

Data Validation Package

September 2010
Groundwater and Surface Water
Sampling at the Shiprock, New Mexico,
Disposal Site

January 2011



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Attachment 2—Data Presentation

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Sampling Event Summary

Site: Shiprock, New Mexico, Disposal Site

Sampling Period: August 30, 2010 – September 2, 2010

Groundwater and surface water sampling and analysis are performed semiannually at the Shiprock Disposal Site as specified in the July 2005 *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* (LMS/PLN/S04351, continually updated) and the *Environmental Procedures Catalog* (LMS/PRO/S04325, continually updated). 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 40 CFR 192.02 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	95
			0610	250
			0614	360
			0615	30
			0618	220
			0735	390
			0854	110
			1008	130
			1104	57
			1105	220
			1111	16
			1112	230
			1113	380
			1114	100
			1115	160
			Selenium	0.01
0614	1.1			
0615	0.11			
0618	0.25			
0622	0.024			
0630	0.042			
0735	0.053			
0779	0.024			

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard ^a	Site Code	Location	Concentration
Selenium (con't)	0.01	SHP01	0793	0.16
			0798	0.02
			0854	0.022
			1008	0.021
			1009	0.13
			1089	0.015
			1104	0.02
			1105	0.095
			1111	0.4
			1112	0.5
			1113	0.32
			1114	0.012
			1115	0.024
			1128	0.025
			1140	0.14
1141	0.19			
Uranium	0.044	SHP01	0608	0.72
			0610	0.93
			0614	1.6
			0615	0.76
			0618	2
			0619	0.13
			0622	0.097
			0623	0.053
			0625	0.048
			0630	0.056
			0734	0.076
			0735	0.16
			0736	0.11
			0766	0.37
			0768	0.16
			0779	0.9
			0792	0.8
			0793	1
			0798	0.97
			0854	1.8
			0855	0.074
			0856	0.044
			0857	0.076
			1008	3.1
			1009	0.28
			1089	0.55
			1104	1.2
			1105	1.6
			1111	0.89
			1112	1.2
			1113	1.4
			1114	0.45
1115	0.66			
1128	1.6			
1135	0.22			
1137	0.28			
1138	0.16			
1139	0.13			
1140	1.2			
1141	1.1			
1143	0.056			

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard ^a	Site Code	Location	Concentration
Nitrate + Nitrite as Nitrogen	10	SHP02	0600	83
			0602	17
			0603	1800
			0604	1200
			0726	11
			0727	92
			0728	120
			0731	160
			0812	1500
			0813	2300
			0814	960
			0815	720
			0816	24
			0817	520
			0818	880
			0819	37
			0822	12
			0824	200
			0825	28
			0826	59
			0827	18
			0828	73
			0830	49
			0833	360
			0835	83
			0836	18
			0838	440
			0841	670
			0843	22
			0844	800
			0846	38
			1007	700
			1011	150
1049	550			
1059	350			
1068	250			
1070	710			
1071	950			
1073	1200			
1074	1300			
1078	640			
1079	89			
1091	1100			
1092	1300			
1093R	2400			
1095	1600			
1096	610			
DM7	730			
Selenium	0.01	SHP02	0603	0.098
			0604	0.65
			0725	0.01
			0726	0.051
			0731	0.25
			0812	5.6
			0813	0.1
0814	2.3			
0815	0.032			

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard ^a	Site Code	Location	Concentration
Selenium (con't)	0.01	SHP02	0816	0.013
			0818	2.6
			0819	0.013
			0827	0.024
			0828	0.063
			0830	0.033
			0833	0.35
			0835	0.35
			0836	0.19
			0837	0.31
			0838	0.93
			0841	4
			0843	0.26
			0844	1.9
			0846	0.34
			0848	0.052
			1007	0.1
			1011	0.21
			1049	1.4
			1059	0.013
			1068	0.019
			1070	3
			1071	2.8
			1073	2.5
			1074	0.32
			1078	3.2
			1079	0.46
			1091	1
1092	0.45			
1093R	0.71			
1095	0.2			
1096	3.1			
Uranium	0.044	SHP02	0600	0.63
			0602	0.53
			0604	0.085
			0725	0.077
			0727	0.29
			0728	0.21
			0812	0.13
			0813	0.12
			0814	0.085
			0815	0.34
			0817	6.8
			0818	0.11
			0819	0.76
			0820	0.072
			0822	0.088
			0824	0.27
			0826	3.5
			0827	0.88
			0828	0.65
			0833	0.18
0835	0.07			
0837	0.056			
0838	0.084			
0841	0.13			
0844	0.16			

Table 1 (continued). Shiprock Locations that Exceed Standards

Analyte	Standard ^a	Site Code	Location	Concentration
Uranium (con't)	0.044	SHP02	1007	2.5
			1011	0.42
			1049	0.16
			1059	0.063
			1068	0.55
			1070	0.087
			1071	0.1
			1073	0.061
			1074	2
			1078	0.12
			1091	0.11
			1092	0.045
			1093R	0.12
			1095	0.049
1096	0.1			

^a Standards are listed in 40 CFR 192.02 Table 1 to Subpart A; units are in milligrams per liter.

Floodplain river location analyte concentrations for filtered and unfiltered samples 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 and Table 3, benchmark values were not exceeded for the river locations adjacent to or downstream from the site.

Table 2. Benchmark Comparison for Floodplain River Locations (Filtered Samples)

Location	Ammonia as N	Manganese	Nitrate+Nitrite as N	Selenium	Strontium	Sulfate	Uranium
Benchmark	0.1	0.025	1.2	0.002	1.20	220	0.003
0501	ND ^a	ND	0.35	0.0006	0.68	120	0.001
0897	ND	ND	NA ^b	0.0007	0.69	110	0.001
0898 (Benchmark Location)	ND	ND	0.38	0.0006	0.69	120	0.001
0899	ND	0.002	0.34	0.0006	0.69	110	0.001
0940	ND	0.004	0.34	0.0006	0.68	110	0.002
0956	ND	0.004	0.30	0.0006	0.70	110	0.001
0965	ND	0.005	0.30	0.0005	0.71	110	0.001
1203	ND	0.002	0.34	0.0005	0.70	110	0.001
1205	0.1	0.003	0.30	0.0005	0.69	110	0.001

^a ND = Not Detected.

^b NA = Not Available.

Units are in milligrams per liter.

Table 3. Benchmark Comparison for Floodplain River Locations (Unfiltered Samples)

Location	Ammonia as N	Manganese	Nitrate+Nitrite as N	Selenium	Strontium	Sulfate	Uranium
Benchmark	0.1	2.5	0.8	0.002	2.20	150	0.009
0501	ND ^a	0.33	0.30	0.0008	0.75	110	0.002
0897	NA ^b	0.099	0.36	0.0007	0.70	NA	0.001
0898 (Benchmark Location)	ND	0.68	0.38	0.0011	0.84	120	0.002
0899	ND	0.21	0.35	0.0006	0.74	110	0.002
0940	ND	0.19	0.33	0.0006	0.74	110	0.002
0956	ND	0.10	0.31	0.0005	0.73	110	0.001
0965	ND	0.12	0.30	0.0005	0.72	110	0.001
1203	ND	0.28	0.32	0.0007	0.76	110	0.002
1205	ND	0.12	0.30	0.0006	0.72	110	0.001

^a ND = Not Detected.

^b NA = Not Available.

Units are in milligrams per liter.

Both filtered and unfiltered samples were submitted from the river locations. A comparison of the results is shown in Table 4 (excluding ammonia as N, which was not detected in any of the river location samples).

Table 4. Floodplain River Locations, Filtered and Unfiltered Samples

Location	Analyte	Result, Filtered	Result, Unfiltered	RPD ^a
0501	Calcium	53	61	14
	Chloride	11	11	0
	Magnesium	9	540	193
	Manganese	0.003	2.6	200
	Nitrate+Nitrite as N	0.35	0.30	15
	Potassium	2.3	3.0	26
	Selenium	0.0006	0.0008	29
	Sodium	27	28	4
	Strontium	0.68	0.75	10
	Sulfate	120	110	9
	Uranium	0.0013	0.0017	27
0897	Calcium	56	57	2
	Chloride	12	NA ^b	
	Magnesium	9.7	10	3
	Manganese	0.0035	0.099	186
	Nitrate+Nitrite as N	0.36	0.36	0
	Potassium	2.3	2.5	8
	Selenium	0.0007	0.00069	1
	Sodium	28	28	0
	Strontium	0.69	0.70	1
	Sulfate	110	NA	
	Uranium	0.0014	0.0014	0

Table 4 (continued). Floodplain River Locations, Filtered and Unfiltered Samples


Location	Analyte	Result, Filtered	Result, Unfiltered	RPD ^a
0898	Calcium	54	71	27
	Chloride	11	11	0
	Magnesium	9.0	13	36
	Manganese	0.0032	0.68	198
	Nitrate+Nitrite as N	0.38	0.37	3
	Potassium	2.3	3.5	41
	Selenium	0.0006	0.0011	59
	Sodium	29	30	3
	Strontium	0.69	0.84	20
	Sulfate	120	120	0
	Uranium	0.0013	0.002	42
0899	Calcium	54	59	9
	Chloride	11	11	0
	Magnesium	9.0	10.0	11
	Manganese	0.0021	0.21	196
	Nitrate+Nitrite as N	0.34	0.35	3
	Potassium	2.3	2.7	16
	Selenium	0.0006	0.0006	0
	Sodium	28	28	0
	Strontium	0.69	0.74	7
	Sulfate	110	110	0
	Uranium	0.0013	0.0015	14
0940	Calcium	55	60	9
	Chloride	11	11	0
	Magnesium	8.8	10.0	13
	Manganese	0.0035	0.19	193
	Nitrate+Nitrite as N	0.34	0.33	3
	Potassium	2.3	2.9	23
	Selenium	.00006	0.0006	164
	Sodium	26	26	0
	Strontium	0.68	0.74	8
	Sulfate	110	110	0
	Uranium	0.0015	0.0016	6
0956	Calcium	58	61	5
	Chloride	12	12	0
	Magnesium	9.4	10.0	6
	Manganese	0.0038	0.10	186
	Nitrate+Nitrite as N	0.30	0.31	3
	Potassium	2.4	2.6	8
	Selenium	0.0006	0.0005	18
	Sodium	25	26	4
	Strontium	0.70	0.72	3
	Sulfate	110	110	0
	Uranium	0.0013	0.0014	7


