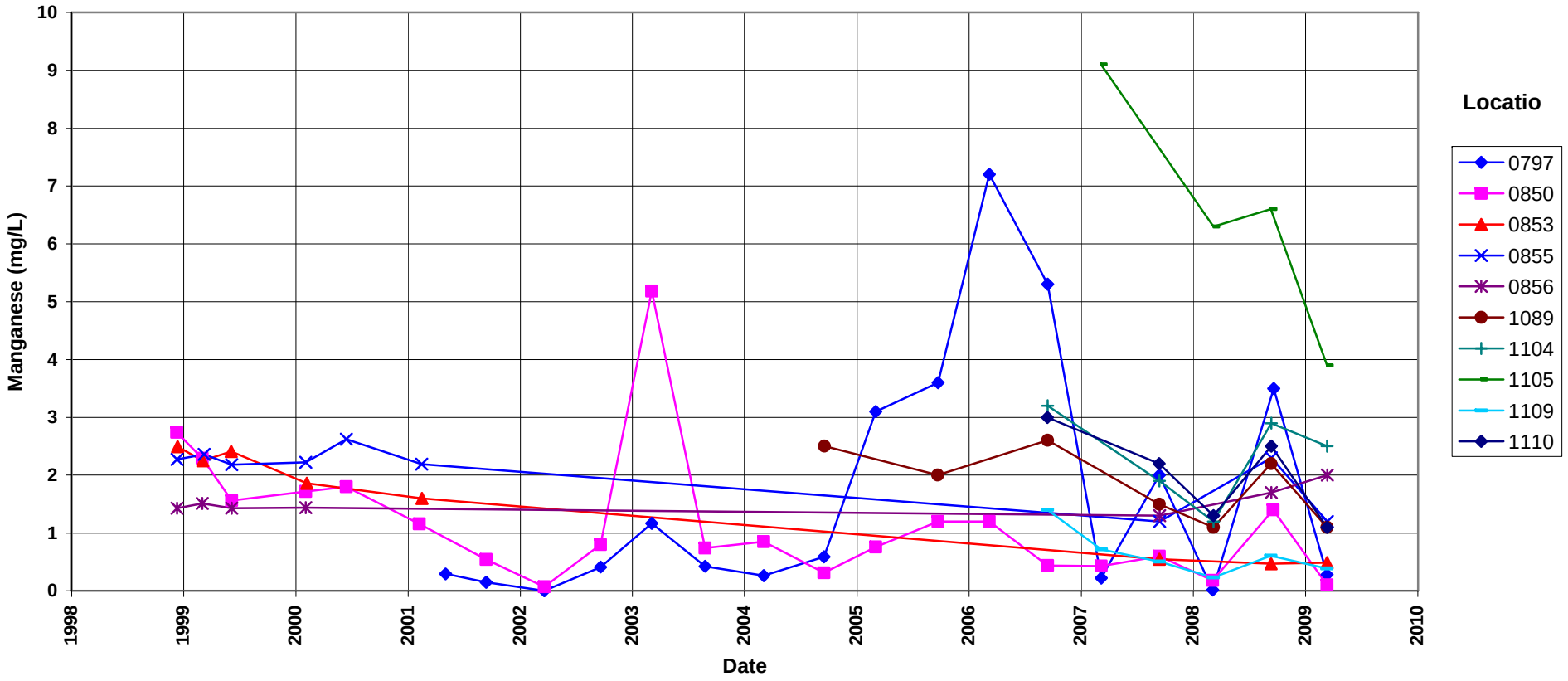
Shiprock Disposal Site (Floodplain)
Manganese Concentration
No established groundwater standard



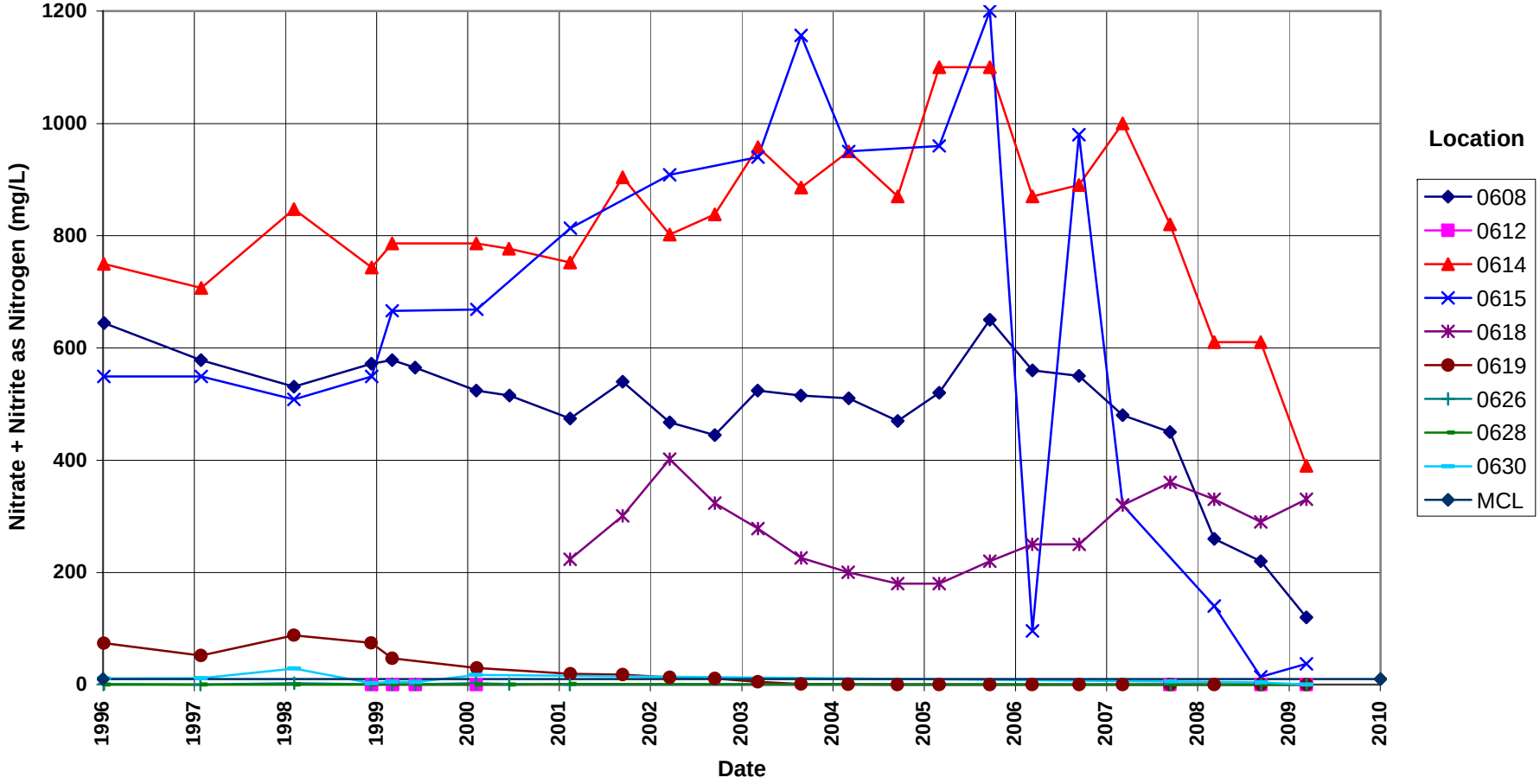
Shiprock Disposal Site (Floodplain)
Manganese Concentration
No established groundwater standard



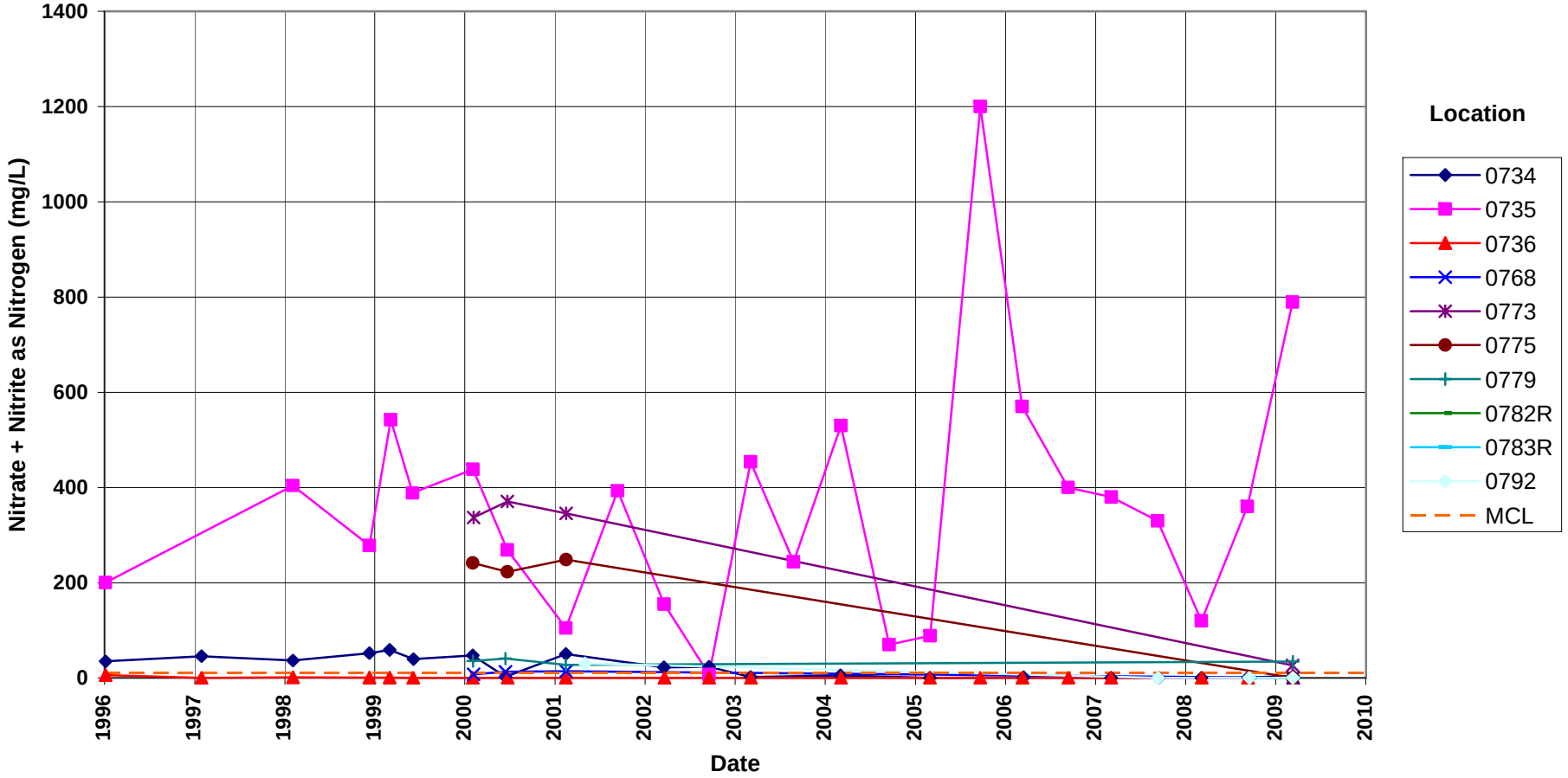
Shiprock Disposal Site (Floodplain)
Manganese Concentration
No established groundwater standard



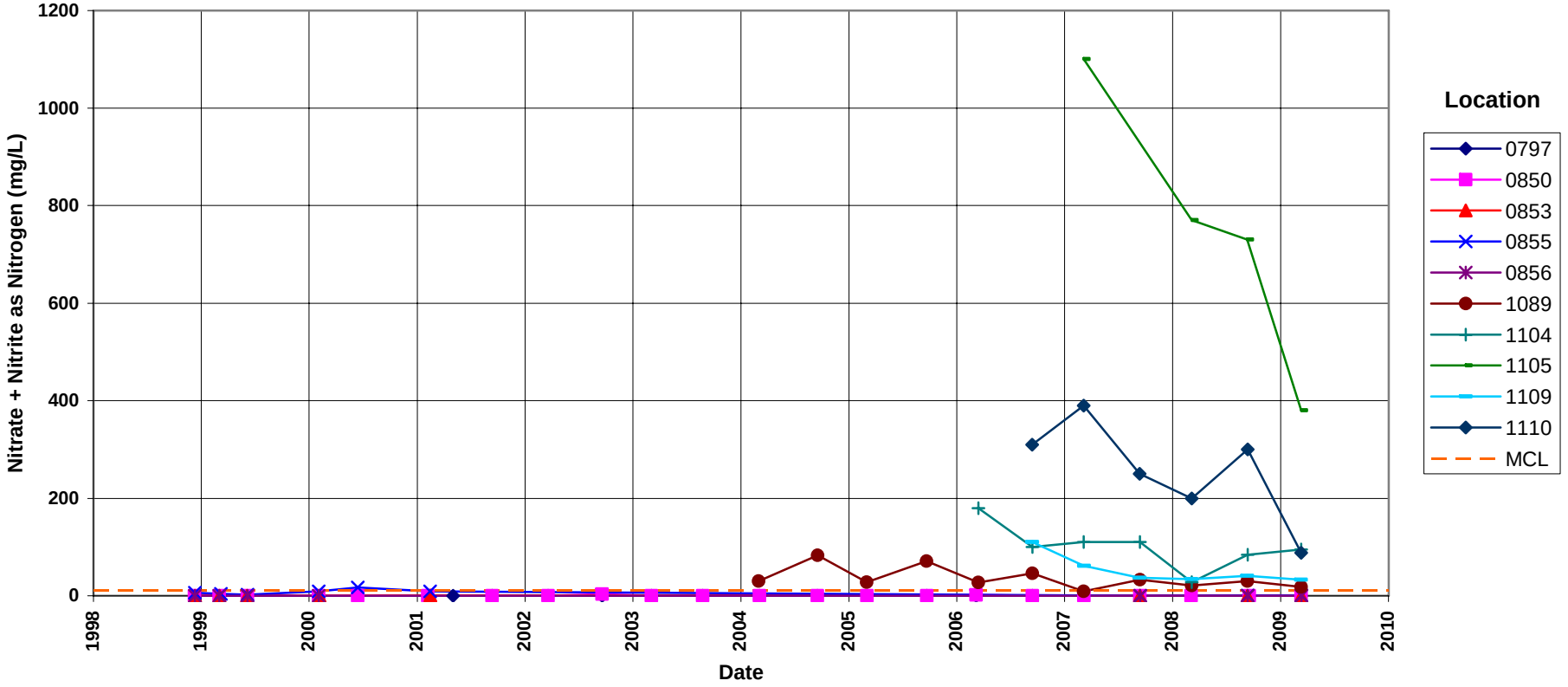
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



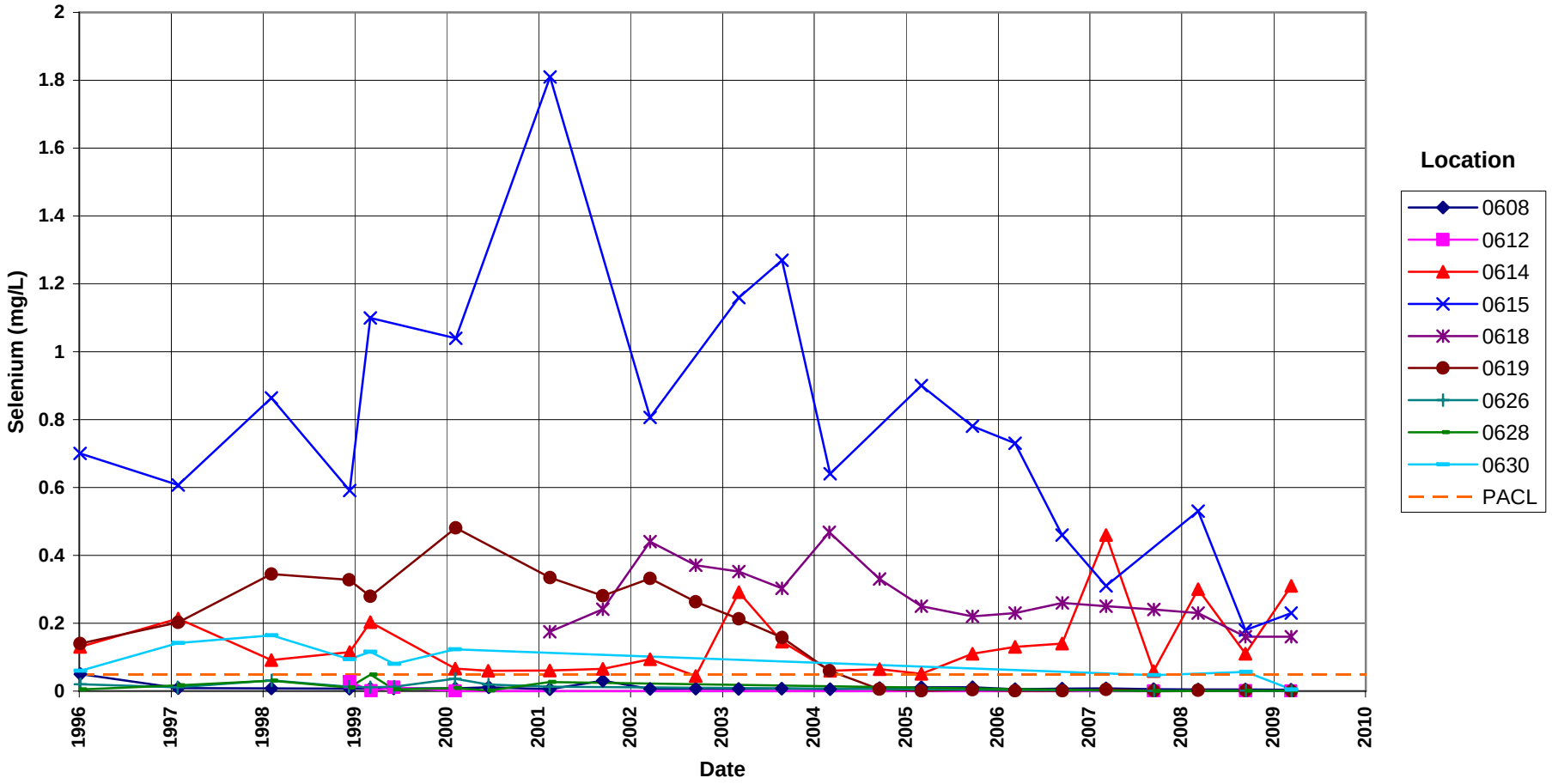
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



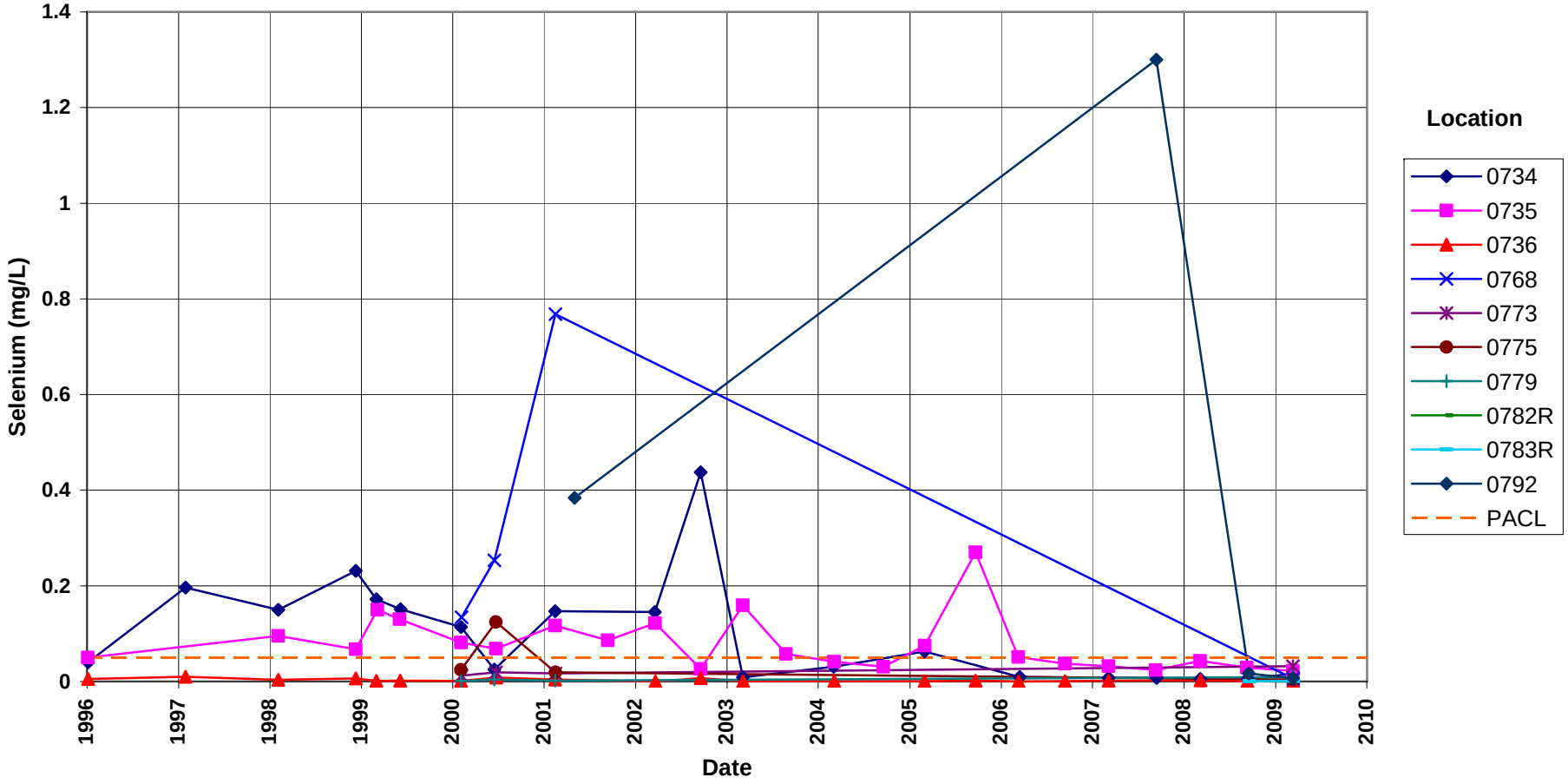
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



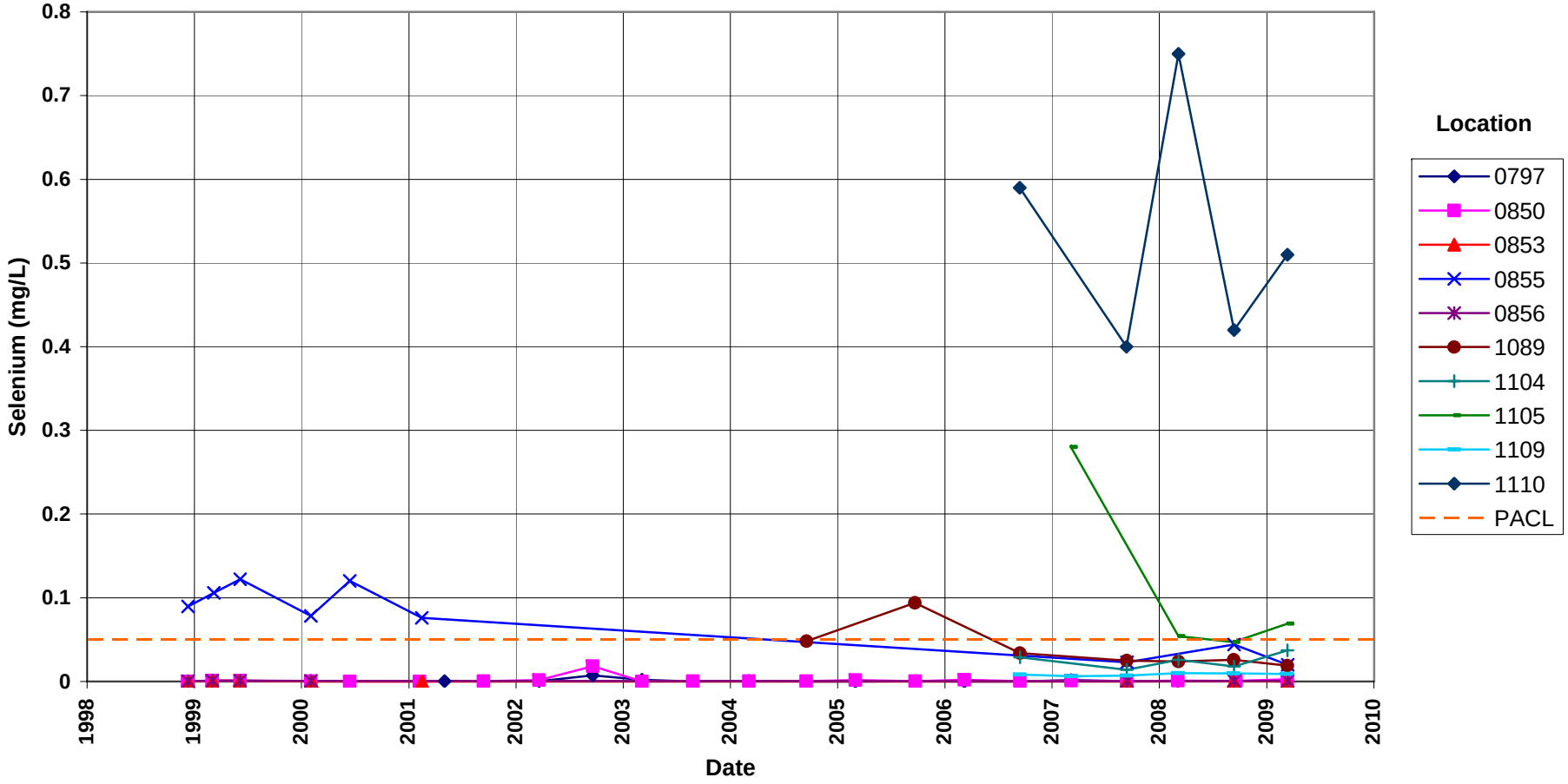
Shiprock Disposal Site (Floodplain)
Selenium Concentration
Proposed Alternate Contaminant Limit (PACL) = 0.05 mg/L



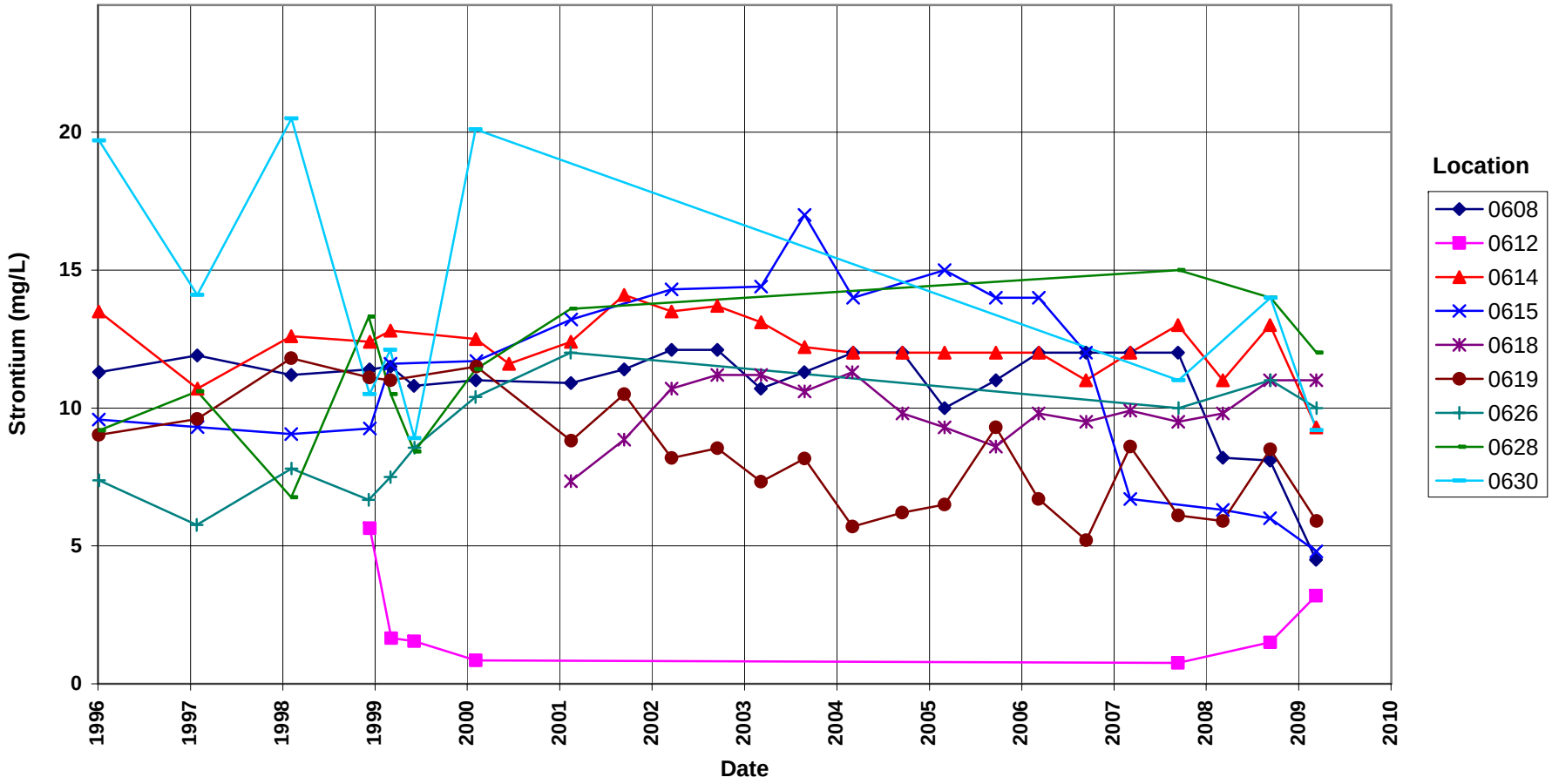
Shiprock Disposal Site (Floodplain)
Selenium Concentration
Proposed Alternate Contaminant Limit (PACL) = 0.05 mg/L



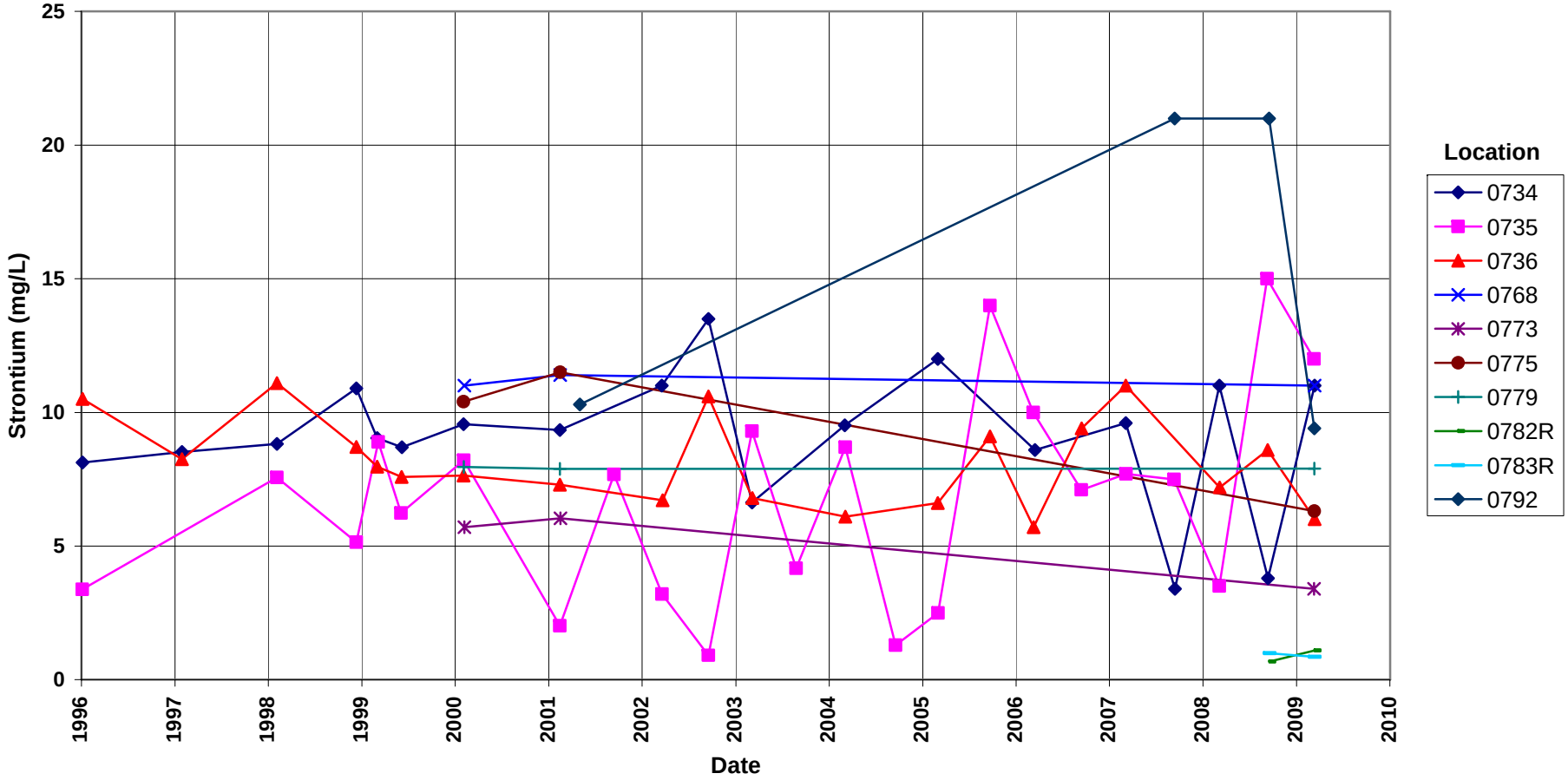
Shiprock Disposal Site (Floodplain)
Selenium Concentration
Proposed Alternate Contaminant Limit (PACL) = 0.05 mg/L



Shiprock Disposal Site (Floodplain)
Strontium Concentration
No established groundwater standard



Shiprock Disposal Site (Floodplain)
Strontium Concentration
No established groundwater standard