Table 4 (continued). Floodplain River Locations, Filtered and Unfiltered Samples

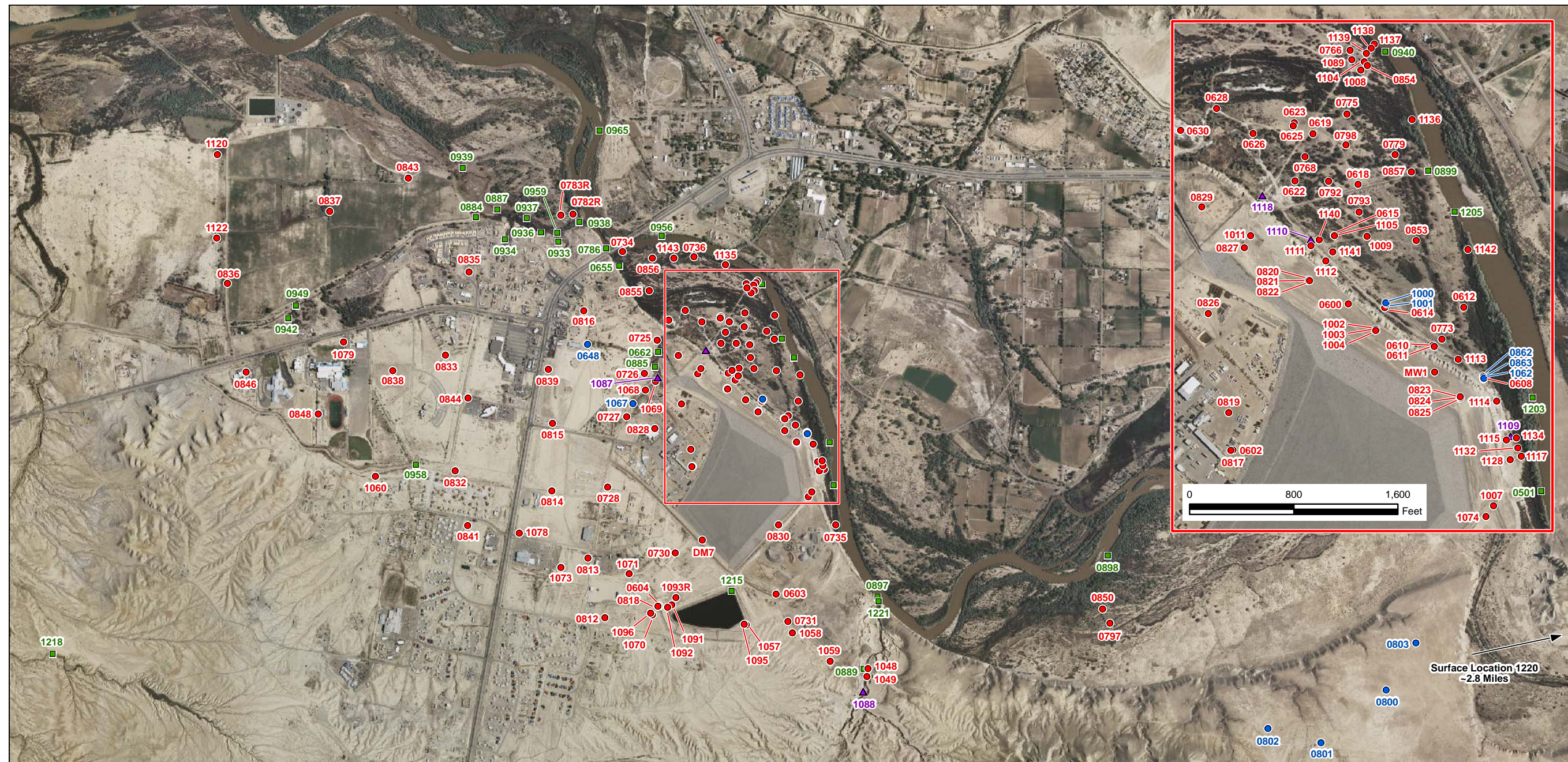
Location	Analyte	Result, Filtered	Result, Unfiltered	RPD ^a
0965	Calcium	59	61	3
	Chloride	13	12	8
	Magnesium	9.5	10.0	5
	Manganese	0.0048	0.12	185
	Nitrate+Nitrite as N	0.30	0.30	0
	Potassium	2.6	2.7	4
	Selenium	0.0005	0.0005	0
	Sodium	26	26	0
	Strontium	0.71	0.72	2
	Sulfate	110	110	0
	Uranium	0.0013	0.0014	7
1203	Calcium	57	63	10
	Chloride	11	11	0
	Magnesium	8.9	10.0	12
	Manganese	0.0021	0.28	197
	Nitrate+Nitrite as N	0.34	0.32	6
	Potassium	2.3	2.9	23
	Selenium	0.0005	0.0007	33
	Sodium	26	26	0
	Strontium	0.70	0.76	8
	Sulfate	110	110	0
	Uranium	0.0013	0.0015	14
1205	Calcium	58	60	3
	Chloride	11	12	9
	Magnesium	9.3	9.8	5
	Manganese	0.0028	0.12	191
	Nitrate+Nitrite as N	0.30	0.30	0
	Potassium	2.3	2.5	8
	Selenium	0.0005	0.0006	18
	Sodium	25	25	0
	Strontium	0.69	0.72	4
	Sulfate	110	110	0
	Uranium	0.0013	0.0014	7

^a RPD = Relative Percent Difference. Units are in milligrams per liter.

^b NA = Not Available.

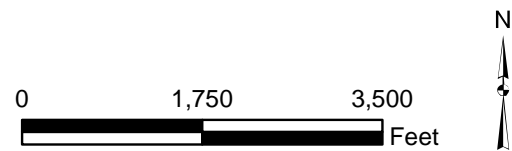

 David Miller
 Site Lead, S.M. Stoller Corporation


 Date



LEGEND

- WELL TO BE SAMPLED
- WELL TO BE SAMPLED (WATER LEVEL ONLY)
- SURFACE LOCATION TO BE SAMPLED
- ▲ TREATMENT SYSTEM LOCATION TO BE SAMPLED



U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO	Work Performed by S.M. Stoller Corporation Under DOE Contract No. DE-AM01-07L-MD0260
Planned Sampling Map Shiprock, NM, Disposal Site August 2010	
DATE PREPARED: December 22, 2010	FILENAME: S0680600

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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	August 30, 2010 – September 02, 2010
Date(s) of Verification	December 6, 2010	Name of Verifier	Steve Donovan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures? List other documents, SOPs, instructions.	Yes	Work Order Letter dated July 27, 2010.
2. Were the sampling locations specified in the planning documents sampled?	No	A total of 34 locations were not sampled, see Trip Report for explanation.
3. Was a pre-trip calibration conducted as specified in the above-named documents?	Yes	Pre-trip calibration was performed on August 30, 2010.
4. Was an operational check of the field equipment conducted daily? Did the operational checks meet criteria?	Yes Yes	
5. Were the number and types (alkalinity, temperature, specific conductance, pH, turbidity, DO, ORP) of field measurements taken as specified?	Yes	
6. Was the category of the well documented?	Yes	
7. Were the following conditions met when purging a Category I well: Was one pump/tubing volume purged prior to sampling? Did the water level stabilize prior to sampling? Did pH, specific conductance, and turbidity measurements stabilize prior to sampling? Was the flow rate less than 500 mL/min? If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	Yes Yes Yes Yes NA	

Water Sampling Field Activities Verification Checklist (continued)

	Response (Yes, No, NA)	Comments
8. Were the following conditions met when purging a Category II well: Was the flow rate less than 500 mL/min?	Yes	
Was one pump/tubing volume removed prior to sampling?	Yes	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	Duplicate samples were collected from eight locations.
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	Yes	One equipment blank was collected.
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 (FDSC) report?	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	Yes	The sample for location SHP01-1135 was filtered due to elevated turbidity.
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 (FDSC)?	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): 10083299
 Sample Event: August 30, 2010 – September 2, 2010
 Site(s): Shiprock Disposal Site (Floodplain), New Mexico
 Laboratory: ALS Laboratory Group, Fort Collins, Colorado
 Work Order No.: 1009148
 Analysis: Metals and Wet Chemistry
 Validator: Steve Donovan
 Review Date: October 22, 2010

This validation was performed according to the *Environmental Procedures Catalog* (LMS/PRO/S04325, continually updated), “Standard Practice for Validation of Laboratory Data.” 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 5.

Table 5. 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

Data Qualifier Summary

Analytical results were qualified as listed in Table 6. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 6. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
1009148-1	0501	Manganese	U	Less than 5 times the calibration blank
1009148-15	0628	Potassium	J	Poor duplicate precision
1009148-21	0768	Potassium	J	Matrix spike failure
1009148-21	0768	Sulfate	J	Matrix spike failure
1009148-36	0897	Ammonia as N	J	Mislabeled bottles, filtration status unknown
1009148-36	0897	Nitrate + Nitrite as N	J	Mislabeled bottles, filtration status unknown
1009148-37	0897	Chloride	J	Mislabeled bottles, filtration status unknown
1009148-37	0897	Manganese	U	Less than 5 times the calibration blank

Table 6 (continued). Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
1009148-37	0897	Sulfate	J	Mislabeled bottles, filtration status unknown
1009148-39	0898	Manganese	U	Less than 5 times the calibration blank
1009148-51	1105	Ammonia as N	J	Poor duplicate precision
1009148-64	1136	Selenium	U	Less than 5 times the calibration blank
1009148-68	1140	Nitrate+Nitrite as N	J	Missed holding time
1009148-76	0628 dup	Potassium	J	Poor duplicate precision
1009148-79	1105 dup	Ammonia as N	J	Poor duplicate precision
1009148-79	1105 dup	Nitrate+Nitrite as N	J	Missed holding time
1009148-80	Equip Blank	Sodium	U	Less than 5 times the method blank

Sample Shipping/Receiving

ALS Laboratory Group in Fort Collins, Colorado, received 80 water samples on September 9, 2010, accompanied by Chain of Custody (COC) forms. The receiving documentation included copies for the shipping labels listing the air waybill numbers. 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. The sample bottles from location 0897 were mislabeled. The preserved and unpreserved bottles submitted filtered (IJX 650), were both unpreserved. The preserved and unpreserved bottles submitted unfiltered (IJX 685), were both preserved. The bottle sets between these two samples got mixed up, e.g., one of the unpreserved bottles was IJX 650 and the other was really IJX 685 and one of the preserved bottles was IJX 650 and the other was really IJX 685. Because sample filtration was not expected to affect the ammonia as N, chloride, nitrate + nitrite as N, and sulfate results, the laboratory was instructed to run one bottle labeled IJX 650 for anions, and cancel the anions for IJX 685, and run one bottle labeled IJX 685 for NO_x/NH₃, and cancel the NO_x/NH₃ for IJX 650. The ammonia as N, chloride, nitrate + nitrite as N, and sulfate results for location 0897 are qualified with a “J” flag because the filtration status of the aliquots selected for analysis could not be confirmed.