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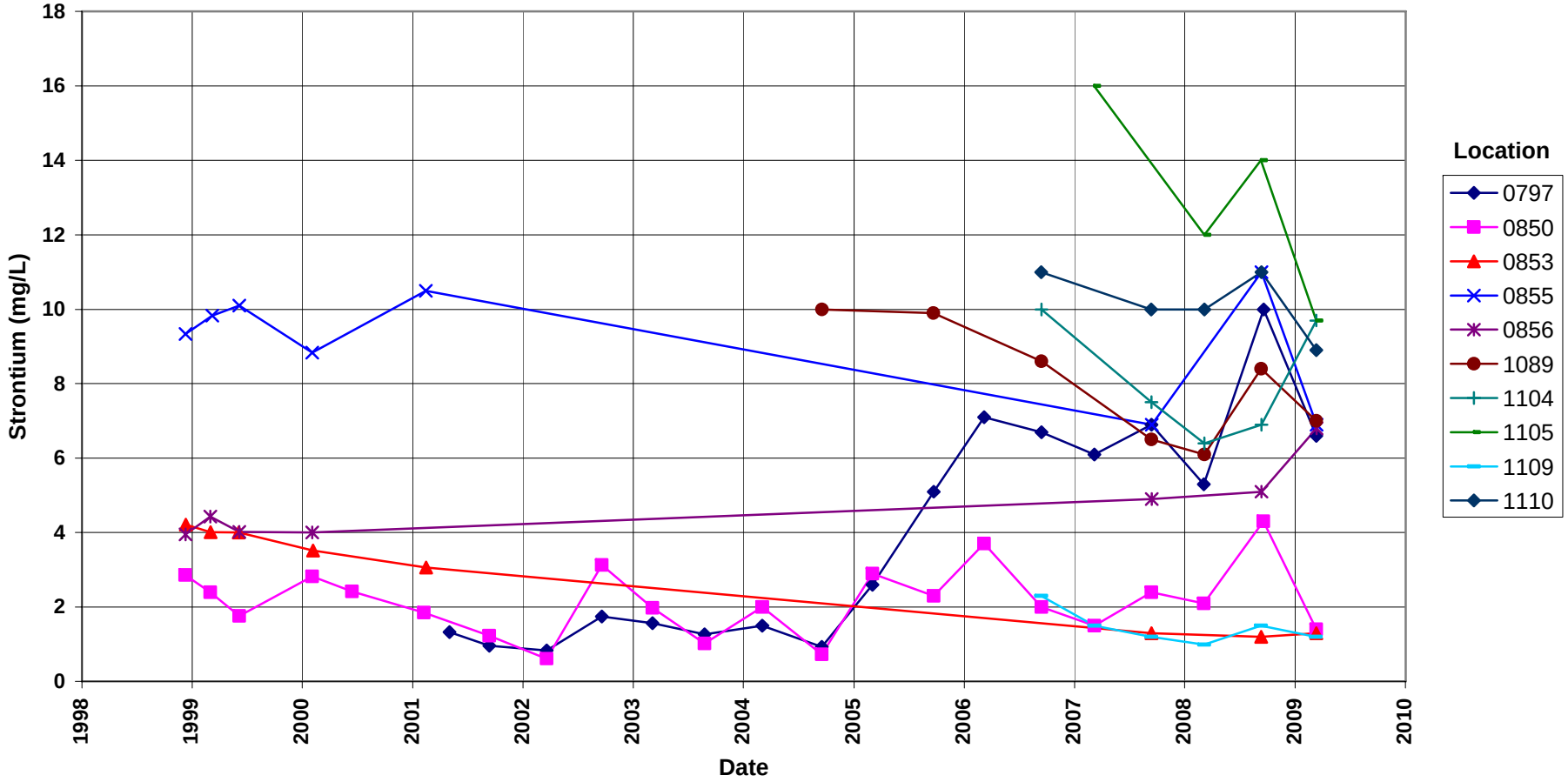
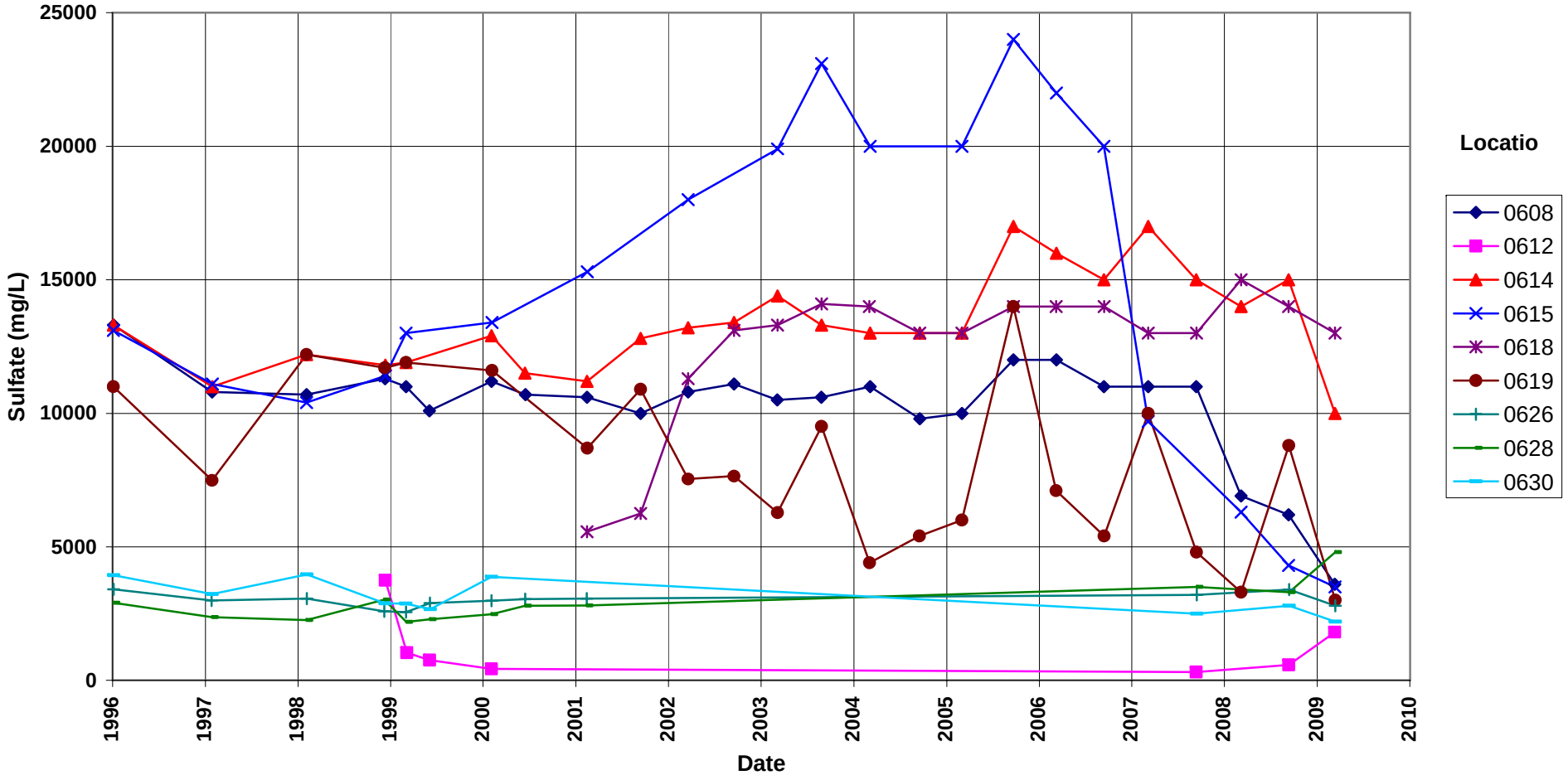
No established groundwater standard



Shiprock Disposal Site (Floodplain)
Sulfate Concentration
No established groundwater standard



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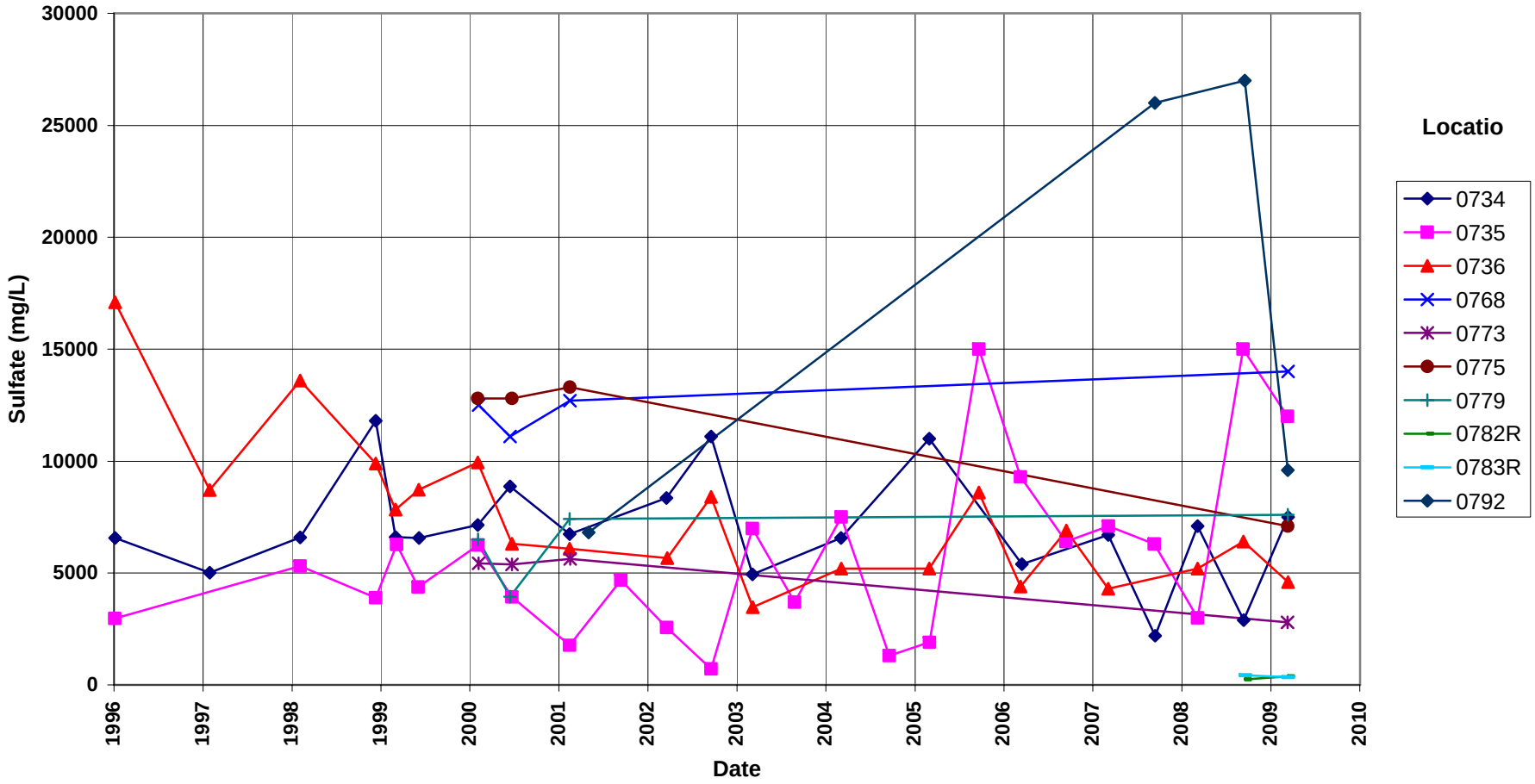
Sulfate Concentration
No established groundwater standard



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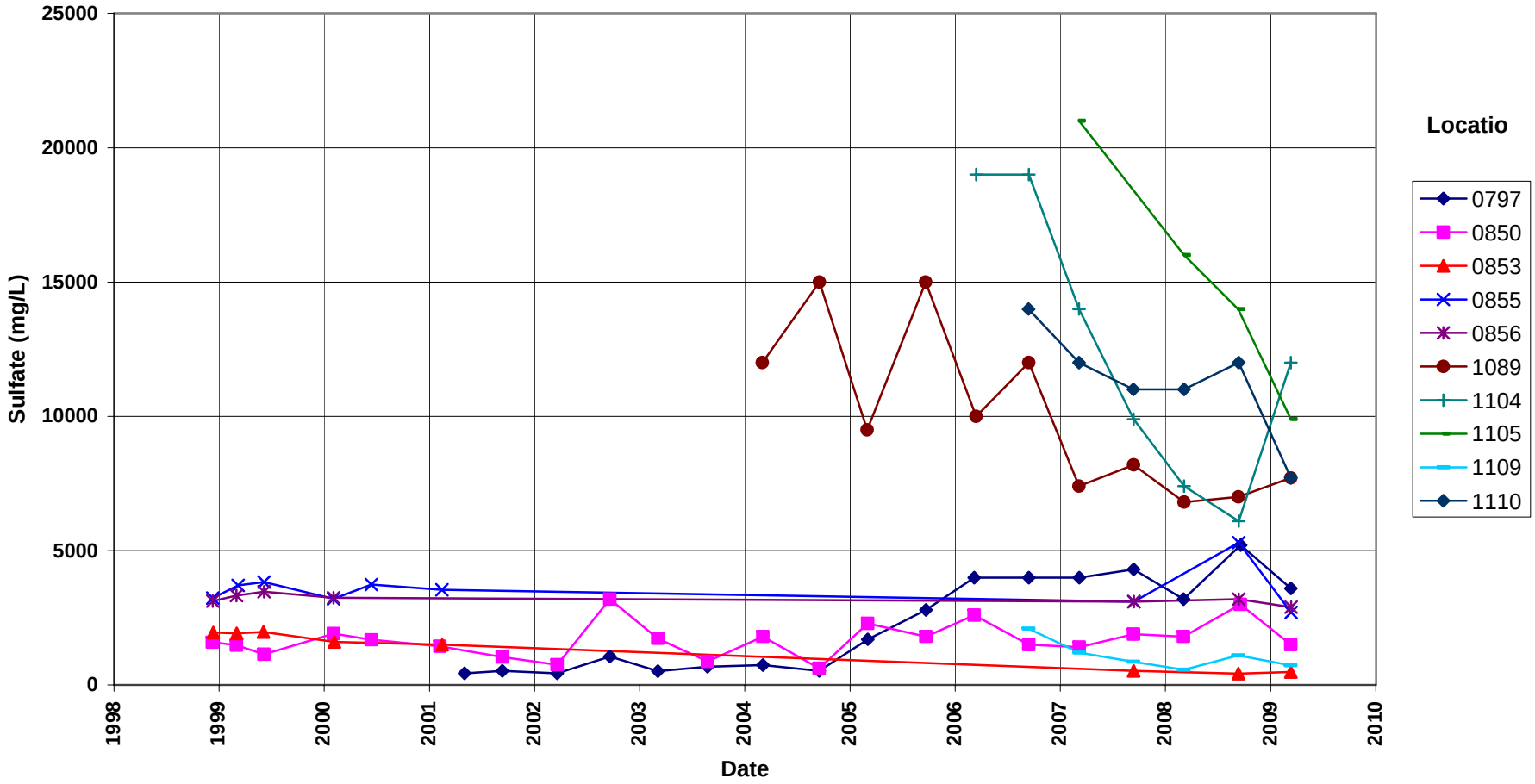
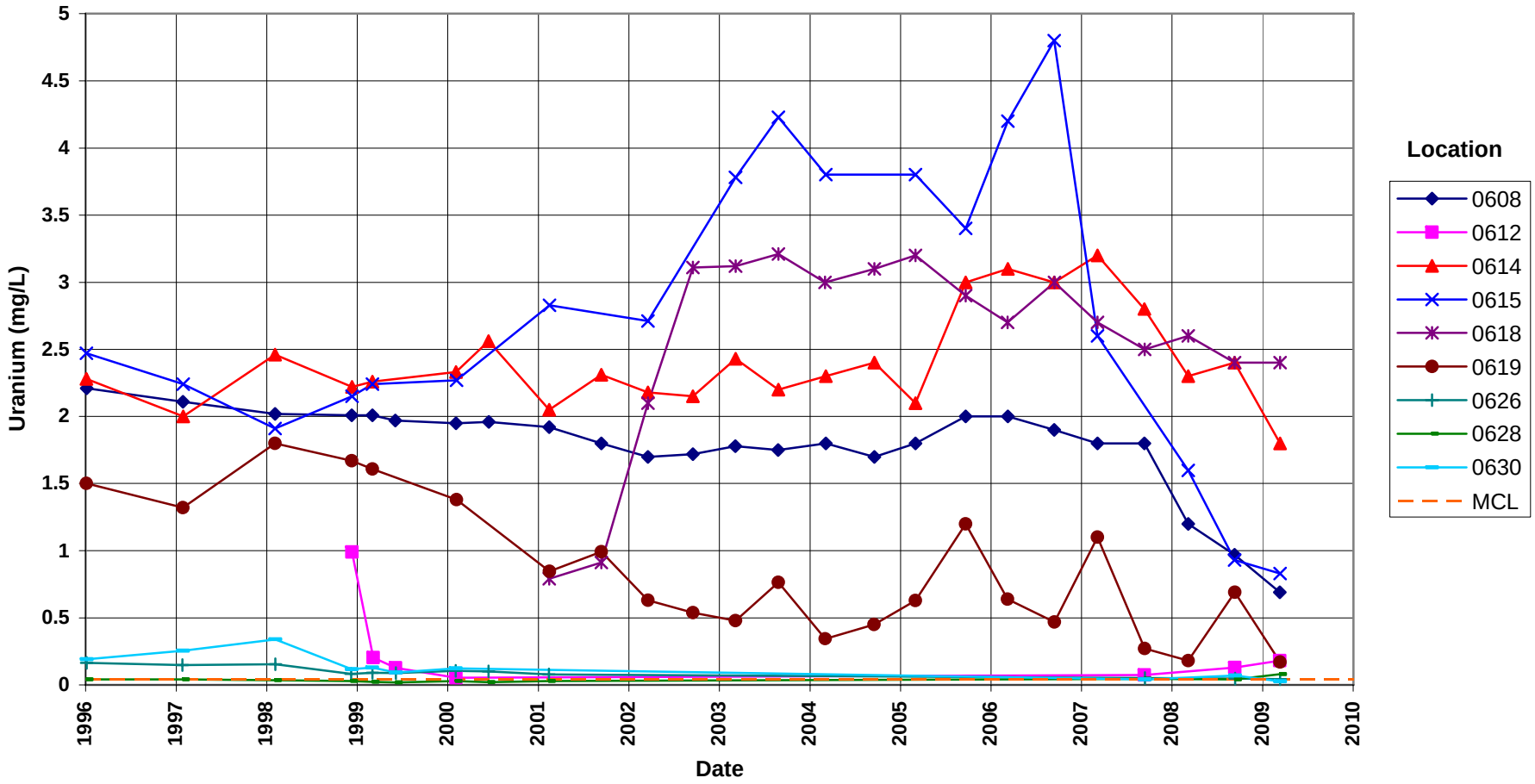
Sulfate Concentration
No established groundwater standard



Shiprock Disposal Site (Floodplain)
Uranium Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



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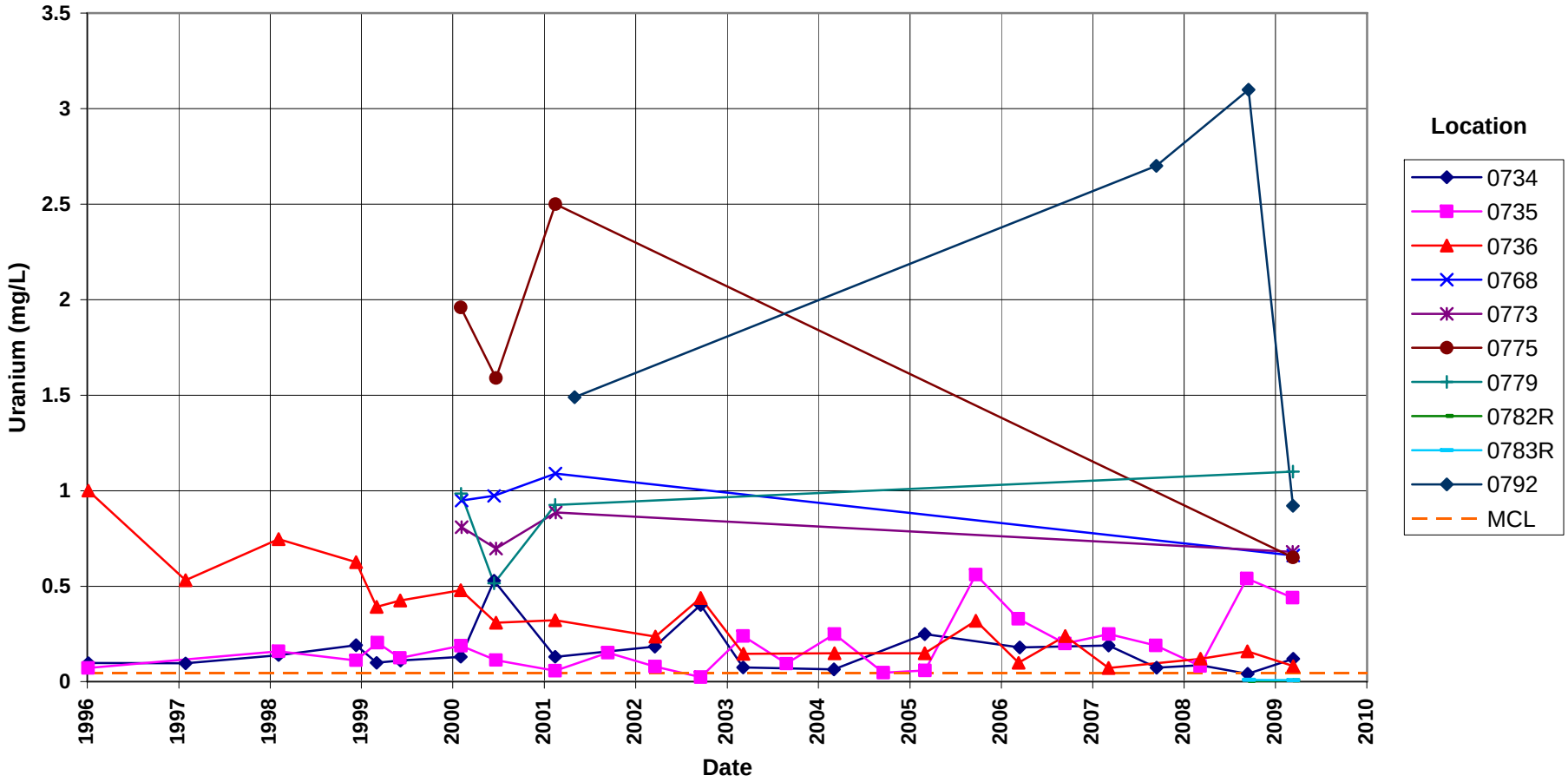