Preservation and Holding Times

The sample shipments were received intact with the temperatures inside the iced coolers between 0.8 °C and 1.2 °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 exception. The metals aliquot for sample 1141 was received with a pH greater than two because of the buffering capacity of the sample. Prior to analysis, the laboratory acidified and equilibrated this aliquot to a pH less than two as required. All samples were analyzed within the required holding time with the following exceptions. The re-analysis of samples 1140 and 1105 duplicate for nitrate+nitrite as N was performed beyond the holding time. The nitrate+nitrite as N results for these samples are qualified with a “J” flag as estimated values.

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. All calibration and laboratory spike standards were prepared from independent sources.

Method EPA 350.1

Calibration was performed for ammonia as N on September 20 and 27, 2010, 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 18 verification checks. All calibration checks met the acceptance criteria.

Method EPA 353.2

Four calibrations were performed for nitrate + nitrite as N between September 22 and 29, 2010, 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 22 verification checks. All calibration checks met the acceptance criteria.

Method SW-846 6010B

Two calibrations for calcium, magnesium, manganese, potassium, sodium, and strontium were performed September 27-28, 2010, using single point calibrations. Initial and continuing calibration verification checks were made at the required frequency resulting in 39 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

Initial calibrations for selenium and uranium were performed on September 28, 2010, using four calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 15 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 PQL and all results were within the acceptance range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries associated with requested analytes were stable and within acceptable ranges.

Method SW-846 9056

Calibrations were performed for chloride and sulfate on September 2, 2010, 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. Initial and continuing calibration verification checks were made at the required frequency resulting in 30 verification checks. All calibration checks met the acceptance criteria.

Method and Calibration Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. Calibration blanks are analyzed to assess instrument contamination prior to and during sample analysis. All initial and continuing calibration blank results associated with the samples were below the PQL. Many magnesium, manganese, and strontium calibration blanks were negative and the absolute values were greater than the MDL but less than the PQL. All associated sample results were greater than 5 times the MDL.

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

ICP ICS 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 (MS) Analysis

MS and matrix spike duplicate (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 magnesium, potassium, and sulfate MS or MSD recoveries did not meet the acceptance criteria for one sample each. The associated sample results 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 MSD sample results for all analytes were less than 20 percent, indicating acceptable laboratory precision.

Laboratory Control Samples

Laboratory control samples 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 control sample 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.

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

A revised EDD file was received on December 3, 2010. 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: 10083299 Lab Code: PAR Validator: Steve Donivan Validation Date: 12/3/2010
Project: Shiprock Monitoring Analysis Type: Metals General Chem Rad Organics
of Samples: 80 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
- Detection Limits
- Field/Trip Blanks
- Field Duplicates

There are 2 holding time failures.

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

There was 1 trip/equipment blank evaluated.

There were 4 duplicates evaluated.

SAMPLE MANAGEMENT SYSTEM

RIN: 10083299 Lab Code: PAR

Non-Compliance Report: Holding Times

Project: Shiprock Monitoring

Validation Date: 12/3/2010

Ticket	Location	Lab Sample ID	Method Code	Holding Times			Criteria			Reported Dates		
				Collection to Preparation	Preparation to Analysis	Collection to Analysis	Collection to Preparation	Preparation to Analysis	Collection to Analysis	Collection Date	Preparation Date	Analysis Date
IJX 704	1140	1009148-68	WCH-A-022		69				28	09/02/2010	11/10/2010	11/10/2010
IJX 708	2731	1009148-79	WCH-A-022		69				28	09/02/2010	11/10/2010	11/10/2010

SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet

RIN: 10083299 Lab Code: PAR Date Due: 10/7/2010
 Matrix: Water Site Code: SHP Date Completed: 10/4/2010

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Calcium	09/27/2010			OK	OK	OK	OK	OK	92.0	93.0	94.0	0.0	102.0	0.0	103.0
Calcium	09/27/2010							OK	96.0	82.0	75.0	1.0	103.0	2.0	105.0
Calcium	09/28/2010			OK	OK	OK	OK	OK	99.0	95.0	103.0	3.0	98.0	1.0	99.0
Calcium	09/28/2010							OK	99.0	99.0	72.0	2.0	96.0	1.0	98.0
Magnesium	09/27/2010			OK	OK	OK	OK	OK	102.0	103.0	103.0	0.0	105.0	1.0	102.0
Magnesium	09/27/2010							OK	104.0	90.0	87.0	1.0	108.0	2.0	104.0
Magnesium	09/28/2010			OK	OK	OK	OK	OK	102.0	99.0	103.0	3.0	107.0	2.0	102.0
Magnesium	09/28/2010							OK	103.0	113.0	17.0	2.0	108.0	6.0	104.0
Manganese	09/27/2010			OK	OK	OK	OK	OK	94.0	92.0	93.0	0.0	87.0	3.0	99.0
Manganese	09/27/2010							OK	97.0	86.0	83.0	1.0	89.0	3.0	102.0
Manganese	09/28/2010			OK	OK	OK	OK	OK	95.0	90.0	94.0	3.0	88.0	2.0	98.0
Manganese	09/28/2010							OK	95.0	95.0	74.0	2.0	92.0	1.0	100.0
Potassium	09/27/2010			OK	OK	OK	OK	OK	95.0	104.0	104.0	0.0			82.0
Potassium	09/27/2010							OK	96.0	132.0	131.0	0.0			82.0
Potassium	09/28/2010			OK	OK	OK	OK	OK	93.0	99.0	101.0	2.0			80.0
Potassium	09/28/2010							OK	94.0	120.0	107.0	2.0			79.0
Selenium	09/28/2010	0.0000	1.0000	OK	OK	OK	OK	OK	102.0	98.0	98.0	0.0	107.0		119.0
Selenium	09/28/2010							OK	98.0	104.0	106.0	1.0			77.0

SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet

RIN: 10083299 Lab Code: PAR Date Due: 10/7/2010
 Matrix: Water Site Code: SHP Date Completed: 10/4/2010

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Selenium	09/28/2010							OK	97.0	99.0	99.0	0.0			
Selenium	09/28/2010							OK	101.0	111.0	116.0	4.0			
Sodium	09/27/2010			OK	OK	OK	OK	OK	99.0	98.0	97.0	0.0		1.0	98.0
Sodium	09/27/2010							OK	100.0	190.0	181.0	0.0		8.0	100.0
Sodium	09/28/2010			OK	OK	OK	OK	OK	94.0	92.0	95.0	2.0		3.0	100.0
Sodium	09/28/2010							OK	95.0	119.0	23.0	2.0		7.0	101.0
Strontium	09/27/2010			OK	OK	OK	OK	OK	93.0	95.0	96.0	1.0	95.0	0.0	93.0
Strontium	09/27/2010							OK	94.0	66.0	55.0	1.0	95.0	2.0	94.0
Strontium	09/28/2010			OK	OK	OK	OK	OK	95.0	91.0	95.0	2.0	94.0	1.0	91.0
Strontium	09/28/2010							OK	96.0	93.0	51.0	2.0	93.0	1.0	90.0
Uranium	09/28/2010	0.0000	1.0000	OK	OK	OK	OK	OK	100.0	97.0	96.0	0.0	106.0	2.0	110.0
Uranium	09/28/2010							OK	90.0	69.0	89.0	1.0		2.0	100.0
Uranium	09/28/2010							OK	93.0	98.0	96.0	2.0		5.0	
Uranium	09/28/2010							OK	97.0	-696.0	-347.0	2.0		7.0	

SAMPLE MANAGEMENT SYSTEM
Wet Chemistry Data Validation Worksheet

RIN: 10083299 Lab Code: PAR Date Due: 10/7/2010
 Matrix: Water Site Code: SHP Date Completed: 10/4/2010

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
AMMONIA AS N	09/20/2010	0.030	1.0000	OK	OK	OK	OK	OK	96.00	77.0	87.0	2.00	
AMMONIA AS N	09/27/2010	0.020	0.9999	OK	OK	OK	OK	OK	98.00	90.0	92.0	3.00	
AMMONIA AS N	09/27/2010							OK	98.00	91.0	90.0	2.00	
AMMONIA AS N	09/27/2010							OK	93.00	98.0	98.0	0	
CHLORIDE	09/21/2010	0.000	0.9999	OK	OK	OK	OK	OK	102.00	94.0	95.0	0	
CHLORIDE	09/21/2010								100.00	95.0			
CHLORIDE	09/21/2010									97.0			
CHLORIDE	09/22/2010			OK	OK	OK	OK	OK	102.00	105.0	107.0	8.00	
CHLORIDE	09/22/2010									105.0	105.0	0	
CHLORIDE	09/22/2010									102.0			
CHLORIDE	09/24/2010			OK	OK	OK	OK	OK	101.00	97.0	100.0	2.00	
CHLORIDE	09/25/2010			OK	OK	OK	OK	OK		103.0			
CHLORIDE	09/27/2010			OK	OK	OK	OK	OK	104.00	99.0	100.0	1.00	
Nitrate+Nitrite as N	09/22/2010	0.000	0.9998	OK	OK	OK	OK	OK	101.00	100.0	102.0	1.00	
Nitrate+Nitrite as N	09/22/2010							OK	99.00	101.0	109.0	7.00	
Nitrate+Nitrite as N	09/23/2010	0.000	0.9996	OK	OK	OK	OK	OK	101.00	105.0	104.0	1.00	

SAMPLE MANAGEMENT SYSTEM
Wet Chemistry Data Validation Worksheet

RIN: 10083299 Lab Code: PAR Date Due: 10/7/2010
 Matrix: Water Site Code: SHP Date Completed: 10/4/2010

Analyte	Date Analyzed	CALIBRATION							Method	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB	Blank						
Nitrate+Nitrite as N	09/24/2010	0.000	0.9997	OK	OK	OK	OK	OK	102.00					
Nitrate+Nitrite as N	09/29/2010	0.000	0.9998	OK	OK	OK	OK	OK	102.00	99.0	96.0	2.00		
SULFATE	09/21/2010			OK	OK	OK	OK	OK	101.00	86.0				
SULFATE	09/21/2010								99.00	101.0				
SULFATE	09/22/2010	0.000	0.9998	OK	OK	OK	OK	OK	101.00	108.0	117.0	5.00		
SULFATE	09/22/2010									108.0	107.0	0		
SULFATE	09/22/2010									92.0				
SULFATE	09/24/2010			OK	OK	OK	OK	OK	101.00	96.0	103.0	2.00		
SULFATE	09/25/2010			OK	OK	OK	OK	OK		103.0				
SULFATE	09/27/2010			OK	OK	OK	OK	OK	103.00	104.0	111.0	2.00		

General Information

Report Number (RIN): 10083302
Sample Event: August 30, 2010 – September 2, 2010
Site(s): Shiprock Disposal Site (Terrace), New Mexico
Laboratory: ALS Laboratory Group, Fort Collins, Colorado
Work Order No.: 1009142
Analysis: Metals and Wet Chemistry
Validator: Steve Donivan
Review Date: October 26, 2010

This validation was performed according to the *Environmental Procedures Catalog* (LMS/PRO/S04325, continually updated), “Standard Practice for Validation of Laboratory Data.” 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 7.

Table 7. 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

Data Qualifier Summary

Analytical results were qualified as listed in Table 8. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 8. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
All	All	Potassium	J	Matrix spike and serial dilution failures
1009142-22	0826	Ammonia as N	J	Missed holding time
1009142-29	0836	Manganese	J	Poor duplicate precision
1009142-29	0836	Selenium	J	Serial dilution failure
1009142-30	0837	Selenium	J	Serial dilution failure
1009142-62	0836 Duplicate	Manganese	J	Poor duplicate precision
1009142-62	0836 Duplicate	Selenium	J	Serial dilution failure

Sample Shipping/Receiving

ALS Laboratory Group in Fort Collins, Colorado, received 66 water samples on September 9, 2010, accompanied by COC forms. The receiving documentation included copies for the shipping labels listing the air waybill numbers. 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.

Preservation and Holding Times

The sample shipments were received intact with the temperatures inside the iced coolers between 0.2 °C and 3.2 °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 metals aliquot for sample 1088 and the preserved anions aliquot for sample 0848 were received with a pH greater than two because of the buffering capacity of the sample. 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 with the following exception. The re-analysis of sample 0826 for ammonia as N for was performed beyond the holding time. The ammonia as N result for this sample is qualified with a “J” flag as an estimated value.

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. All calibration and laboratory spike standards were prepared from independent sources.

Method MCAWW 350.1

Calibration was performed for ammonia as N on September 15 and 20, 2010, 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 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 September 16 and 17, 2010, 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 15 verification checks. All calibration checks met the acceptance criteria.

Method SW-846 6010B

Two calibrations for calcium, magnesium, manganese, potassium, sodium, and strontium were performed September 29, 2010, using single point calibrations. Initial and continuing calibration verification checks were made at the required frequency resulting in 20 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 PQL and all results were within the acceptance range.

Method SW-846 6020A

Initial calibrations for selenium and uranium were performed on September 29, 2010, using four calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the 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 13 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 PQL and all results were within the acceptance range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries associated with requested analytes were stable and within acceptable ranges.

Method SW-846 9056

Calibrations were performed for chloride and sulfate on September 2, 2010, 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. Initial and continuing calibration verification checks were made at the required frequency resulting in 25 verification checks. All calibration checks met the acceptance criteria.

Method and Calibration Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. Calibration blanks are analyzed to assess instrument contamination prior to and during sample analysis. All initial and continuing calibration blank results associated with the samples were below the PQL. Many magnesium, manganese, strontium, and sodium method and 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.

ICP ICS Analysis

ICP ICS were analyzed at the required frequency to verify the instrumental interelement and background correction factors. All check sample results met the acceptance criteria.

MS Analysis

MS and 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. Multiple potassium MS or MSD recoveries did not meet the acceptance criteria. All potassium sample results 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 MSD sample results for all analytes were less than 20 percent, indicating acceptable laboratory precision.

Laboratory Control Samples

Laboratory control samples 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 control sample 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. Two selenium and multiple potassium serial dilutions did not meet the acceptance criteria. The associated selenium sample results and all potassium sample results 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.

EDD File

The revised EDD file arrived on December 3, 2010. 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: 10083302 Lab Code: PAR Validator: Steve Donovan Validation Date: 12/3/2010

Project: Shiprock Monitoring Analysis Type: Metals General Chem Rad Organics

of Samples: 66 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
- Detection Limits
- Field/Trip Blanks
- Field Duplicates

There are 1 holding time failures.

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

There were 4 duplicates evaluated.

SAMPLE MANAGEMENT SYSTEM

RIN: 10083302 Lab Code: PAR

Non-Compliance Report: Holding Times

Project: Shiprock Monitoring

Validation Date: 12/3/2010

Ticket	Location	Lab Sample ID	Method Code	Holding Times			Criteria			Reported Dates		
				Collection to Preparation	Preparation to Analysis	Collection to Analysis	Collection to Preparation	Preparation to Analysis	Collection to Analysis	Collection Date	Preparation Date	Analysis Date
IJX 785	0826	1009142-23	WCH-A-005			62			28	09/01/2010	11/02/2010	11/02/2010

SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet

RIN: 10083302 Lab Code: PAR Date Due: 10/7/2010
 Matrix: Water Site Code: SHP Date Completed: 10/4/2010

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Calcium	09/29/2010			OK	OK	OK	OK	96.0	93.0	94.0	0.0	105.0	3.0	102.0	
Calcium	09/29/2010						OK	97.0	98.0	105.0	0.0	102.0	1.0	101.0	
Calcium	09/29/2010						OK	99.0	106.0	138.0	3.0		7.0		
Calcium	09/29/2010						OK	97.0	104.0	113.0	1.0		0.0		
Magnesium	09/29/2010			OK	OK	OK	OK	97.0	96.0	96.0	0.0	107.0	1.0	101.0	
Magnesium	09/29/2010							99.0	96.0	83.0	2.0	104.0	1.0	99.0	
Magnesium	09/29/2010						OK	100.0	100.0	106.0	2.0		0.0		
Magnesium	09/29/2010						OK	99.0	107.0	100.0	1.0		1.0		
Manganese	09/29/2010			OK	OK	OK	OK	94.0	89.0	89.0	0.0	91.0	8.0	99.0	
Manganese	09/29/2010						OK	94.0	72.0	54.0	2.0	87.0	5.0	95.0	
Manganese	09/29/2010							96.0	86.0	88.0	2.0		8.0		
Manganese	09/29/2010							93.0	85.0	84.0	1.0				
Potassium	09/29/2010			OK	OK	OK	OK	94.0	124.0	123.0	1.0		29.0	81.0	
Potassium	09/29/2010						OK	96.0	124.0	125.0	0.0		27.0	77.0	
Potassium	09/29/2010						OK	96.0	120.0	120.0	0.0		28.0		
Potassium	09/29/2010						OK	96.0	132.0	130.0	1.0				
Selenium	09/29/2010	0.0000	1.0000	OK	OK	OK	OK	98.0	105.0	107.0	2.0	106.0	7.0	98.0	
Selenium	09/29/2010						OK	105.0	117.0	123.0	1.0		14.0	103.0	

SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet

RIN: 10083302 Lab Code: PAR Date Due: 10/7/2010
 Matrix: Water Site Code: SHP Date Completed: 10/4/2010

Analyte	Date Analyzed	CALIBRATION						Method	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
Selenium	09/29/2010							OK	98.0	98.0	98.0	0.0		14.0	
Selenium	09/29/2010							OK	91.0	117.0	113.0	1.0			
Sodium	09/29/2010			OK	OK	OK	OK	OK	93.0	100.0	102.0	0.0		3.0	92.0
Sodium	09/29/2010							OK	95.0	83.0	91.0	1.0		1.0	89.0
Sodium	09/29/2010							OK	96.0	111.0	111.0	0.0		0.0	
Sodium	09/29/2010							OK	95.0	102.0	104.0	0.0		4.0	
Strontium	09/29/2010			OK	OK	OK	OK	OK	95.0	89.0	87.0	1.0	94.0	2.0	90.0
Strontium	09/29/2010							OK	97.0	67.0	59.0	1.0	91.0	5.0	87.0
Strontium	09/29/2010							OK	97.0	107.0	116.0	1.0		2.0	
Strontium	09/29/2010							OK	95.0	83.0	73.0	1.0		5.0	
Uranium	09/29/2010	0.0000	1.0000	OK	OK	OK	OK	OK	94.0	98.0	98.0	0.0	107.0	2.0	120.0
Uranium	09/29/2010							OK	100.0	95.0	99.0	1.0		3.0	105.0
Uranium	09/29/2010							OK	94.0	105.0	110.0	1.0		2.0	
Uranium	09/29/2010							OK	96.0	107.0	91.0	3.0		3.0	

SAMPLE MANAGEMENT SYSTEM
Wet Chemistry Data Validation Worksheet

RIN: 10083302 Lab Code: PAR Date Due: 10/7/2010
 Matrix: Water Site Code: SHP Date Completed: 10/4/2010