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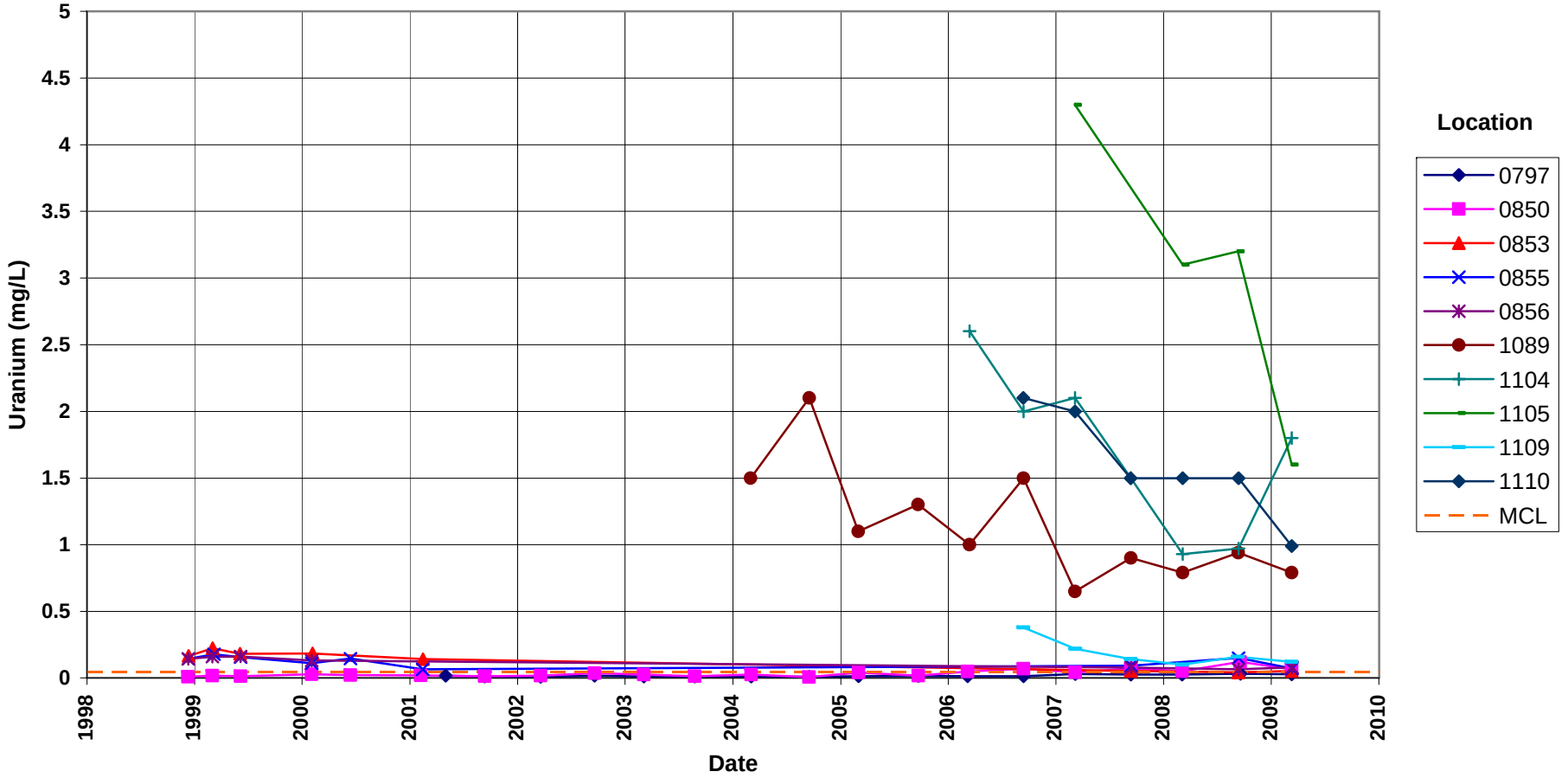

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Time-Concentration Graphs
Terrace Locations

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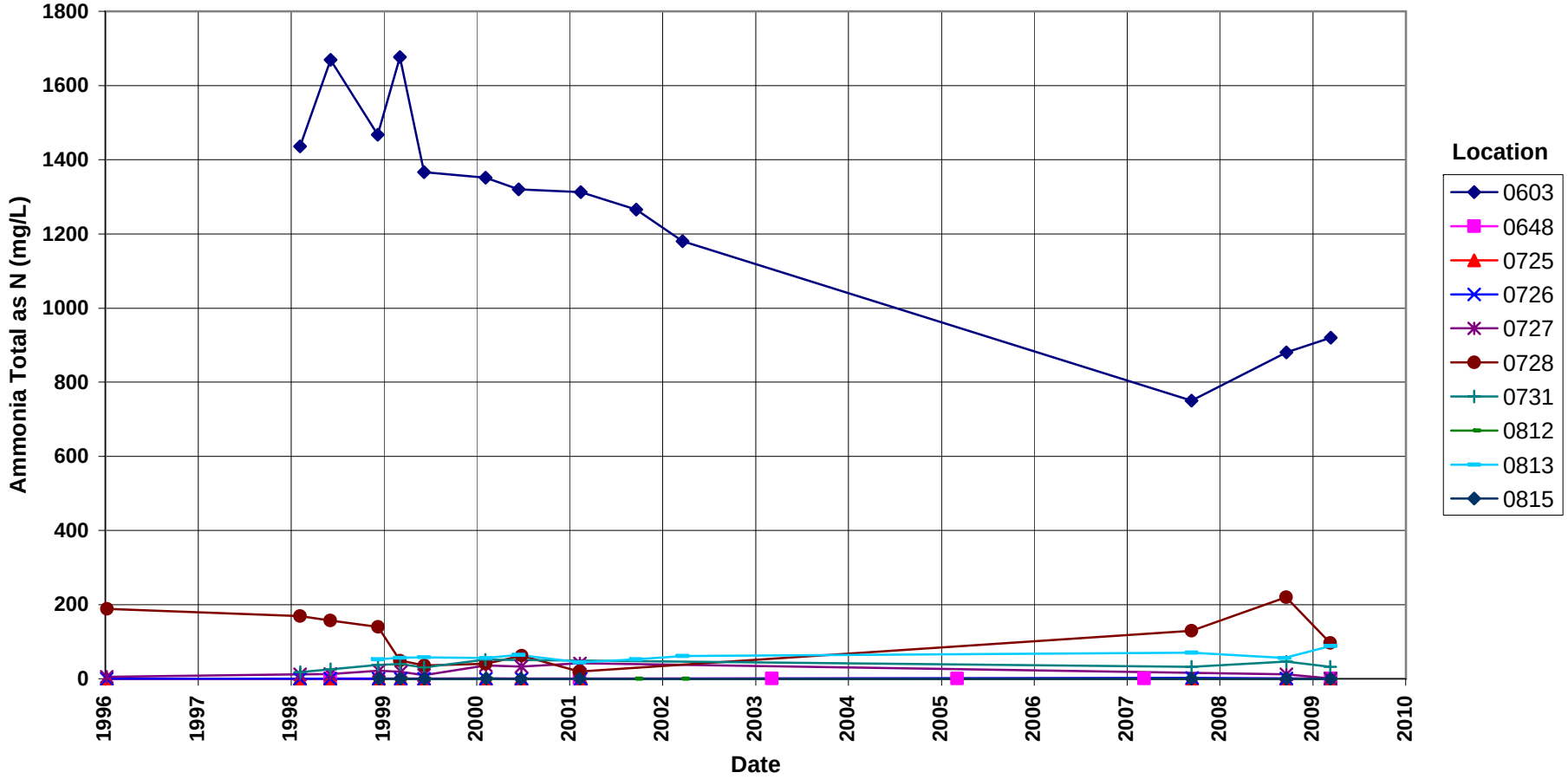
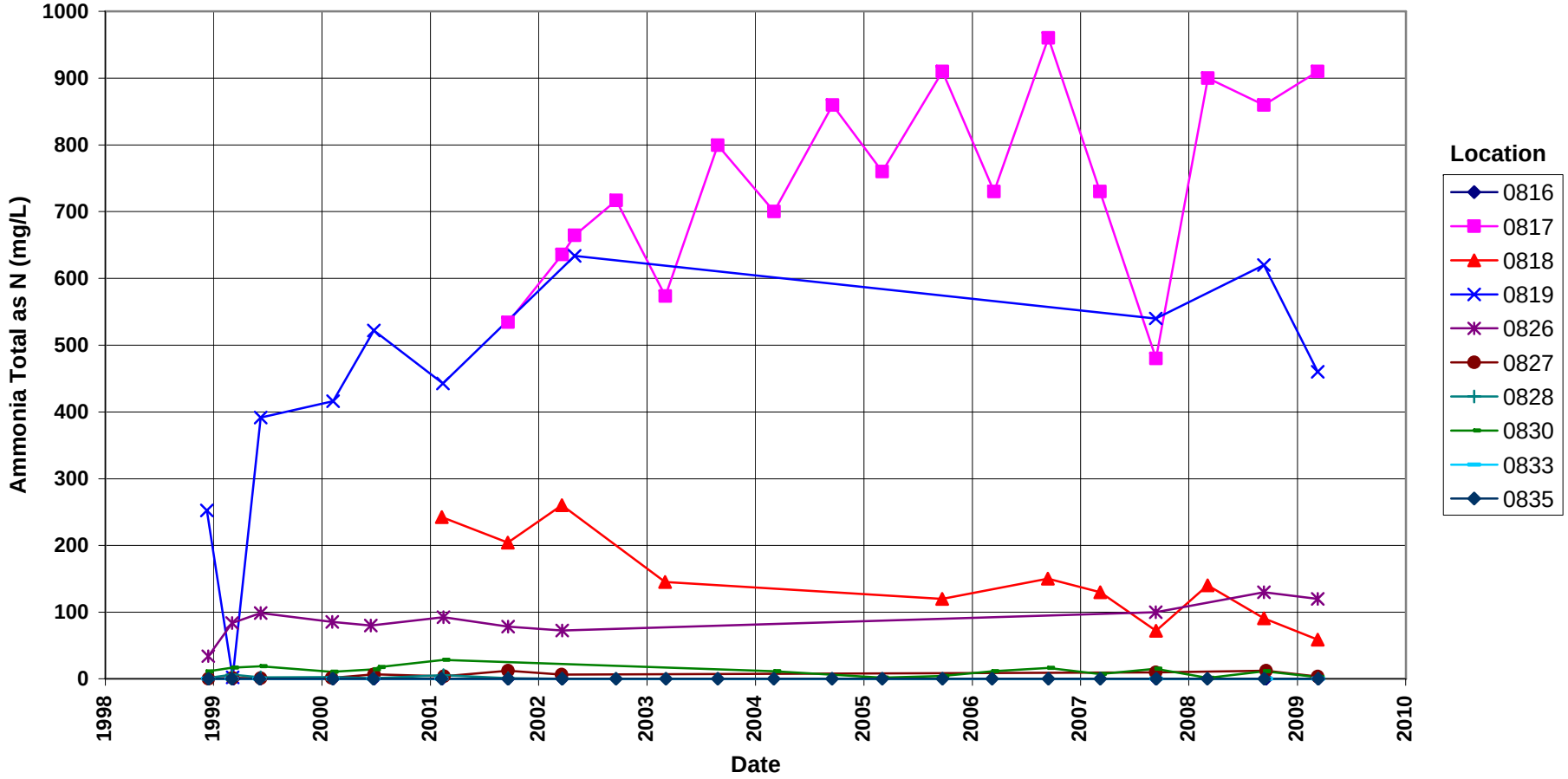
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration

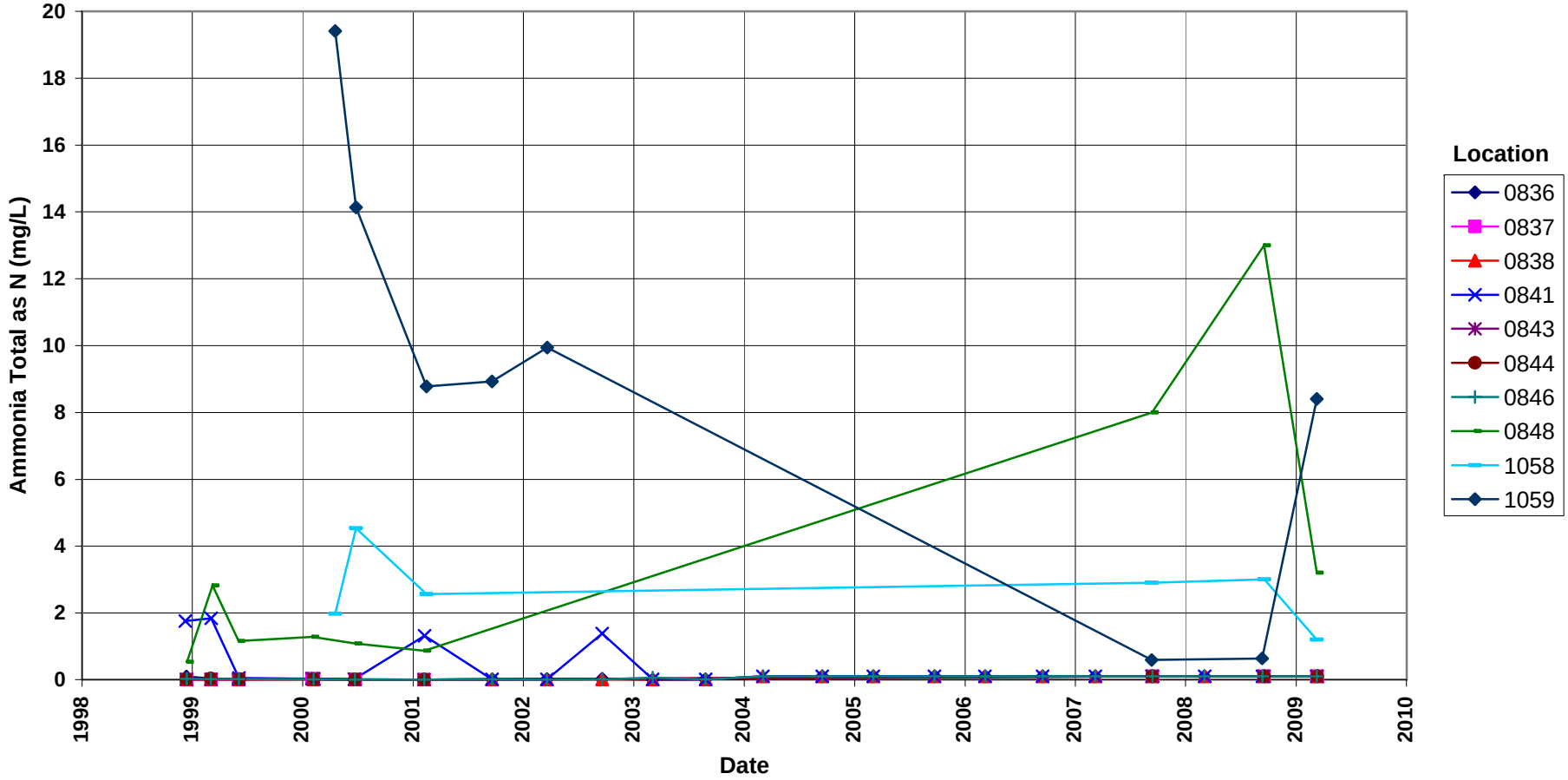
No established groundwater standard



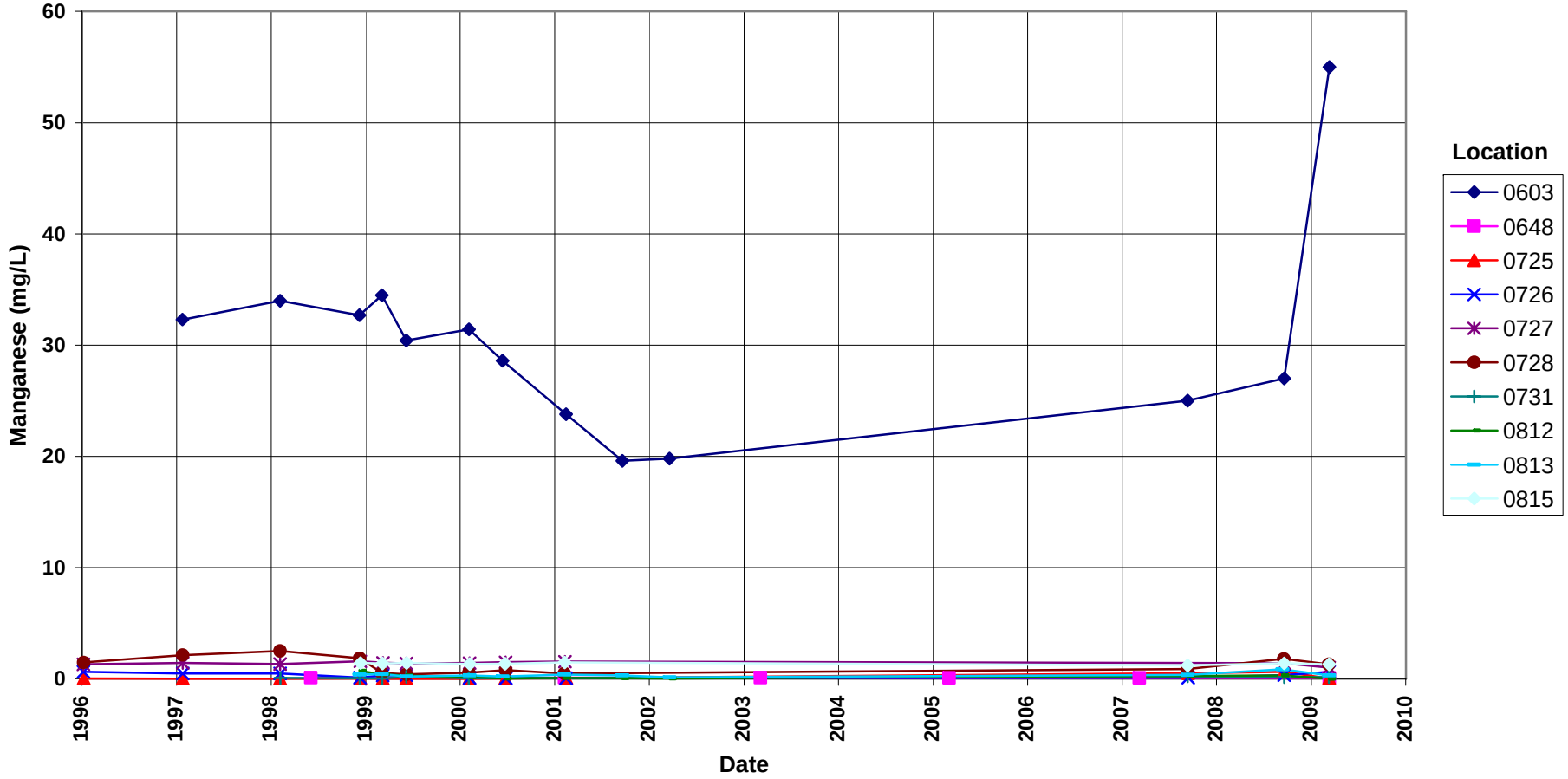
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration
No established groundwater standard