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	09/15/2010	0.020	1.0000	OK	OK	OK	OK	OK	99.00	94.0	93.0	0	
AMMONIA AS N	09/15/2010							OK	99.00				
AMMONIA AS N	09/15/2010							OK	99.00				
AMMONIA AS N	09/20/2010	0.020	1.0000	OK	OK	OK	OK	OK	94.00	78.0	77.0	0	
CHLORIDE	09/14/2010	0.000	1.0000	OK	OK	OK	OK	OK	100.00				
CHLORIDE	09/15/2010				OK		OK	OK	98.00	97.0	95.0	1.00	
CHLORIDE	09/15/2010							OK	103.00				
CHLORIDE	09/16/2010				OK		OK	OK	102.00	97.0	95.0	1.00	
CHLORIDE	09/16/2010								101.0				
Nitrate+Nitrite as N	09/16/2010	0.000	0.9996	OK	OK	OK	OK	OK	102.00	95.0	98.0	1.00	
Nitrate+Nitrite as N	09/16/2010							OK	102.00	88.0	88.0	0	
Nitrate+Nitrite as N	09/16/2010							OK	101.00				
Nitrate+Nitrite as N	09/17/2010	0.000	0.9987	OK	OK	OK	OK	OK	101.00	85.0	79.0	2.00	
SULFATE	09/14/2010	0.000	1.0000	OK	OK	OK	OK	OK	97.00	98.0			
SULFATE	09/15/2010				OK		OK	OK	96.00	99.0	96.0	1.00	
SULFATE	09/15/2010							OK	100.00	104.0	102.0	0	

SAMPLE MANAGEMENT SYSTEM
Wet Chemistry Data Validation Worksheet

RIN: 10083302 **Lab Code:** PAR **Date Due:** 10/7/2010
Matrix: Water **Site Code:** SHP **Date Completed:** 10/4/2010

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
SULFATE	09/15/2010								101.0				
SULFATE	09/16/2010				OK		OK	OK	98.00	98.0			

Sampling Quality Control Assessment

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

Sampling Protocol

Sample results for monitoring 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:

- Floodplain wells 0610, 0766, 0797, and 0857, and terrace wells 0600, 0602, 0604, 0727, 0817, 0819, 0820, 0824, 0825, 0826, 0827, 1058, 1059, and DM7 were classified as Category II.
- Floodplain well 0734, and terrace wells 0812, 0816, 0822, 1007, 1011, 1068, 1074, and MW1 were classified as Category III.

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

Both filtered and unfiltered samples were collected from floodplain river locations 0501, 0897, 0898, 0899, 0940, 0956, 0965, 1203, and 1205.

Floodplain groundwater location 1135 had a turbidity value greater than ten NTUs. The sample from this location was filtered.

Terrace surface water locations 0889, 0949, 1220, and 1221, and groundwater locations 0604, 0812, 0814, 0846, 0889, 1011, 1073, 1088, and 1092 had turbidity values greater than ten NTUs. Samples from these locations were filtered.

Equipment Blank Assessment

Equipment blanks are prepared and analyzed to document contamination attributable to the sample collection process. One equipment blank was submitted with these samples. Calcium and uranium were detected in this blank. The associated sample concentrations 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. The relative percent difference for duplicate results that are greater than 5 times the PQL should be less than 20 percent. For results that are less than five times the PQL, the range should be no greater than the PQL. Duplicate samples were collected from floodplain locations 0614, 0628, 0735, and 1105 and from terrace locations 0614, 0628, 0735, and 1105.

Review of the duplicate data indicated that laboratory dilution and/or transcription errors likely occurred affecting the chloride, nitrate + nitrite as N, and sulfate sample results. On October 20, 2010, the laboratory was requested to re-analyze the samples of these analytes. Revised deliverables were received December 3, 2010.

The potassium duplicate data from floodplain location 0628 did not meet the acceptance criteria. The sample and duplicate potassium results are qualified with a “J” flag as estimated values.

The ammonia as N duplicate data from floodplain location 1105 did not meet the acceptance criteria. The sample and duplicate ammonia as N results are qualified with a “J” flag as estimated values.

The manganese duplicate data from terrace location 0836 did not meet the acceptance criteria. The sample and duplicate potassium results are qualified with a “J” flag as estimated values.

SAMPLE MANAGEMENT SYSTEM

Validation Report: Equipment/Trip Blanks

RIN: 10083299 Lab Code: PAR Project: Shiprock Monitoring Validation Date: 10/25/2010

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	1009148-80	SW6010	Calcium	66	B	12	UG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
1009148-1	IJX 661	0501	53000	1		
1009148-2	IJX 672	0501	61000	1		
1009148-35	IJX 650	0897	56000	1		
1009148-36	IJX 685	0897	57000	1		
1009148-37	IJX 651	0898	54000	1		
1009148-38	IJX 686	0898	71000	1		
1009148-39	IJX 687	0899	54000	1		
1009148-40	IJX 706	0899	59000	1		
1009148-41	IJX 652	0940	55000	1		
1009148-42	IJX 688	0940	60000	1		
1009148-43	IJX 653	0956	58000	1		
1009148-44	IJX 691	0956	61000	1		
1009148-45	IJX 655	0965	59000	1		
1009148-46	IJX 692	0965	61000	1		
1009148-72	IJX 656	1203	57000	1		
1009148-73	IJX 693	1203	63000	1		
1009148-74	IJX 649	1205	58000	1		
1009148-75	IJX 657	1205	60000	1		

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	1009148-80	SW6020	Uranium	0.012		0.0029	UG/L

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
1009148-1	IJX 661	0501	1.3	1		
1009148-2	IJX 672	0501	1.7	1		
1009148-35	IJX 650	0897	1.4	1		
1009148-36	IJX 685	0897	1.4	1		
1009148-37	IJX 651	0898	1.3	1		
1009148-38	IJX 686	0898	2	1		
1009148-39	IJX 687	0899	1.3	1		
1009148-40	IJX 706	0899	1.5	1		

SAMPLE MANAGEMENT SYSTEM

Page 2 of 2

Validation Report: Equipment/Trip Blanks

RIN: 10083299 Lab Code: PAR Project: Shiprock Monitoring Validation Date: 10/25/2010

Blank Data

Blank Type	Lab Sample ID	Lab Method	Analyte Name	Result	Qualifier	MDL	Units
Equipment Blank	1009148-80		Uranium				

Sample ID	Sample Ticket	Location	Result	Dilution Factor	Lab Qualifier	Validation Qualifier
1009148-41	IJX 652	0940	1.5	1		
1009148-42	IJX 688	0940	1.6	1		
1009148-43	IJX 653	0956	1.3	1		
1009148-44	IJX 691	0956	1.4	1		
1009148-45	IJX 655	0965	1.3	1		
1009148-46	IJX 692	0965	1.4	1		
1009148-72	IJX 656	1203	1.3	1		
1009148-73	IJX 693	1203	1.5	1		
1009148-74	IJX 649	1205	1.3	1		
1009148-75	IJX 657	1205	1.4	1		

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

RIN: 10083299 Lab Code: PAR Project: Shiprock Monitoring Validation Date: 12/3/2010

Duplicate: 2041

Sample: 0628

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	0.1	U		1	0.1	U		1			MG/L
Calcium	160000			5	160000			2	0		UG/L
CHLORIDE	67			50	66			50	1.50		MG/L
Magnesium	22000			5	21000			2	4.65		UG/L
Manganese	1400			5	1300			2	7.41		UG/L
Nitrate+Nitrite as N	0.01	U		1	0.01	U		1			MG/L
Potassium	12000			5	15000			2	22.22		UG/L
Selenium	0.74			5	0.58			1			UG/L
Sodium	780000			5	730000			10	6.62		UG/L
Strontium	12000			5	12000			2	0		UG/L
SULFATE	2200			50	2200			50	0		MG/L
Uranium	6.4			5	6.2			1	3.17		UG/L

Duplicate: 2604

Sample: 0735

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	15			10	15			10	0		MG/L
Calcium	260000			5	270000			5	3.77		UG/L
CHLORIDE	380			100	380			100	0		MG/L
Magnesium	760000			5	740000			5	2.67		UG/L
Manganese	2000			5	1900			5	5.13		UG/L
Nitrate+Nitrite as N	390			200	390			500	0		MG/L
Potassium	64000			5	62000			5	3.17		UG/L
Selenium	54			5	53			5	1.87		UG/L
Sodium	2200000			25	2100000			25	4.65		UG/L
Strontium	6700			5	6800			5	1.48		UG/L
SULFATE	7000			100	7100			100	1.42		MG/L
Uranium	170			5	160			5	6.06		UG/L

Duplicate: 2729

Sample: 0614

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	78			100	79			50	1.27		MG/L
Calcium	420000			5	450000			5	6.90		UG/L
CHLORIDE	320			100	320			100	0		MG/L
Magnesium	1500000			5	1500000			5	0		UG/L
Manganese	2800			5	2800			5	0		UG/L
Nitrate+Nitrite as N	360			200	350			500	2.82		MG/L

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

RIN: 10083299 Lab Code: PAR Project: Shiprock Monitoring Validation Date: 12/3/2010

Duplicate: 2729

Sample: 0614

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
Potassium	170000			5	170000			5	0		UG/L
Selenium	1100			200	1200			100	8.70		UG/L
Sodium	1700000			25	1700000			25	0		UG/L
Strontium	7900			5	8200			5	3.73		UG/L
SULFATE	9400			100	9500			100	1.06		MG/L
Uranium	1600			200	1600			100	0		UG/L

Duplicate: 2731

Sample: 1105

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	4.8			1	6.7			5	33.04		MG/L
Calcium	490000			5	490000			5	0		UG/L
CHLORIDE	370			100	380			100	2.67		MG/L
Magnesium	1400000			5	1400000			5	0		UG/L
Manganese	3000			5	3000			5	0		UG/L
Nitrate+Nitrite as N	220			200	220			200	0		MG/L
Potassium	120000			5	120000			5	0		UG/L
Selenium	95			50	95			50	0		UG/L
Sodium	2000000			25	2000000			25	0		UG/L
Strontium	10000			5	10000			5	0		UG/L
SULFATE	9900			200	9800			200	1.02		MG/L
Uranium	1700			50	1600			50	6.06		UG/L

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

RIN: 10083302 Lab Code: PAR Project: Shiprock Monitoring Validation Date: 10/19/2010

Duplicate: 2810

Sample: 0837

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	0.1	U		1	0.1	U		1			MG/L
Calcium	600000			10	620000			5	3.28		UG/L
CHLORIDE	82			50	80			50	2.47		MG/L
Magnesium	230000			1	230000			1	0		UG/L
Manganese	4100			1	4100			1	0		UG/L
Nitrate+Nitrite as N	5.2			10	5.1			10	1.94		MG/L
Potassium	14000	EN		1	14000			1	0		UG/L
Selenium	320	E		1	310			1	3.17		UG/L
Sodium	350000			10	340000			5	2.90		UG/L
Strontium	6000			1	5900			1	1.68		UG/L
SULFATE	2700			50	2600			50	3.77		MG/L
Uranium	55			1	56			1	1.80		UG/L