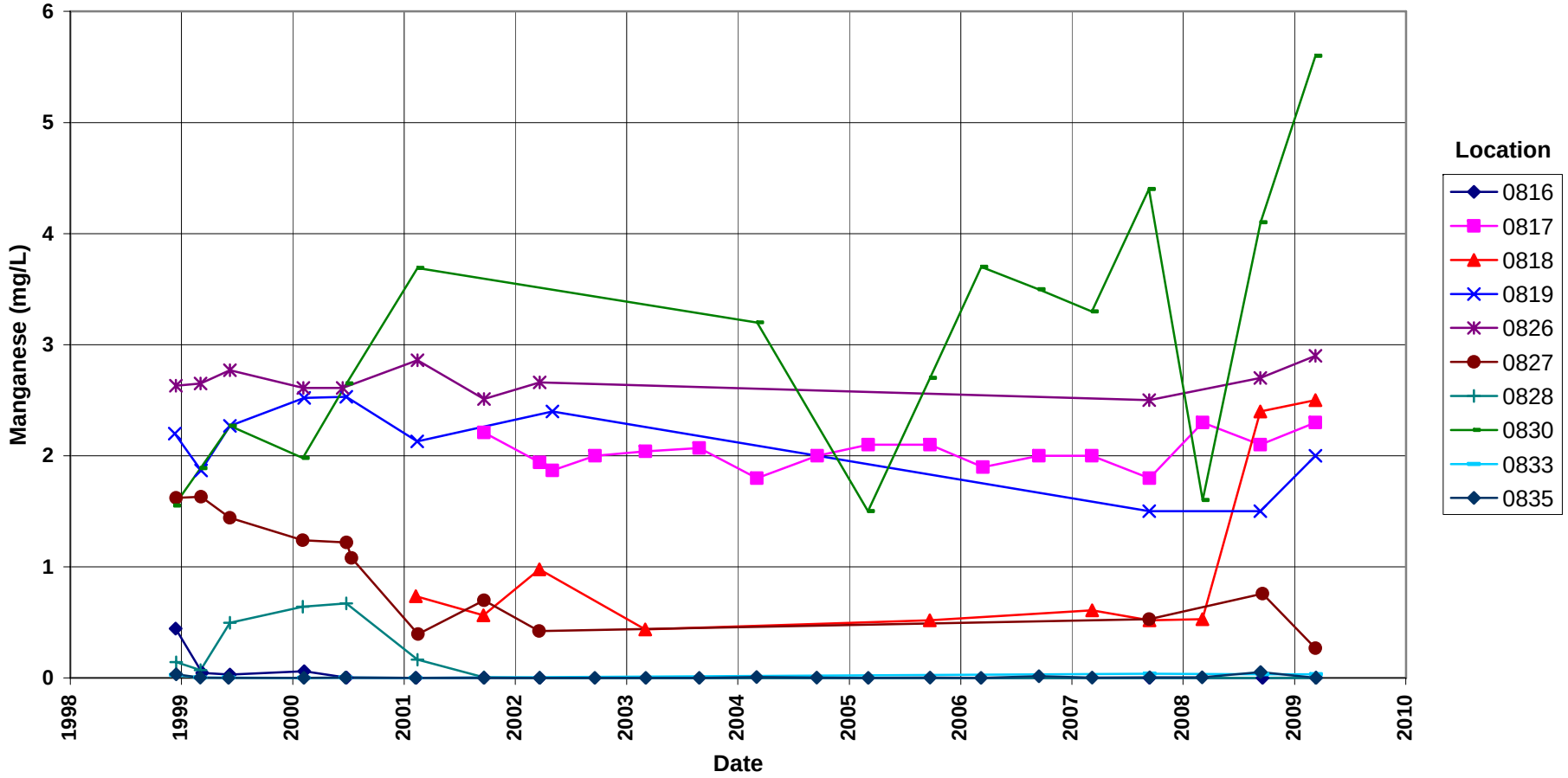
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration
No established groundwater standard



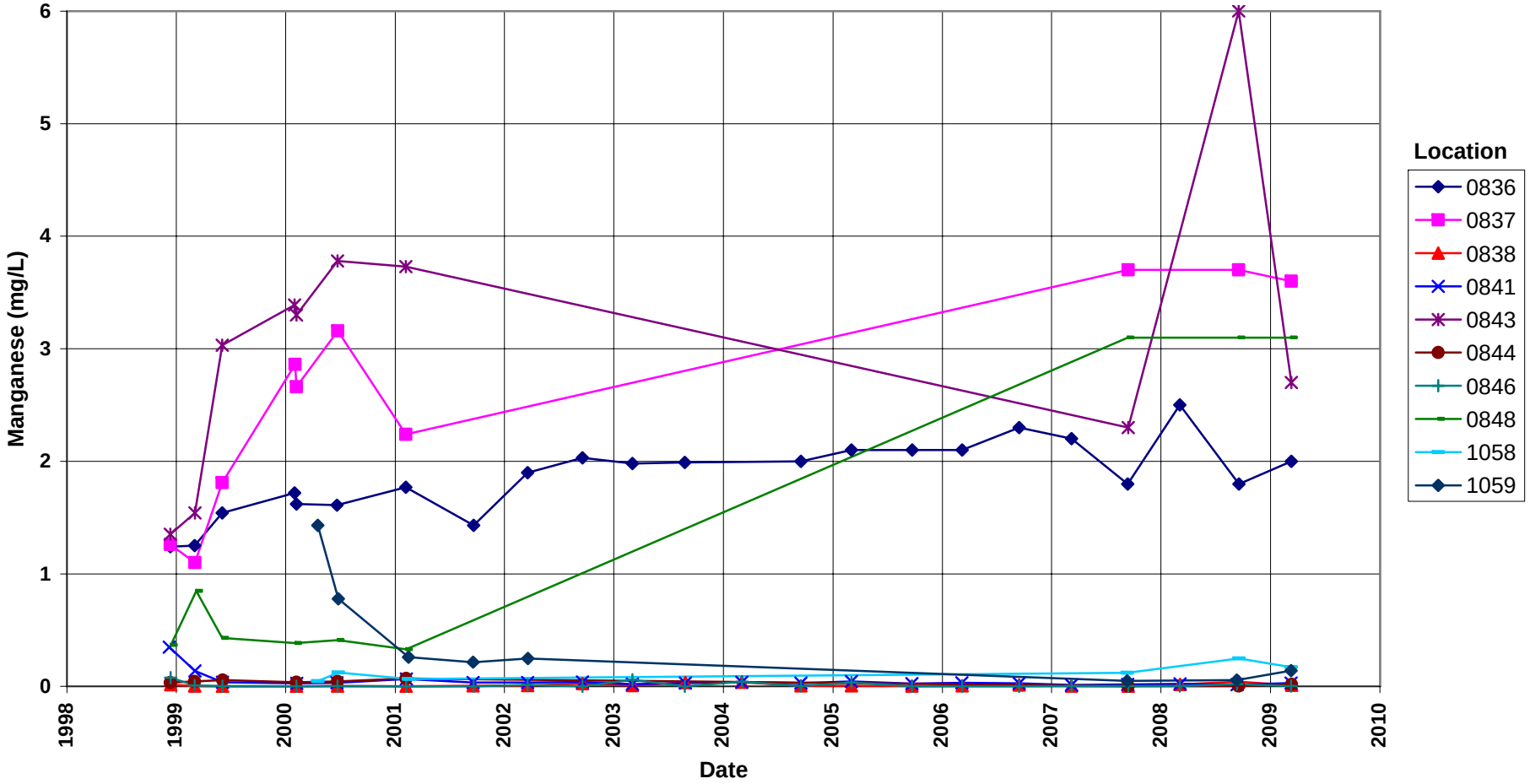
Shiprock Disposal Site (Terrace)
Manganese Concentration
No established groundwater standard



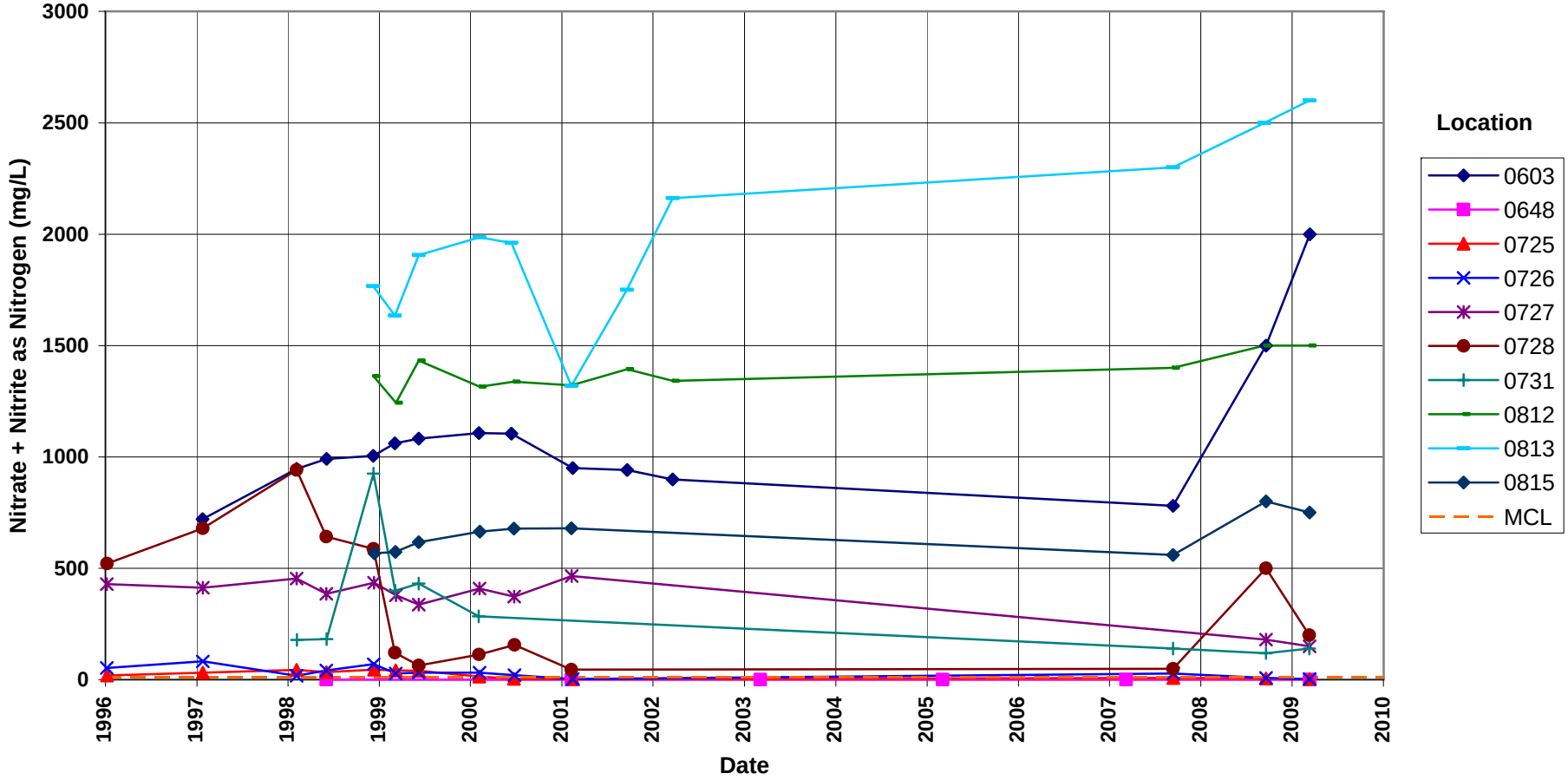
Shiprock Disposal Site (Terrace)
Manganese Concentration
No established groundwater standard



Shiprock Disposal Site (Terrace)
Manganese Concentration
No established groundwater standard



Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



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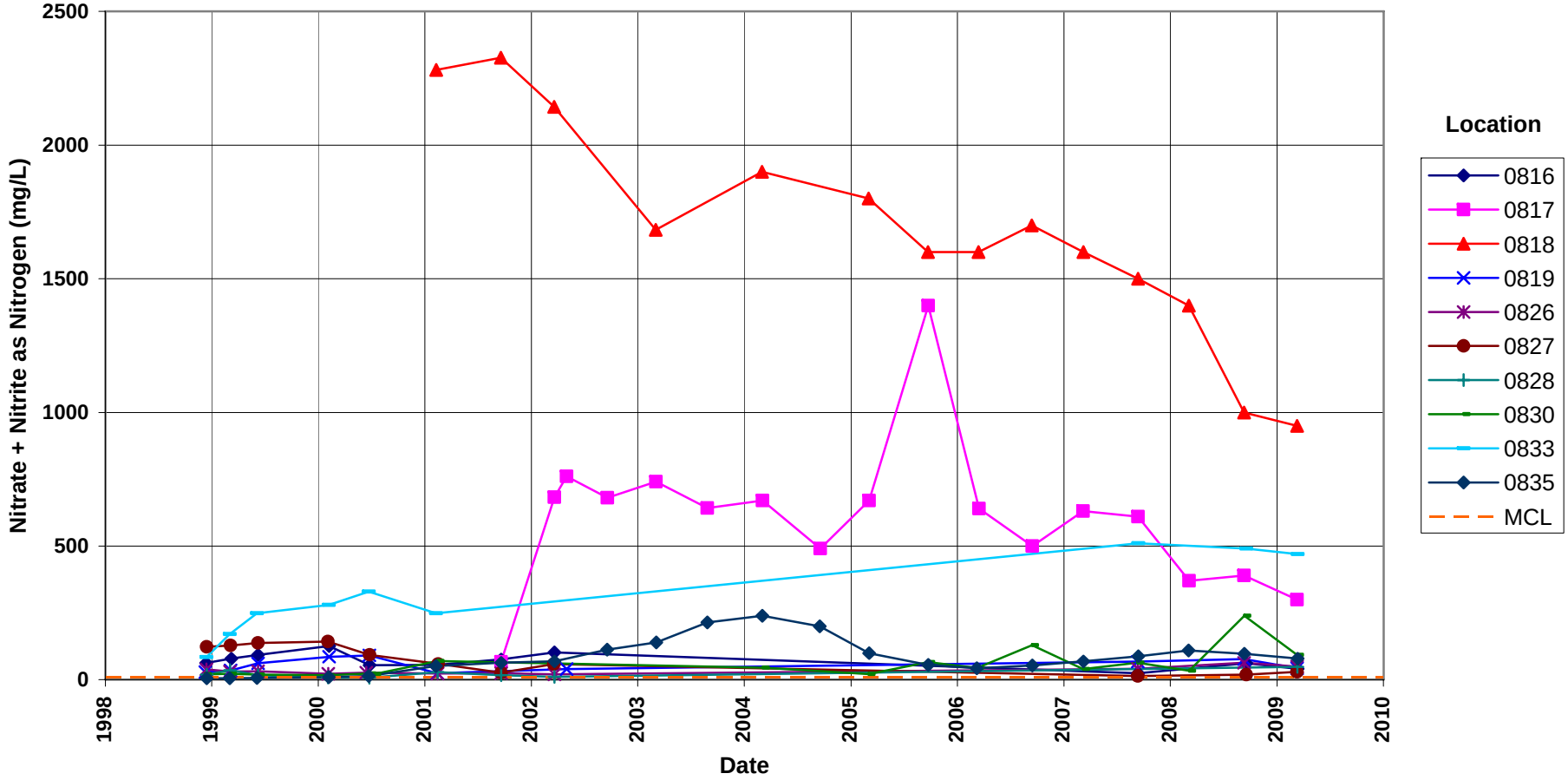