Duplicate: 2811

Sample: 0836

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	0.1	U		1	0.1	U		1			MG/L
Calcium	510000			2	490000			5	4.00		UG/L
CHLORIDE	43			50	45			50			MG/L
Magnesium	240000			2	250000			1	4.08		UG/L
Manganese	970			2	780			1	21.71		UG/L
Nitrate+Nitrite as N	18			20	18			20	0		MG/L
Potassium	6800			2	8000	EN		1	16.22		UG/L
Selenium	200			1	190	E		1	5.13		UG/L
Sodium	350000			2	330000			5	5.88		UG/L
Strontium	5800			2	5700			1	1.74		UG/L
SULFATE	2700			50	2700			50	0		MG/L
Uranium	41			1	42			1	2.41		UG/L

Duplicate: 2812

Sample: 0848

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	3.9			1	4.1			1	5.00		MG/L
Calcium	360000			10	380000			10	5.41		UG/L
CHLORIDE	1100			200	1000			200	9.52		MG/L
Magnesium	490000			10	530000			10	7.84		UG/L
Manganese	2800			10	3000			10	6.90		UG/L
Nitrate+Nitrite as N	0.014			1	0.016			1			MG/L

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

Page 2 of 2

RIN: 10083302 Lab Code: PAR Project: Shiprock Monitoring Validation Date: 10/19/2010

Duplicate: 2812

Sample: 0848

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
Potassium	44000			10	49000			10	10.75		UG/L
Selenium	54			5	52			5	3.77		UG/L
Sodium	6000000			50	5900000			50	1.68		UG/L
Strontium	18000			10	19000			10	5.41		UG/L
SULFATE	16000			200	15000			200	6.45		MG/L
Uranium	21			5	22			5	4.65		UG/L

Duplicate: 2813

Sample: 1079

Analyte	Sample				Duplicate				RPD	RER	Units
	Result	Flag	Error	Dilution	Result	Flag	Error	Dilution			
AMMONIA AS N	0.1	U		1	0.1	U		1			MG/L
Calcium	790000			2	800000			2	1.26		UG/L
CHLORIDE	130			50	140			50	7.41		MG/L
Magnesium	160000			2	160000			2	0		UG/L
Manganese	2	B		2	2.8	B		2	33.33		UG/L
Nitrate+Nitrite as N	89			50	92			50	3.31		MG/L
Potassium	11000			2	11000			2	0		UG/L
Selenium	540			1	460			5	16.00		UG/L
Sodium	330000			2	330000			2	0		UG/L
Strontium	6700			2	6700			2	0		UG/L
SULFATE	2500			50	2600			50	3.92		MG/L
Uranium	37			1	36			5	2.74		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 12-28-2010
Steve Donivan Date

Data Validation Lead: Steve Donivan 12-28-2010
Steve Donivan Date

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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.

Review of the Outliers Report for field parameters indicates that there is a systematic problem with the oxidation-reduction data. The problem was traced to an instrument malfunction affecting two of the instruments used to collect field data. The oxidation-reduction data collected with these instruments are qualified with an "R" flag as rejected.

Other data identified as potentially anomalous generally are from locations where analyte concentrations are trending upward or downward. There were no data errors indicated from the review of these potential outliers and the data from this event are acceptable as qualified.

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP01	0501	N002	09/01/2010	Oxidation Reduction Potential	-79.1	R	671			40.5			12	0	Yes
SHP01	0608	N001	09/01/2010	Oxidation Reduction Potential	-109.3	FR	516			61.9	F		33	0	No
SHP01	0610	N001	09/01/2010	Alkalinity, Total (As CaCO3)	289	FQ	762	L		318			26	0	No
SHP01	0610	N001	09/01/2010	Oxidation Reduction Potential	-91.7	FQR	517.4			71.5	FQ		15	0	Yes
SHP01	0612	N001	09/02/2010	Specific Conductance	850	F	6570			1065	F		14	0	No
SHP01	0614	N001	09/01/2010	Oxidation Reduction Potential	-77.8	FR	504			8			33	0	No
SHP01	0615	N001	09/02/2010	Oxidation Reduction Potential	-228.9	FR	487.8			60			30	0	No
SHP01	0618	N001	08/31/2010	Oxidation Reduction Potential	-277.5	FR	273	F		5.5	F		22	0	Yes
SHP01	0619	N001	08/31/2010	Oxidation Reduction Potential	-216.2	FR	472.9			-172.2	F		29	0	No
SHP01	0622	N001	08/31/2010	Alkalinity, Total (As CaCO3)	396	F	1666			489	F		7	0	No
SHP01	0622	N001	08/31/2010	Oxidation Reduction Potential	-189.2	FR	436			-13.4	F		7	0	No
SHP01	0623	N001	08/31/2010	Oxidation Reduction Potential	-327.3	FR	176			-13.1	FQ		5	0	Yes
SHP01	0625	N001	08/31/2010	Oxidation Reduction Potential	-298.9	FR	450			31.8	F		6	0	No
SHP01	0626	N001	08/31/2010	Alkalinity, Total (As CaCO3)	250	F	829			280			30	0	No
SHP01	0626	N001	08/31/2010	Oxidation Reduction Potential	-308.8	FR	495.4			-85.9	F		17	0	Yes
SHP01	0626	N001	08/31/2010	Turbidity	0.93	F	8			1	U		16	1	No
SHP01	0628	N001	08/31/2010	Oxidation Reduction Potential	-296.7	FR	357.8			-80.3	F		16	0	No
SHP01	0628	N001	08/31/2010	Temperature	21.76	F	18.08	F		4.6			22	0	No
SHP01	0630	N001	09/02/2010	Oxidation Reduction Potential	-317	FR	467.7			-80.1	F		15	0	No
SHP01	0734	N001	09/02/2010	Oxidation Reduction Potential	-134.2	FQR	410			-115.2	FQ		25	0	Yes

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect	
SHP01	0736	N001	09/02/2010	Oxidation Reduction Potential	-168.7		FR	483			-73			26	0	No
SHP01	0736	N001	09/02/2010	Temperature	23.9		F	20.03		F	7.93			26	0	No
SHP01	0766	N001	08/31/2010	Oxidation Reduction Potential	-227.1		FQR	206			-57.2		F	5	0	No
SHP01	0766	N001	08/31/2010	Temperature	24.92		FQ	21.7			9.09			5	0	No
SHP01	0766	N001	08/31/2010	Turbidity	4.7		FQ	4.56			0.7			5	0	No
SHP01	0768	N001	08/31/2010	Alkalinity, Total (As CaCO3)	508		F	1435			970			7	0	Yes
SHP01	0768	N001	08/31/2010	Oxidation Reduction Potential	-146.7		FR	208		L	-97.2			6	0	No
SHP01	0768	N001	08/31/2010	pH	7.12		F	7.45		L	7.25		F	6	0	No
SHP01	0768	N001	08/31/2010	Specific Conductance	7678		F	27698			15000			6	0	No
SHP01	0768	N001	08/31/2010	Temperature	23.09		F	19			8.02			6	0	No
SHP01	0779	N001	08/31/2010	Alkalinity, Total (As CaCO3)	843		F	696			388			7	0	No
SHP01	0779	N001	08/31/2010	Oxidation Reduction Potential	-298.4		FR	222.6		F	-181.5		F	6	0	No
SHP01	0779	N001	08/31/2010	Temperature	20.38		F	16.9			9.51		F	6	0	No
SHP01	0792	N001	08/31/2010	Alkalinity, Total (As CaCO3)	1074		F	1530		F	1109			5	0	No
SHP01	0792	N001	08/31/2010	Oxidation Reduction Potential	-301.6		FR	197		F	-77.1		F	7	0	No
SHP01	0793	N001	09/02/2010	Oxidation Reduction Potential	-237.5		FR	154.2		F	57.4		F	6	0	Yes
SHP01	0798	N001	08/31/2010	Oxidation Reduction Potential	-295.1		FR	158.1			32.4		F	6	0	Yes
SHP01	0798	N001	08/31/2010	Turbidity	1.53		F	9.8			1.72		F	5	0	No
SHP01	0853	N001	09/02/2010	Oxidation Reduction Potential	-282.4		FR	147.4		F	-67			11	0	No
SHP01	0854	N001	08/30/2010	Oxidation Reduction Potential	-305.2		FR	276		F	8.76			11	0	Yes

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP01	0855	N001	09/02/2010	Alkalinity, Total (As CaCO3)	349	F	348		134	F	15	0	No		
SHP01	0855	N001	09/02/2010	Oxidation Reduction Potential	-323.5	FR	222		22.9		11	0	Yes		
SHP01	0855	N001	09/02/2010	Temperature	19.09	F	15.98	F	6.41		12	0	No		
SHP01	0856	N001	09/02/2010	Oxidation Reduction Potential	-318.9	FR	178	F	6	F	9	0	Yes		
SHP01	0856	N001	09/02/2010	Temperature	16.11	F	15.57	F	10.7	F	10	0	No		
SHP01	0857	N001	09/01/2010	Alkalinity, Total (As CaCO3)	286	FQ	378		298		14	0	No		
SHP01	0857	N001	09/01/2010	Oxidation Reduction Potential	-115.5	FQR	125.8	F	-55		11	0	No		
SHP01	0898	0001	09/01/2010	Alkalinity, Total (As CaCO3)	167		155		39		30	0	No		
SHP01	0940	N002	08/31/2010	Oxidation Reduction Potential	-126.6	R	210		-2.5		25	0	Yes		
SHP01	1008	N001	08/30/2010	Oxidation Reduction Potential	-277.5	FR	290	F	65.9	F	12	0	Yes		
SHP01	1008	N001	08/30/2010	Specific Conductance	25023	F	24430	F	14850	F	12	0	No		
SHP01	1009	N001	09/02/2010	Oxidation Reduction Potential	-270.6	FR	198.7	F	59		6	0	Yes		
SHP01	1009	N001	09/02/2010	pH	7.04	F	7.02		6.87	F	6	0	No		
SHP01	1009	N001	09/02/2010	Specific Conductance	4506	F	7490		4535	F	6	0	No		
SHP01	1089	N001	08/30/2010	Oxidation Reduction Potential	-172.8	R	235	F	-9.5	F	14	0	No		
SHP01	1089	N001	08/30/2010	pH	7.11		7.71		7.12	F	14	0	No		
SHP01	1104	N001	08/30/2010	Oxidation Reduction Potential	-142.1	R	217.5	F	-38		10	0	No		
SHP01	1104	N001	08/30/2010	pH	7.02		7.66		7.03		10	0	No		
SHP01	1105	N001	09/02/2010	Oxidation Reduction Potential	-229.2	FR	263	F	61.5	F	7	0	Yes		
SHP01	1109	N001	09/01/2010	Oxidation Reduction Potential	-32	R	290		11.7		36	0	No		