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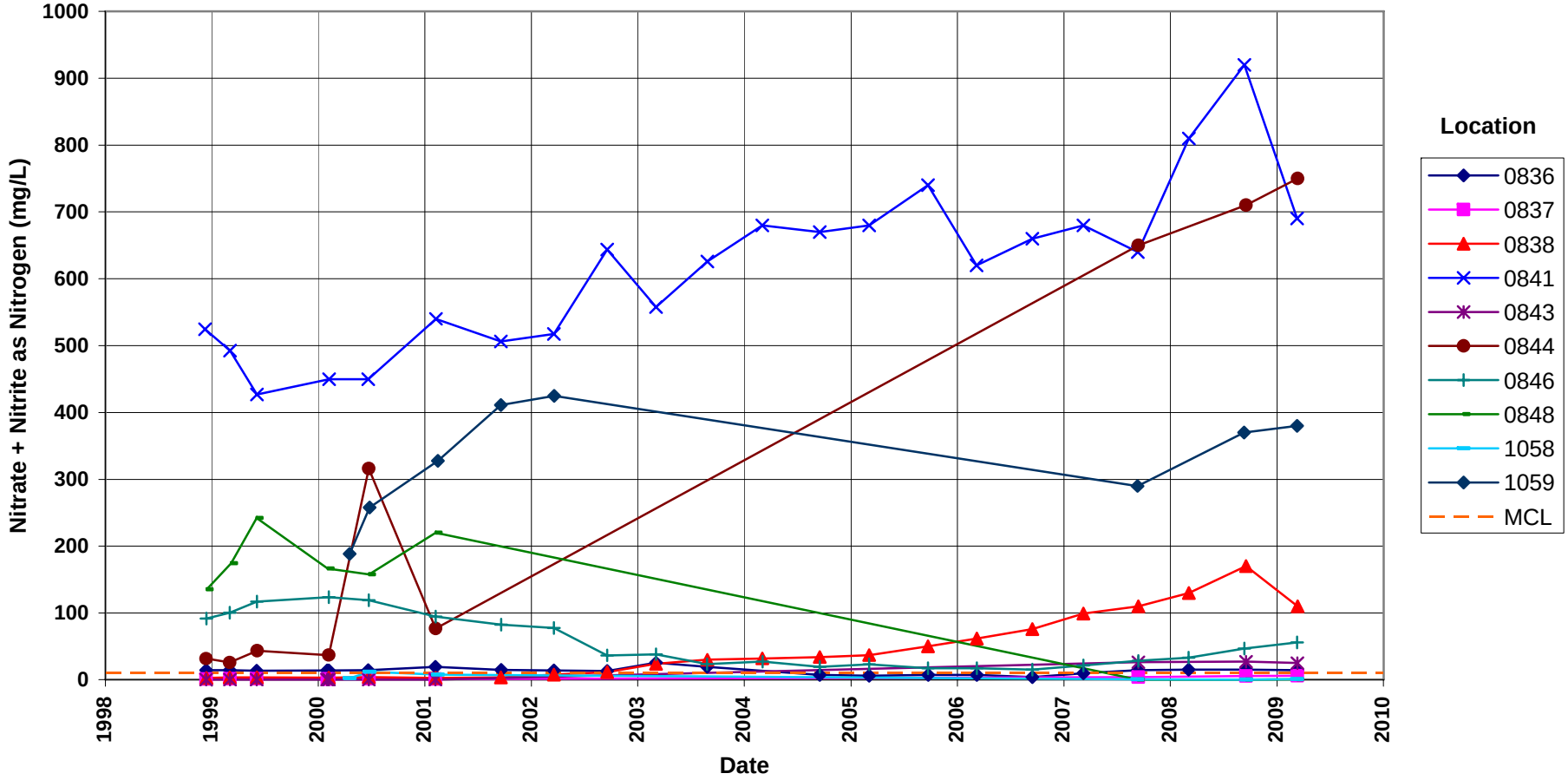
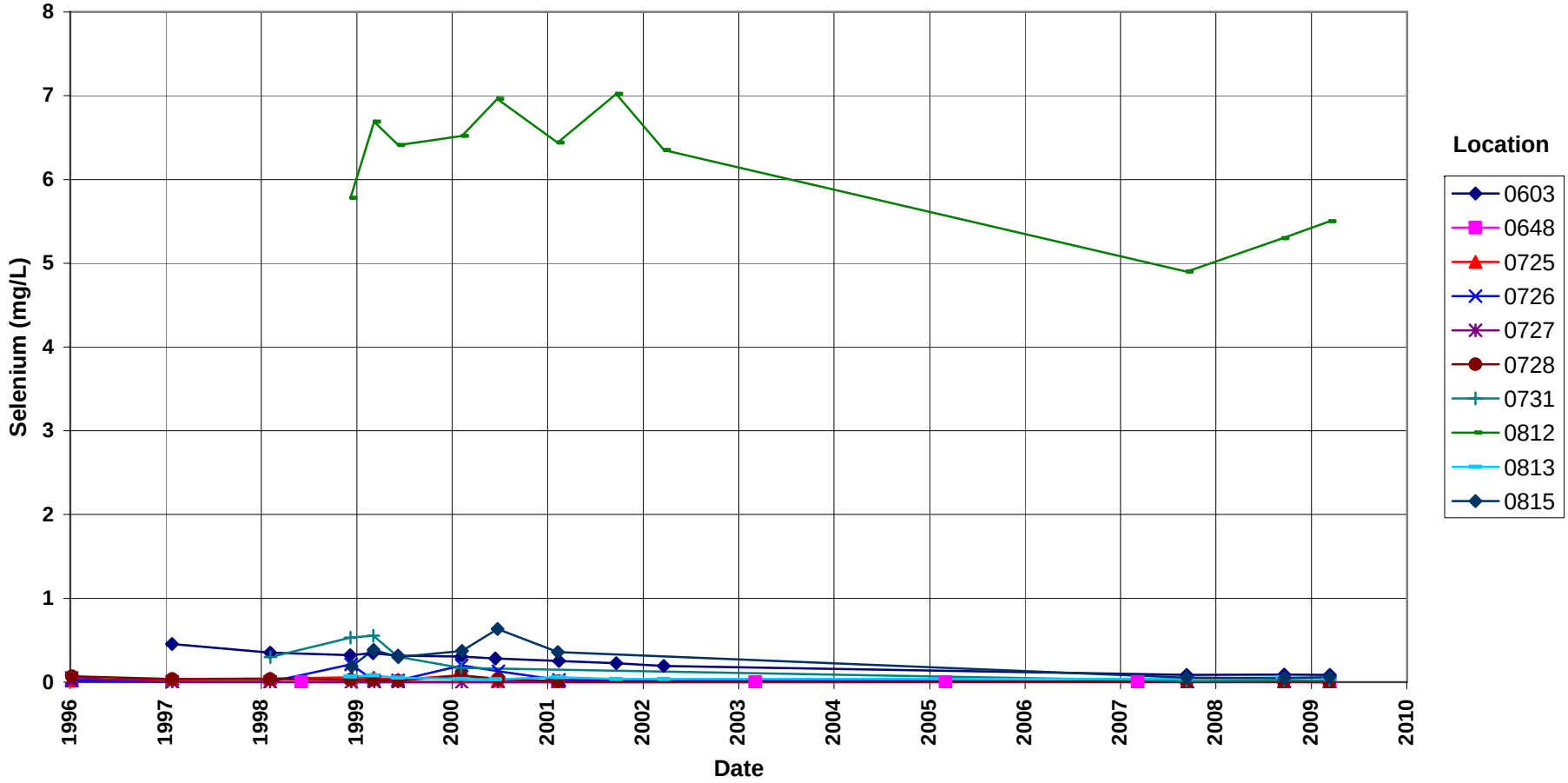


Shiprock Disposal Site (Terrace)
Selenium Concentration
Proposed Alternate Contaminant Limit (PACL) = 0.05 mg/L



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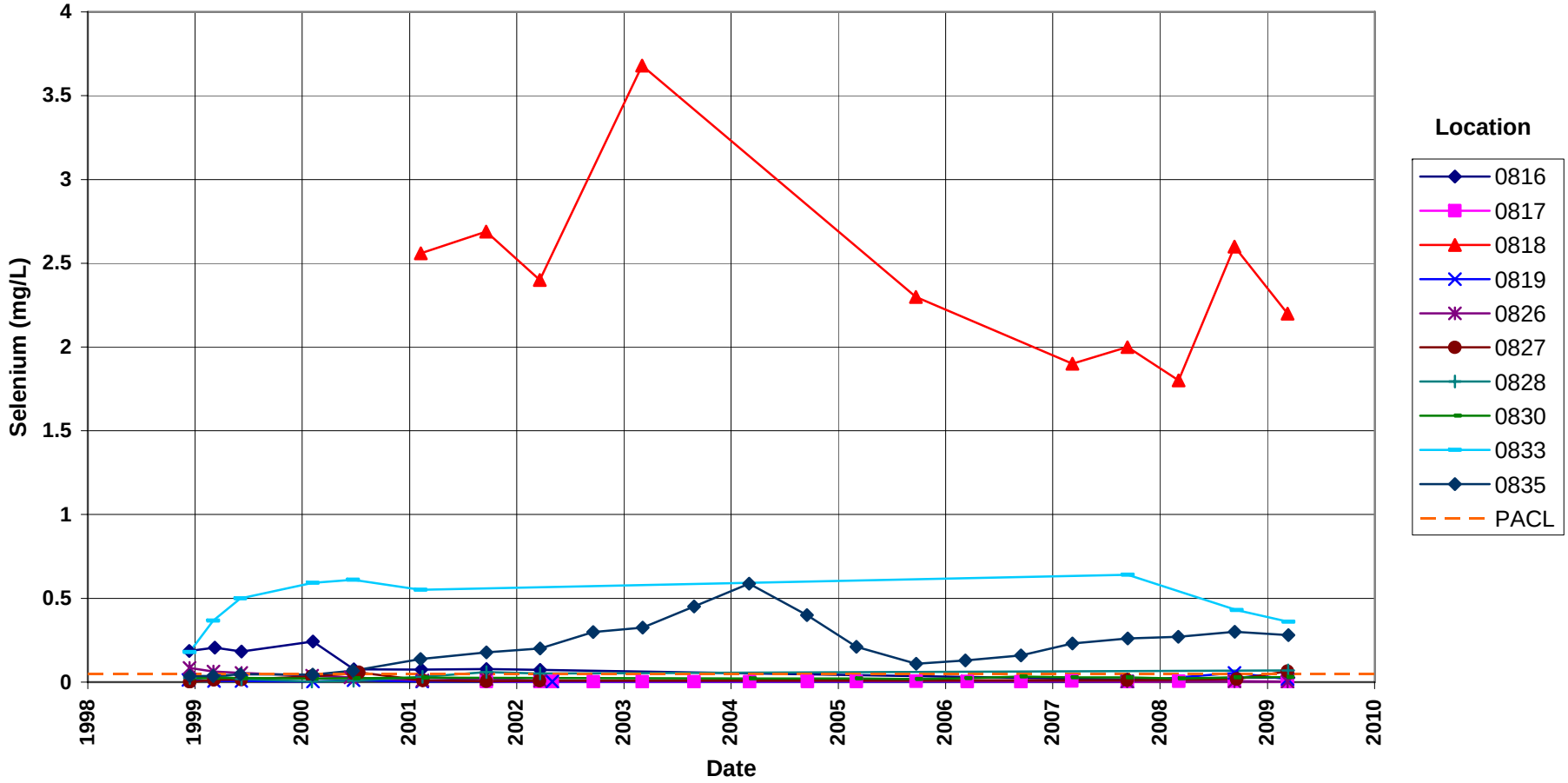

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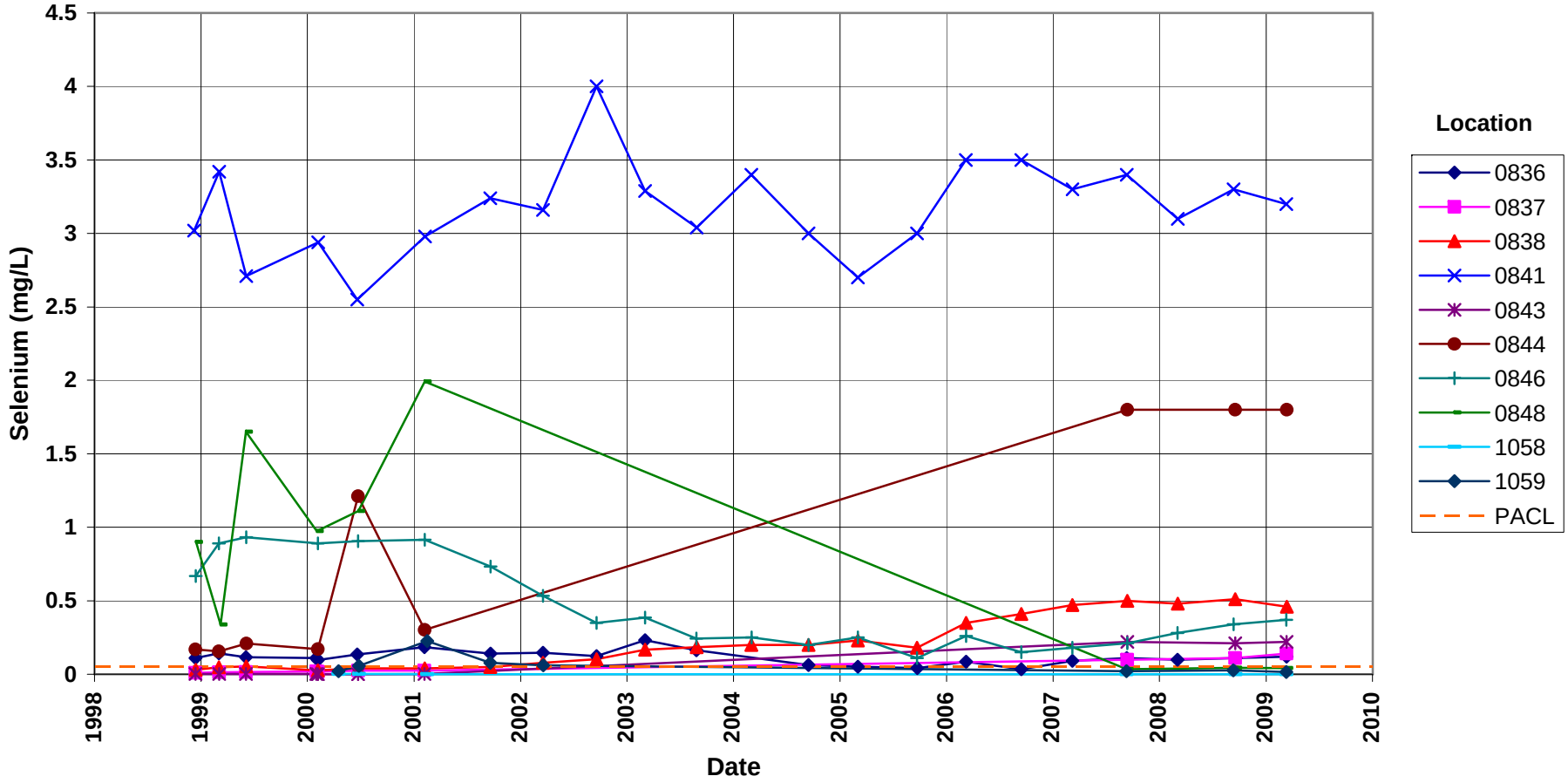
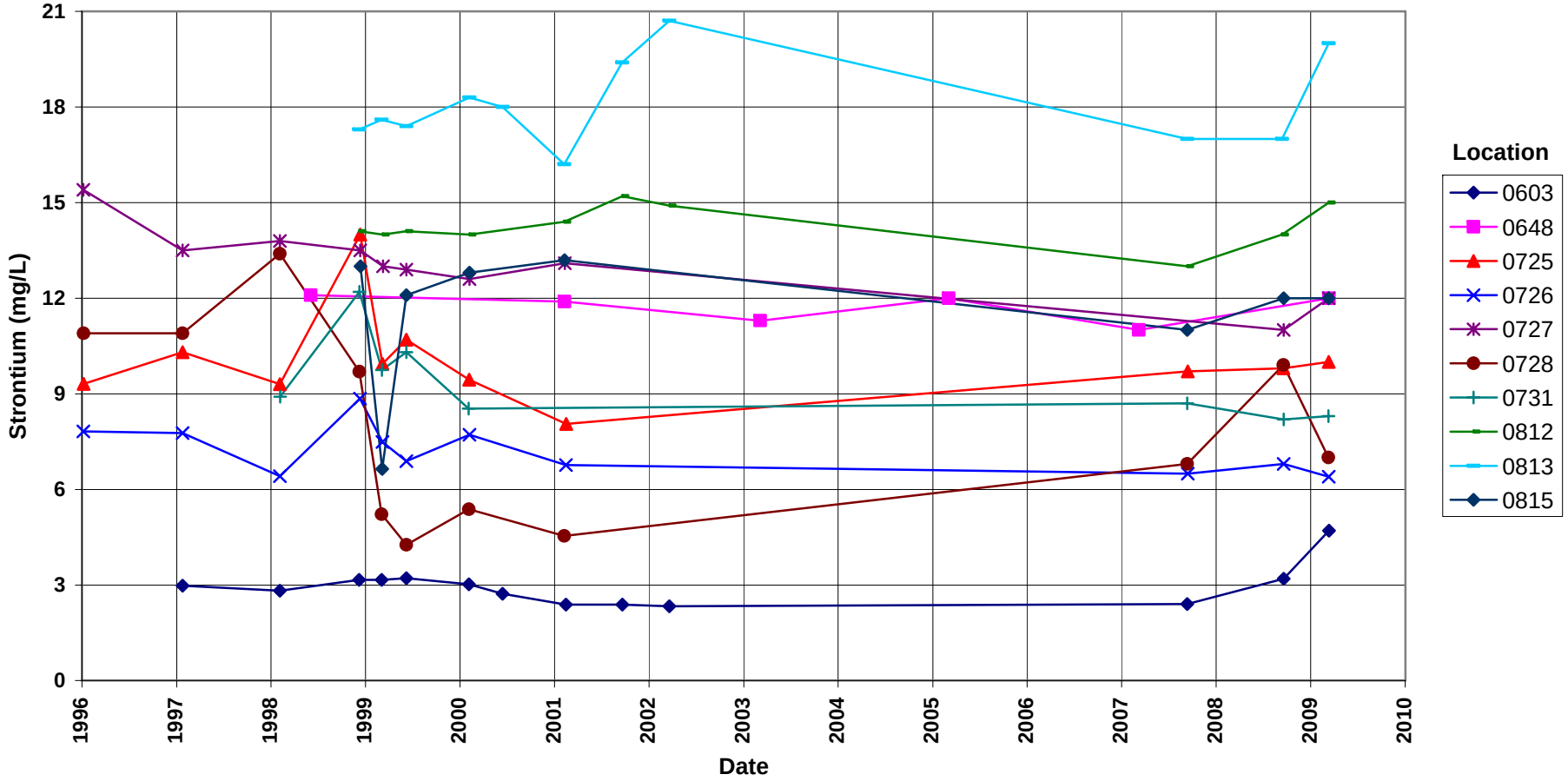


Shiprock Disposal Site (Terrace)
Strontium Concentration
No established groundwater standard



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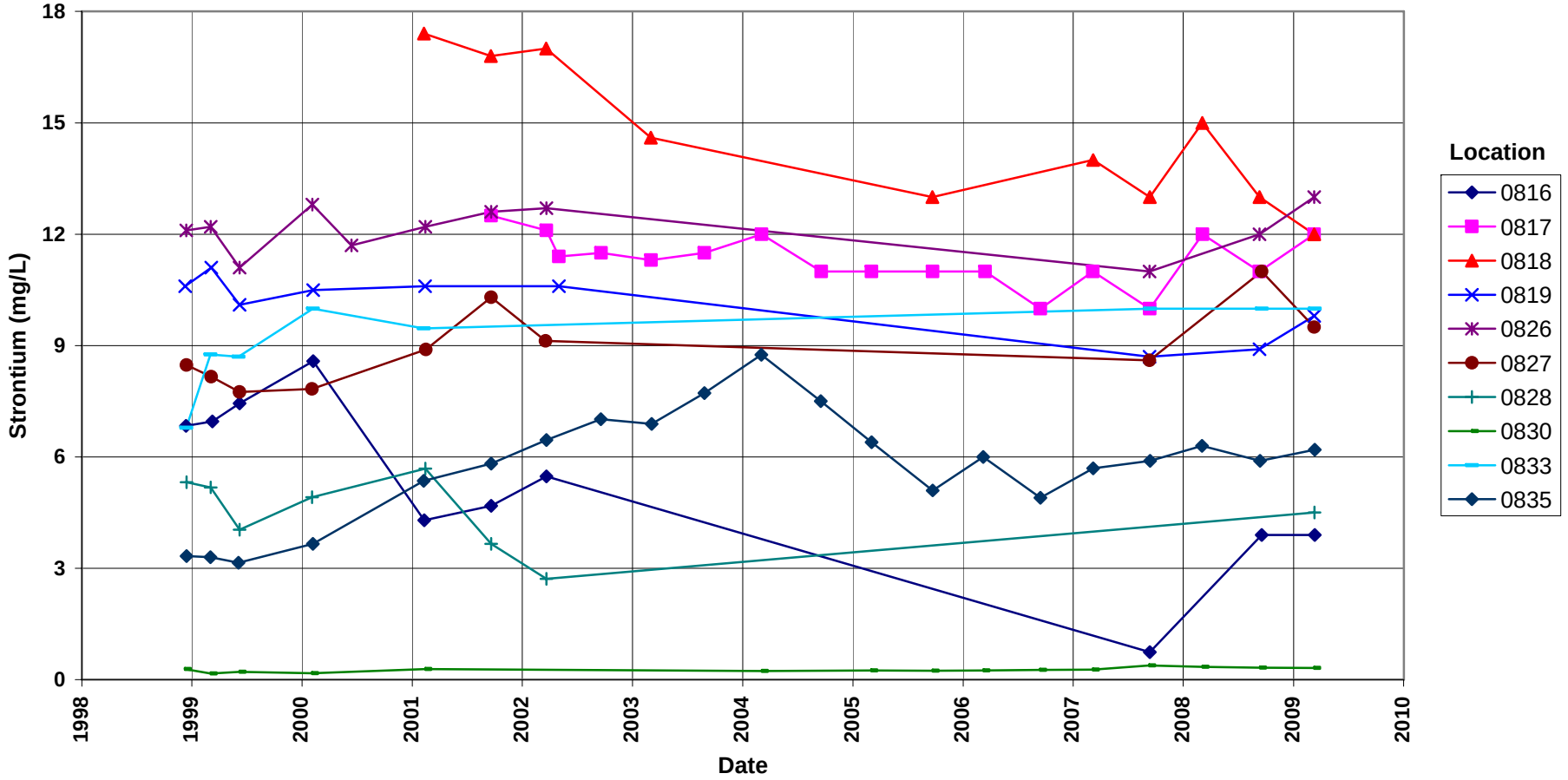

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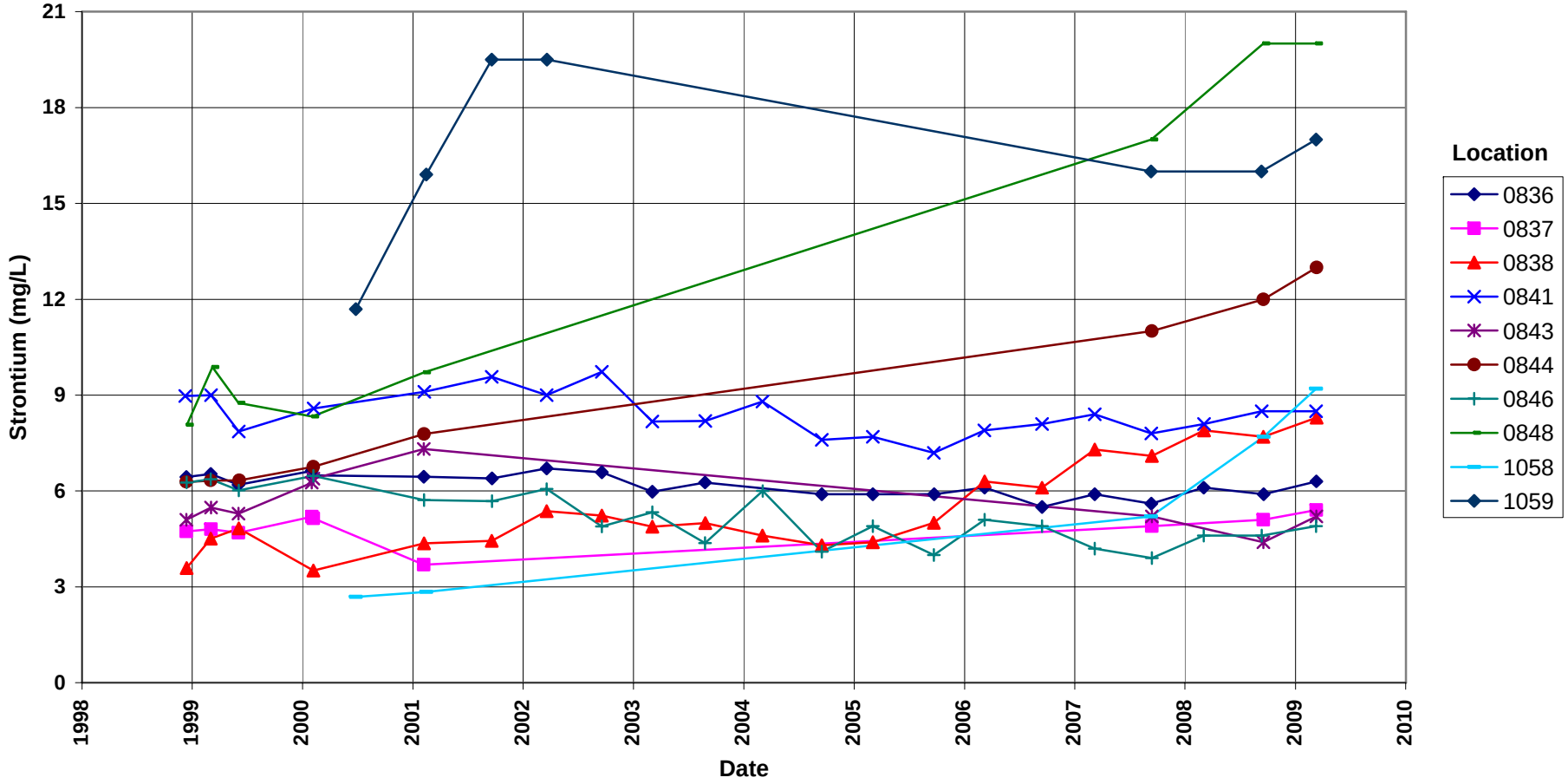
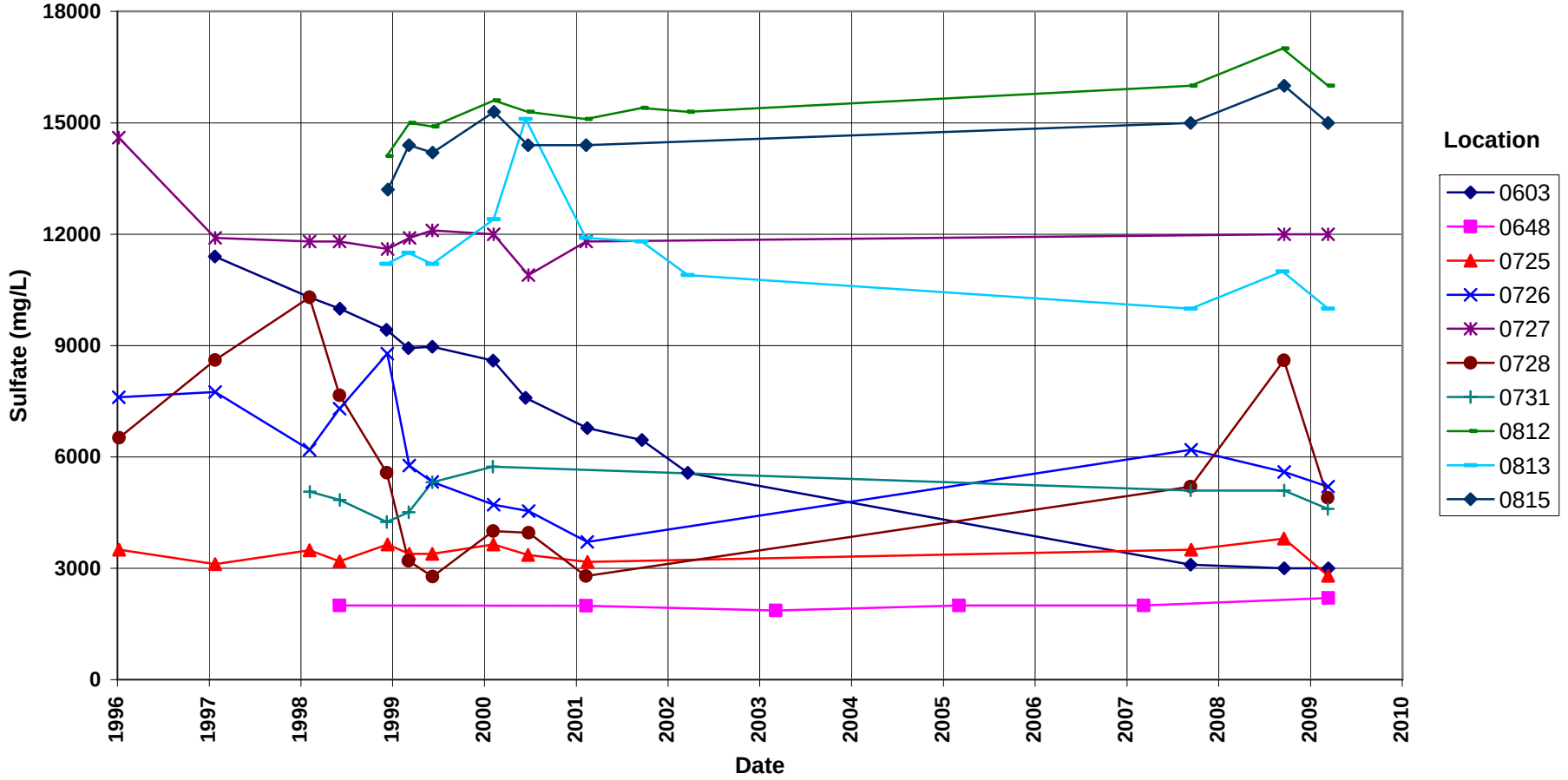


Shiprock Disposal Site (Terrace)
Sulfate Concentration
No established groundwater standard



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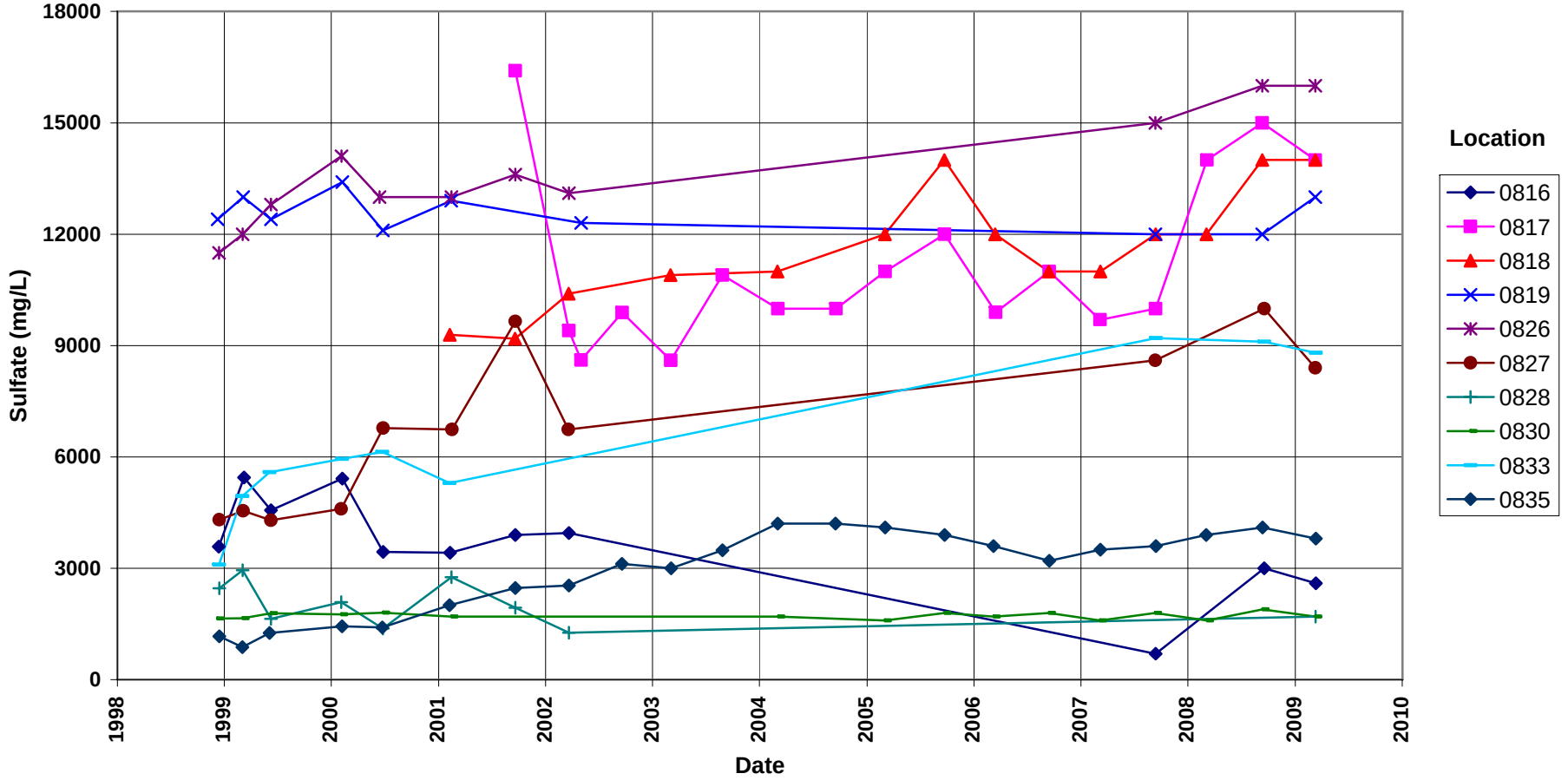

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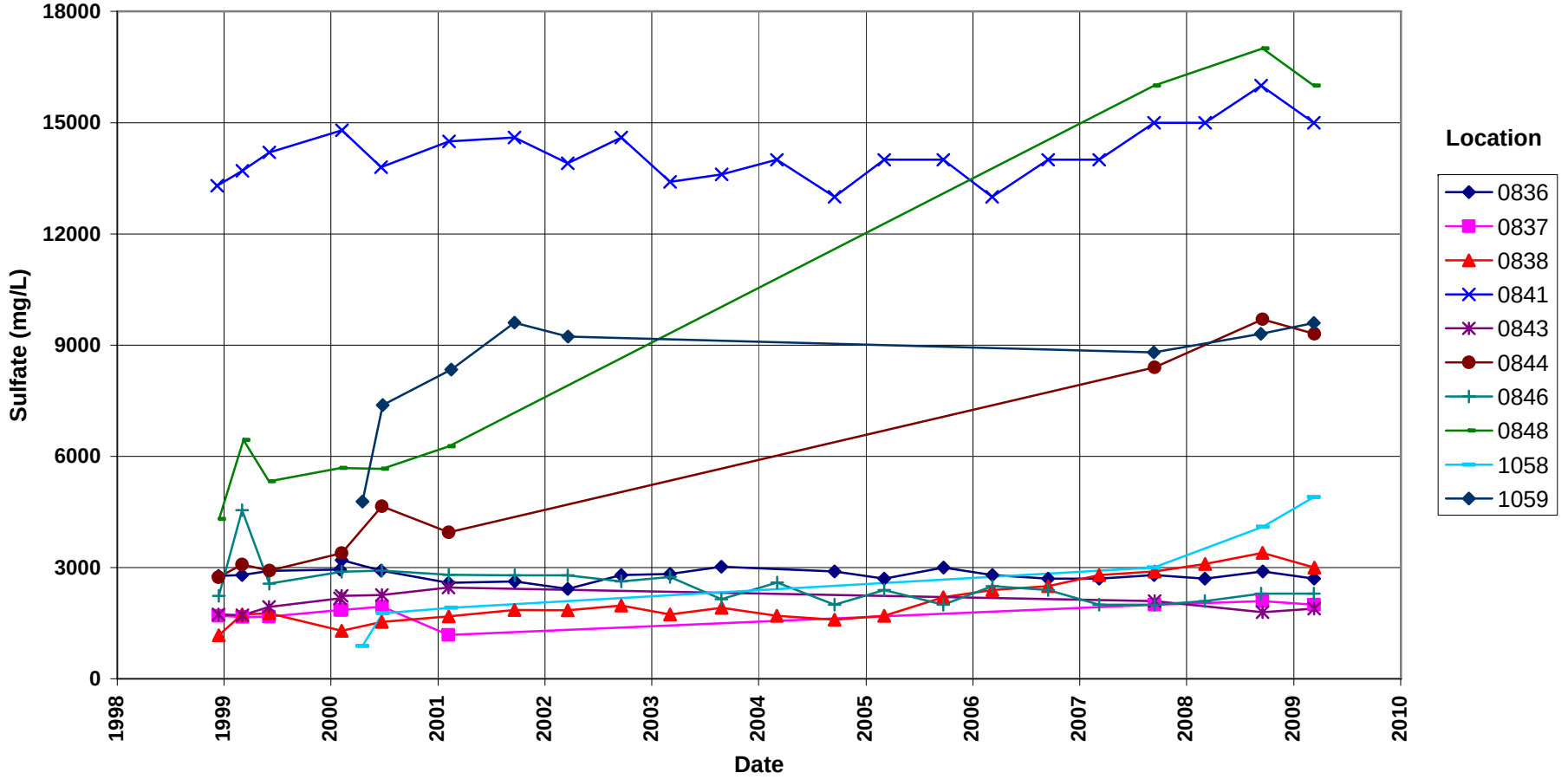
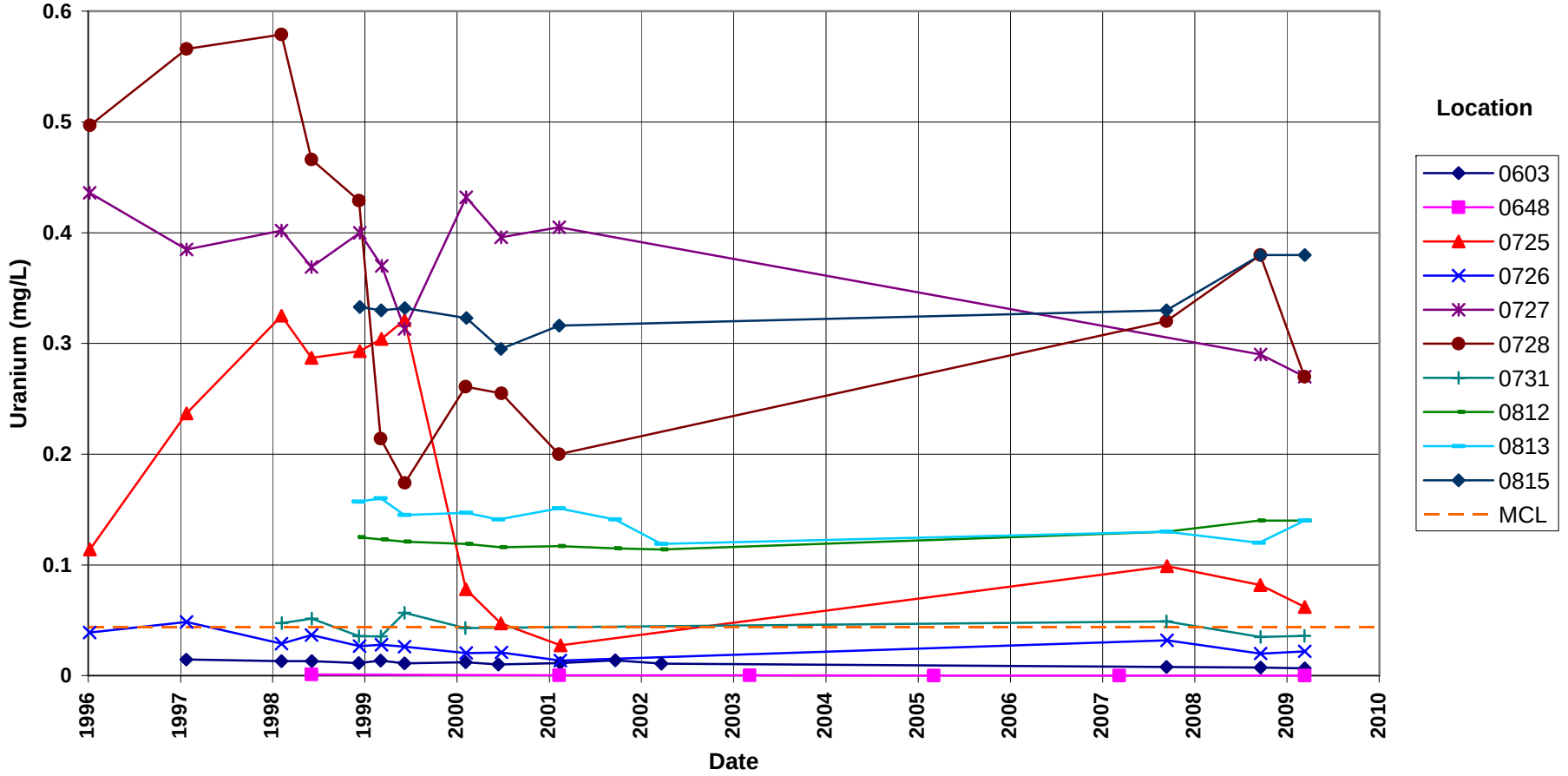