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect	
SHP01	1109	N001	09/01/2010	Turbidity	0.83			8.75			0.92			6	0	No
SHP01	1110	N001	09/02/2010	Oxidation Reduction Potential	-122.6		R	253			47.7			9	0	Yes
SHP01	1110	N001	09/02/2010	Turbidity	2.01			6.48			2.23			7	0	No
SHP01	1111	N001	09/02/2010	Oxidation Reduction Potential	-241.3		FR	244		F	29			9	0	Yes
SHP01	1112	N001	09/01/2010	Oxidation Reduction Potential	-107		FR	252		F	55.1		F	7	0	No
SHP01	1112	N001	09/01/2010	Turbidity	0.68		F	7.3		F	0.91		F	5	0	No
SHP01	1113	N001	09/01/2010	Oxidation Reduction Potential	-102.6		FR	224.8			79.6		F	7	0	Yes
SHP01	1113	N001	09/01/2010	Temperature	22.93		F	22.2		F	4.7			6	0	No
SHP01	1114	N001	09/01/2010	Oxidation Reduction Potential	-61.3		FR	300		F	17.6		F	11	0	No
SHP01	1114	N001	09/01/2010	Turbidity	1.75		F	9.93		F	2.14		F	7	0	No
SHP01	1115	N001	09/01/2010	Oxidation Reduction Potential	-68.9		FR	313.1		F	57.8		F	11	0	No
SHP01	1117	N001	09/01/2010	Oxidation Reduction Potential	-83.7		FR	252		F	-20.4		F	10	0	No
SHP01	1118	N001	08/31/2010	Alkalinity, Total (As CaCO3)	103			827			378			6	0	No
SHP01	1118	N001	08/31/2010	Oxidation Reduction Potential	-172.5		R	535			65.7			9	0	Yes
SHP01	1118	N001	08/31/2010	Specific Conductance	12371			11030			7352			9	0	No
SHP01	1118	N001	08/31/2010	Temperature	21.63			21.29			5.02			9	0	No
SHP01	1203	N002	09/01/2010	Oxidation Reduction Potential	-86.1		R	593			43.9			15	0	Yes
SHP01	1205	N002	09/02/2010	Oxidation Reduction Potential	-154.6		R	552			-0.9			22	0	No

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect	
						Lab	Data		Lab	Data		Lab	Data			
SHP02	0600	N001	09/02/2010	Oxidation Reduction Potential	-275		FQR	438		F	-15		FQ	14	0	Yes
SHP02	0600	N001	09/02/2010	Turbidity	1.43		FQ	9.48		L	1.68			13	0	No
SHP02	0602	N001	09/01/2010	Oxidation Reduction Potential	6		FQR	476			112.6		F	17	0	No
SHP02	0602	N001	09/01/2010	Temperature	27.66		FQ	23.01		F	15.5			24	0	No
SHP02	0603	N001	08/31/2010	Alkalinity, Total (As CaCO3)	132		F	320			166		F	23	0	No
SHP02	0603	N001	08/31/2010	Oxidation Reduction Potential	151.4		F	305		F	178		F	17	0	No
SHP02	0662	N001	09/02/2010	Oxidation Reduction Potential	-170		R	504			-65			26	0	No
SHP02	0725	N001	09/02/2010	Alkalinity, Total (As CaCO3)	434		F	430		F	154			24	0	Yes
SHP02	0725	N001	09/02/2010	Oxidation Reduction Potential	-286		FR	479			5.7		F	19	0	No
SHP02	0727	N001	09/01/2010	Oxidation Reduction Potential	-145		FQR	508		F	136		L	20	0	No
SHP02	0728	N001	09/01/2010	Oxidation Reduction Potential	-95		FR	479			65		FQ	16	0	Yes
SHP02	0731	N001	08/31/2010	Turbidity	1.9		F	110		L	4.49		F	12	0	No
SHP02	0812	0001	08/31/2010	Alkalinity, Total (As CaCO3)	828		FQ	792		L	623			14	0	No
SHP02	0812	N001	08/31/2010	Specific Conductance	34113		FQ	31540			19210		L	15	0	No
SHP02	0814	N001	08/31/2010	Alkalinity, Total (As CaCO3)	624			1120			750			16	0	No
SHP02	0814	N001	08/31/2010	Turbidity	17.1			1000	>	L	30.1			8	0	No
SHP02	0815	N001	09/01/2010	Oxidation Reduction Potential	-88		FR	247		F	121			14	0	Yes
SHP02	0815	N001	09/01/2010	Specific Conductance	23050		F	22500		F	1705			14	0	No

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP02	0815	N001	09/01/2010	Turbidity	2.51	F	32.5			4.09		12	0	No	
SHP02	0816	N001	09/01/2010	Oxidation Reduction Potential	-123	FQR	229		F	48	F	16	0	Yes	
SHP02	0816	N001	09/01/2010	Temperature	21.36	FQ	20.5		F	13.4	FQ	13	0	No	
SHP02	0817	N001	09/01/2010	Oxidation Reduction Potential	-40	FQR	289		F	69.1	F	19	0	No	
SHP02	0819	N001	09/01/2010	Oxidation Reduction Potential	-72	FQR	272		L	67.2	FQ	12	0	Yes	
SHP02	0819	N001	09/01/2010	pH	6.3	FQ	7.08		FQ	6.41	FQ	12	0	No	
SHP02	0820	N001	09/02/2010	Alkalinity, Total (As CaCO3)	428	FQ	640			470		5	0	No	
SHP02	0820	N001	09/02/2010	Oxidation Reduction Potential	-220	FQR	180		L	-60.9	FQ	10	0	No	
SHP02	0820	N001	09/02/2010	Temperature	19.22	FQ	17.6		FQ	13.6		9	0	No	
SHP02	0824	N001	09/02/2010	Oxidation Reduction Potential	-268	FQR	216		L	-6.9	FQ	13	0	Yes	
SHP02	0824	N001	09/02/2010	Specific Conductance	27700	FQ	25500		L	13680		13	0	No	
SHP02	0824	N001	09/02/2010	Turbidity	4.51	FQ	1000	>	L	7.75	FQ	9	0	No	
SHP02	0826	N001	09/01/2010	Oxidation Reduction Potential	-125	FQR	397			80.3	F	14	0	Yes	
SHP02	0827	N001	09/02/2010	Alkalinity, Total (As CaCO3)	1680	FQ	1646		F	765	L	19	0	No	
SHP02	0827	N001	09/02/2010	Oxidation Reduction Potential	-27	FQR	268		FQ	49	F	16	0	No	
SHP02	0828	N001	09/01/2010	Oxidation Reduction Potential	-104	FR	250		F	-87		12	0	No	
SHP02	0830	N001	09/02/2010	Oxidation Reduction Potential	107	FR	453		F	130		20	0	No	
SHP02	0833	N001	08/31/2010	Oxidation Reduction Potential	-18	FR	232		F	87	F	13	0	Yes	
SHP02	0833	N001	08/31/2010	Turbidity	2.27	F	43.2		FQ	2.39	F	12	0	No	

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP02	0835	N001	08/31/2010	Oxidation Reduction Potential	-147	FR	264		F	101		25	0	Yes	
SHP02	0836	N001	08/31/2010	Alkalinity, Total (As CaCO3)	291	F	655			328	F	28	0	No	
SHP02	0837	N001	08/31/2010	Alkalinity, Total (As CaCO3)	607	F	584		F	275	F	17	0	No	
SHP02	0837	N001	08/31/2010	Oxidation Reduction Potential	-145	FR	231			-134.4	F	13	0	No	
SHP02	0837	N001	08/31/2010	Specific Conductance	4763	F	4560		F	2590		13	0	No	
SHP02	0837	N001	08/31/2010	Temperature	17.55	F	16.8		F	13.4		12	0	No	
SHP02	0838	N001	08/31/2010	Oxidation Reduction Potential	-111	FR	258		F	-4	F	26	0	Yes	
SHP02	0838	N001	08/31/2010	Specific Conductance	11632	F	8135		F	2070		26	0	Yes	
SHP02	0838	N001	08/31/2010	Temperature	18.51	F	18.3		F	13.85	F	25	0	Yes	
SHP02	0841	N001	08/31/2010	Oxidation Reduction Potential	-95	FR	267		F	28.1	F	27	0	Yes	
SHP02	0843	N001	08/31/2010	Alkalinity, Total (As CaCO3)	323	F	462			344	F	17	0	No	
SHP02	0844	N001	08/31/2010	Oxidation Reduction Potential	-87	FR	211			97	F	13	0	Yes	
SHP02	0844	N001	08/31/2010	Specific Conductance	18295	F	17470		F	4130		13	0	No	
SHP02	0846	N001	08/31/2010	Oxidation Reduction Potential	-214	R	282		F	90		26	0	Yes	
SHP02	0846	N001	08/31/2010	Temperature	22.09		21.2		FQ	13.5	F	25	0	Yes	
SHP02	0848	N001	08/31/2010	Oxidation Reduction Potential	-155	FR	161			-27.7	F	12	0	No	
SHP02	0848	N001	08/31/2010	Temperature	18.1	F	17.3		FQ	15.5		11	0	No	
SHP02	0889	N001	08/31/2010	Turbidity	1000	>	376			2.14		13	0	No	
SHP02	1007	N001	09/02/2010	Oxidation Reduction Potential	-353	FQR	256		FQ	19	FQ	9	0	Yes	