Shiprock Disposal Site (Terrace)
Uranium Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



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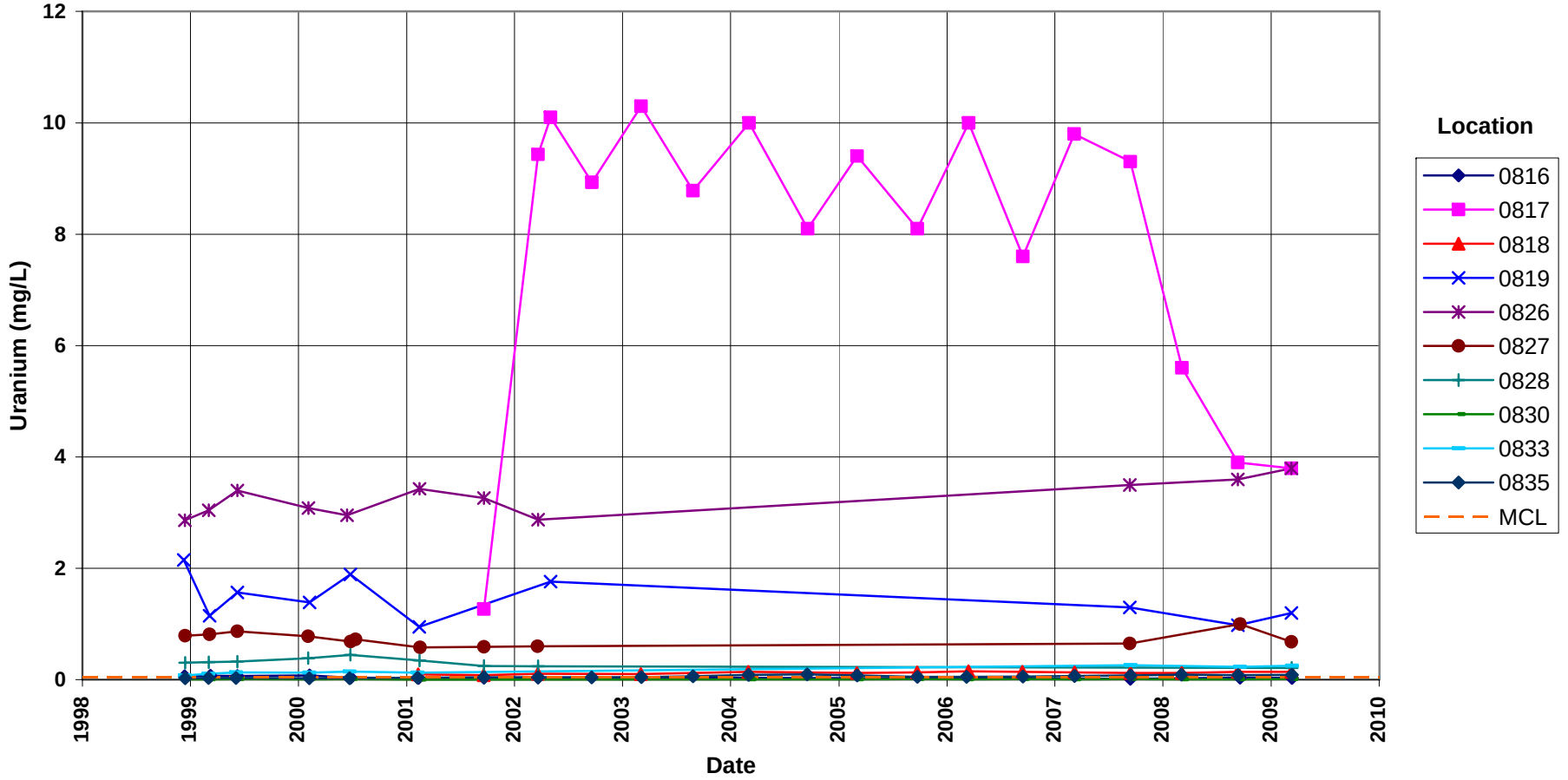

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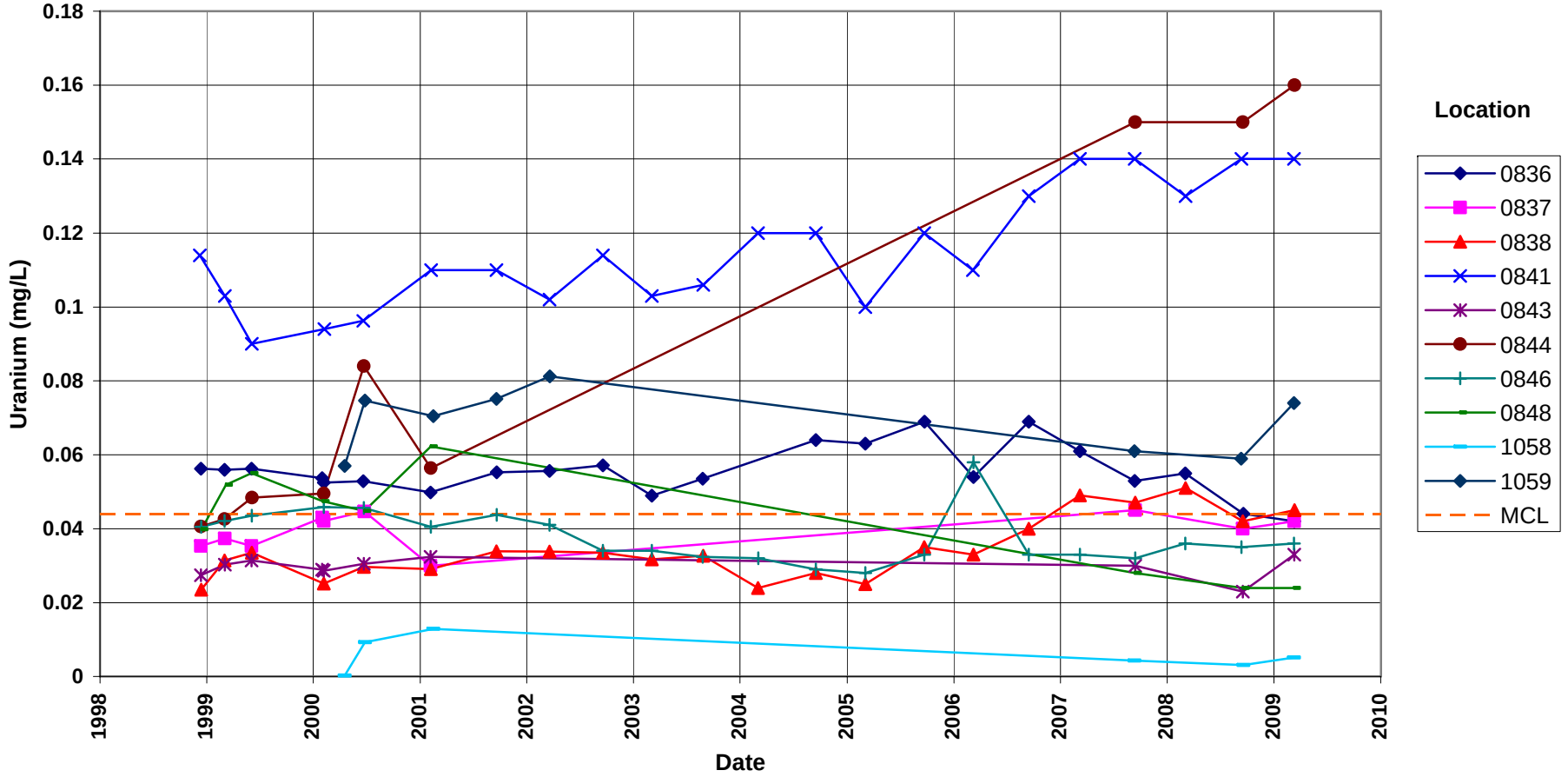

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Attachment 3
Sampling and Analysis Work Order

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Stoller

established 1959

Task Order LM–501
Control Number 09-0478

February 5, 2009

U.S. Department of Energy
Office of Legacy Management
ATTN: Tracy Ribeiro
Site Manager
2597 B ¾ Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AM01-07LM00060, Stoller
March 2009 Environmental Sampling at Shiprock, New Mexico

REFERENCE: Task Order LM00-501-02-119-402, Shiprock, NM Site

Dear Ms. Ribeiro:

The purpose of this letter is to inform you of the upcoming sampling event at Shiprock, New Mexico. Enclosed are the map and tables specifying sample locations and analytes for routine monitoring. Water quality data will be collected from monitor wells and surface locations at this site as part of the routine environmental sampling scheduled to begin the week of March 9, 2009.

The following lists show the well (along with associated zone of completion) and surface locations scheduled for sampling during this event.

Monitor Wells*

SHP01

608 Km	619 Al	736 Al	1089 Al	1109 Nr	1112 Nr	1115 Nr
614 Al	734 Al	797 Al	1104 Nr	1110 Nr	1113 Nr	1116 Nr
615 Al	735 Al	850 Al	1105 Nr	1111 Nr	1114 Nr	1117 Nr
618 Al						

SHP02

648 Ju	830 Km	838 Al	1057 Al/Km	1078 Al/Km	1088 Nr	1093 Al
730 Al	832 Al	839 Al	1060 Al	1079 Al	1091 Al	1095 Nr
817 Km	835 Al	841 Al	1070 Al/Km	1087 Nr	1092 Al	1096 Nr
818 Al	836 Al	846 Al	1071 Al/Km			

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

Surface Water

SHP01

501	897	937	939	956	965	1203
655	898	938	940	959	1118	1205
887						

The S.M. Stoller Corporation 2597 B ¾ Road Grand Junction, Colorado 81503 (970) 248–6601 Fax: (970) 248–7636

SHP02

662	884	889	934	936	942	958
786	885	933				

Water levels will be collected from additional (non-sampled) wells as shown in the attachment. All samples will be collected as directed in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management*.

If you have any questions, please call me at (970) 248-6652.

Sincerely,

David Miller
Site Lead

DM/lcg/lb

Enclosures (3)

cc: (electronic)
Steve Donivan, Stoller
Lauren Goodknight, Stoller
David Miller, Stoller
EDD Delivery
rc-grand.junction

Constituent Sampling Breakdown

Site	Shiprock				
Analyte	Groundwater	Surface Water	Required Detection Limit (mg/L)	Analytical Method	Line Item Code
Approx. No. Samples/yr	92	49			
Field Measurements					
Alkalinity					
Dissolved Oxygen	X				
Redox Potential	X	X			
pH	X	X			
Specific Conductance	X	X			
Turbidity	X	X			
Temperature	X	X			
Laboratory Measurements					
Aluminum					
Ammonia as N (NH3-N)	X	X	0.1	EPA 350.1	WCH-A-005
Calcium	X	X	5	SW-846 6010	LMM-01
Chloride	X	X	0.5	SW-846 9056	MIS-A-039
Chromium					
Gross Alpha					
Gross Beta					
Iron					
Lead					
Magnesium	X	X	5	SW-846 6010	LMM-01
Manganese	X	X	0.005	SW-846 6010	LMM-01
Molybdenum					
Nickel					
Nickel-63					
Nitrate + Nitrite as N (NO3+NO2)-N	X	X	0.05	EPA 353.1	WCH-A-022
Potassium	X	X	1	SW-846 6010	LMM-01
Radium-226					
Radium-228					
Selenium	X	X	0.0001	SW-846 6020	LMM-02
Silica					
Sodium	X	X	1	SW-846 6010	LMM-01
Strontium	X	X	0.2	SW-846 6010	LMM-01
Sulfate	X	X	0.5	SW-846 9056	MIS-A-044
Sulfide					
Total Dissolved Solids	X		10	SM2540 C	WCH-A-033
Total Organic Carbon					
Uranium	X	X	0.0001	SW-846 6020	LMM-02
Vanadium					
Zinc					
Total No. of Analytes	13	12			

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

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Attachment 4
Trip Report

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Stoller established 1959
Grand Junction Office

Memorandum

DATE: March 26, 2009

TO: David Miller

FROM: Jeff Price

SUBJECT: Sampling Trip Report

Site: Shiprock, New Mexico

Dates of Sampling Event: March 9 - 12, 2009

Team Members: Joe Trevino, David Miller, Heidi Frasure, Sam Campbell, Dan Sellers, Jeff Price

Number of Locations Sampled: Water samples for metals, anions, TDS, and (NO_2+NO_3)-N, were collected from 87 wells and 18 surface water locations (TDS were not collected at surface water locations).

Locations Not Sampled/Reason: 9 surface water locations (0786, 0884, 0887, 0933, 0934, 0936, 0937, 0938, and 0942) and 6 wells (0730, 0804, 0805, 0816, 0832, and 1060) were dry. Due to insufficient water in well 1120, only a metals sample was collected.

Location Specific Information: Because of low water level, the pressure transducers were removed from wells 0846 and 1060. The casing of monitor well 0828 has been extended. Dataloggers from 21 well locations were downloaded. Dataloggers were removed from well locations SHP02-1060 and SHP02-0846. Well 02-1058 was purged dry during development and took awhile to recover prior to sampling.

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

False Id	True Id	Sample Type	Associated Matrix	Ticket Number
2604	1115	Duplicate	Groundwater	HET-256
2733	01-1112	Duplicate	Groundwater	HET-379
2731	01-0619	Duplicate	Groundwater	HET-298
2735	02-1078	Duplicate	Groundwater	HET-457
2737	02-0813	Duplicate	Groundwater	HET-459
2738	02-0815	Duplicate	Groundwater	HET-460
2729	N/A	Equipment Blank	N/A	HET-377

RIN Number Assigned: All samples were assigned to RIN 09032136.

Sample Shipment: Samples were shipped in six containers from Farmington, New Mexico, via FedEx to Paragon Analytics, Inc. on March 12, 2009.

Well Inspection Summary: Well inspections were conducted at all sampled wells; all wells were in good condition with the following exceptions:

- Plant roots have grown into monitor well 0768
- Monitor wells 0792 and 1113 were not labeled.
- The casing on monitor well 0853 was bent.
- There is a lot of organic debris and small floating objects in well 0626.

Equipment: All wells were sampled using the low-flow procedure – most with a peristaltic pump and dedicated tubing or a dedicated bladder pump. Some Category III wells on the Terrace were sampled with a bailer.

Water Level Measurements: Water levels were measured in all sampled monitor wells and 18 additional monitor wells.

Field Variance: Turbidity criterion was not met at monitor well 0850. Alkalinity was not collected at wells 01-0898 and 02-0949.

Institutional Controls: All gates were closed and locked during the sampling event.

Fences, Gates, and Locks: All were in good condition.
Signs: No missing or vandalized signs were observed.
Trespassing/Site Disturbances: N/A

Site Issues:

Disposal Cell/Drainage Structure Integrity: N/A
Vegetation/Noxious Weed Concerns: Tamarisk plant infestations on the flood plain are creating access problems for surface water locations and some wells.
Maintenance Requirements: N/A
Other: N/A

Corrective Action Required/Taken: Monitor well 0850 needs to be redeveloped. Monitor wells 0792 and 1113 were labeled – no further action required. Monitor well 0828 needs a resurvey of the elevation. Monitor well 0768 has roots in the well that need to be removed. The bent casing of monitor well 0828 should be examined with a downhole camera to determine if the casing is broken.

(JP/lcg)

cc: (electronic)
Tracy Ribeiro, DOE
Steve Donivan, Stoller
EDD Delivery, Stoller

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