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers	Result	Lab	Data	Result	Lab	Data	N	N Below Detect	
SHP02	1007	N001	09/02/2010	Specific Conductance	21240	FQ	19840		FQ	12620		L	9	0	No
SHP02	1049	N001	08/31/2010	Alkalinity, Total (As CaCO3)	659	F	602			521			7	0	Yes
SHP02	1049	N001	08/31/2010	pH	7.24	F	8.44		FQ	7.45		F	6	0	No
SHP02	1049	N001	08/31/2010	Specific Conductance	14371	F	31637		FQ	15000		S	6	0	No
SHP02	1049	N001	08/31/2010	Turbidity	6.03	F	574		FQ	9.85			5	0	No
SHP02	1058	N001	08/31/2010	Turbidity	3.35	FQ	644			7.02		FQ	7	0	No
SHP02	1059	N001	08/31/2010	Turbidity	4.89	FQ	466		L	5.35		FQ	9	0	No
SHP02	1068	N001	09/02/2010	Oxidation Reduction Potential	-174	FQR	289			130.1		FQ	5	0	Yes
SHP02	1068	N001	09/02/2010	pH	6.56	FQ	7.09		FQ	6.81			5	0	No
SHP02	1070	N001	09/01/2010	Oxidation Reduction Potential	21	R	484.6			96			12	0	No
SHP02	1073	N001	09/02/2010	pH	6.84		7.76		FQ	6.85		FQ	6	0	No
SHP02	1074	N001	09/02/2010	Oxidation Reduction Potential	-285	FQR	284		FQ	50		FQ	5	0	Yes
SHP02	1074	N001	09/02/2010	pH	6.53	FQ	6.88		FQ	6.69		FQ	5	0	No
SHP02	1074	N001	09/02/2010	Specific Conductance	21600	FQ	21025		FQ	875		FQ	5	0	No
SHP02	1079	N001	08/31/2010	Oxidation Reduction Potential	-160	FR	239		F	-93		F	16	0	No
SHP02	1079	N001	08/31/2010	pH	6.62	F	7.16		F	6.67		F	16	0	No
SHP02	1087	N001	09/01/2010	Oxidation Reduction Potential	30	R	409.6			113			15	0	Yes
SHP02	1088	N001	09/01/2010	Temperature	23.34		23.2			6.06			14	0	No
SHP02	1088	N001	09/01/2010	Turbidity	99.89		74.6			2.32			11	0	No

Data Validation Outliers Report - Field Parameters Only

Comparison: All Historical Data

Laboratory: Field Measurements

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers	Result	Lab	Data	Result	Lab	Data	N	N Below Detect	
SHP02	1092	N001	09/01/2010	Turbidity	37.7		33.1			3.35			10	0	Yes
SHP02	1095	N001	09/01/2010	Alkalinity, Total (As CaCO3)	376		543			444			5	0	No
SHP02	1095	N001	09/01/2010	Turbidity	1.79		5.3			2.02			7	0	No
SHP02	1096	N001	09/01/2010	Alkalinity, Total (As CaCO3)	694		659			558			5	0	No
SHP02	1096	N001	09/01/2010	Oxidation Reduction Potential	-107	R	251			140			8	0	Yes
SHP02	1215	N001	09/01/2010	pH	8.03		8.45			8.11			5	0	No
SHP02	1215	N001	09/01/2010	Specific Conductance	58420		52389			28846			5	0	No
SHP02	DM7	N001	09/02/2010	Oxidation Reduction Potential	243.5	FQ	242			117	FQ		9	0	No
SHP02	DM7	N001	09/02/2010	Temperature	26.16	FQ	20.7	FQ		11.4	FQ		6	0	No
SHP02	DM7	N001	09/02/2010	Turbidity	6.29	FQ	849			7.21	F		6	0	No
SHP02	MW1	N001	09/02/2010	Oxidation Reduction Potential	-145	FQR	127	FQ		16	FQ		7	0	Yes
SHP02	MW1	N001	09/02/2010	Turbidity	4.56	FQ	32.8	FQ		6.53	FQ		6	0	No

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.

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Result	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
						Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect	
SHP01	0608	N001	09/01/2010	Nitrate + Nitrite as Nitrogen	95		F	650		F	120		F	13	0	No
SHP01	0612	N001	09/02/2010	Calcium	46		F	432			64		F	15	0	No
SHP01	0612	N001	09/02/2010	Magnesium	30		F	407			35		F	15	0	No
SHP01	0612	N001	09/02/2010	Sodium	82		F	908			100		FJ	15	0	No
SHP01	0612	N001	09/02/2010	Strontium	0.57		F	5.64			0.76		F	14	0	No
SHP01	0612	N001	09/02/2010	Sulfate	250		F	3750			310		F	15	0	No
SHP01	0612	N001	09/02/2010	Uranium	0.021		F	0.991			0.0542			15	0	No
SHP01	0614	N001	09/01/2010	Ammonia Total as N	78		F	65		F	17		F	17	0	Yes
SHP01	0614	N002	09/01/2010	Ammonia Total as N	79		F	65		F	17		F	17	0	Yes
SHP01	0614	N001	09/01/2010	Selenium	1.1		F	0.71		F	0.0443		F	37	0	Yes
SHP01	0614	N002	09/01/2010	Selenium	1.2		F	0.71		F	0.0443		F	37	0	Yes
SHP01	0615	N001	09/02/2010	Uranium	0.76		F	4.8		F	0.83		F	40	0	No
SHP01	0618	N001	08/31/2010	Ammonia Total as N	72		F	60		F	27			20	0	Yes
SHP01	0623	N001	08/31/2010	Calcium	220		F	535			224			6	0	No
SHP01	0623	N001	08/31/2010	Magnesium	55		F	1709			58		F	6	0	No
SHP01	0623	N001	08/31/2010	Selenium	0.0014		F	0.7			0.0019		F	5	0	No
SHP01	0623	N001	08/31/2010	Strontium	8.1		F	12			8.4		F	5	0	No
SHP01	0623	N001	08/31/2010	Uranium	0.053		F	1.67			0.062		F	6	0	No

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect	
						Lab	Data		Lab	Data		Lab	Data			
SHP01	0625	N001	08/31/2010	Magnesium	50		F	1736			51		F	6	0	No
SHP01	0626	N001	08/31/2010	Magnesium	36		F	938			42		F	30	0	No
SHP01	0626	N001	08/31/2010	Uranium	0.013		F	1.22			0.035		F	31	0	No
SHP01	0628	N001	08/31/2010	Magnesium	22		F	493			33.7			22	0	No
SHP01	0628	N002	08/31/2010	Magnesium	21		F	493			33.7			22	0	No
SHP01	0628	N002	08/31/2010	Manganese	1.3		F	5.36			1.31			22	0	No
SHP01	0628	N001	08/31/2010	Sodium	780		F	1889			789			22	0	No
SHP01	0628	N002	08/31/2010	Sodium	730		F	1889			789			22	0	No
SHP01	0628	N002	08/31/2010	Uranium	0.0062		F	0.405			0.0181			23	0	No
SHP01	0628	N001	08/31/2010	Uranium	0.0064		F	0.405			0.0181			23	0	No
SHP01	0734	N001	09/02/2010	Selenium	0.0032		FQ	0.437		F	0.005		UW	29	4	No
SHP01	0736	N001	09/02/2010	Magnesium	110		F	1670			130		F	24	0	No
SHP01	0768	N001	08/31/2010	Calcium	250		F	392			320		F	5	0	No
SHP01	0768	N001	08/31/2010	Chloride	110		F	578			350		F	5	0	No
SHP01	0768	N001	08/31/2010	Magnesium	180		F	1210			590		F	5	0	No
SHP01	0768	N001	08/31/2010	Potassium	50	EN	FJ	180		F	77		L	5	0	No
SHP01	0768	N001	08/31/2010	Selenium	0.0012		F	0.768			0.0057		F	5	0	No
SHP01	0768	N001	08/31/2010	Sodium	1400		F	6700			3810		L	5	0	No
SHP01	0768	N001	08/31/2010	Sulfate	4300	N	FJ	18390			11100			6	0	No

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP01	0768	N001	08/31/2010	Uranium	0.16	F	1.4	F	0.66	F	6	0	No		
SHP01	0779	N001	08/31/2010	Selenium	0.024	F	0.023	F	0.001	B	5	0	No		
SHP01	0792	N001	08/31/2010	Selenium	0.004	F	1.3	F	0.0062	F	6	0	No		
SHP01	0793	N001	09/02/2010	Ammonia Total as N	2.3	F	17	F	2.8	F	5	0	No		
SHP01	0793	N001	09/02/2010	Calcium	220	F	485		250	F	6	0	No		
SHP01	0798	N001	08/31/2010	Selenium	0.02	F	0.873		0.059	F	5	0	No		
SHP01	0850	N001	09/01/2010	Calcium	12	F	310	FQ	16	F	25	0	Yes		
SHP01	0850	N001	09/01/2010	Chloride	16	F	260	F	41.2	F	25	0	Yes		
SHP01	0850	N001	09/01/2010	Magnesium	2.5	F	68	FQ	3.3	B F	25	0	Yes		
SHP01	0850	N001	09/01/2010	Strontium	0.18	F	4.3	FQ	0.25	F	25	0	Yes		
SHP01	0850	N001	09/01/2010	Sulfate	210	F	4600	F	610	F	25	0	Yes		
SHP01	0850	N001	09/01/2010	Uranium	0.0038	F	0.12	FQ	0.0046	F	25	0	Yes		
SHP01	0853	N001	09/02/2010	Calcium	82	F	466		96	F	12	0	No		
SHP01	0853	N001	09/02/2010	Magnesium	27	F	170		29	F	12	0	No		
SHP01	0853	N001	09/02/2010	Manganese	0.37	F	2.49		0.41	F	11	0	No		
SHP01	0853	N001	09/02/2010	Strontium	0.9	F	4.21		1.1	F	11	0	No		
SHP01	0853	N001	09/02/2010	Sulfate	330	F	1980		360	F	12	0	No		
SHP01	0853	N001	09/02/2010	Uranium	0.037	F	0.224		0.04	F	12	0	No		
SHP01	0856	N001	09/02/2010	Calcium	170	F	309		190	F	12	0	No		

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP01	0856	N001	09/02/2010	Magnesium	48	F	119			54	F	12	0	No	
SHP01	0856	N001	09/02/2010	Sulfate	2600	F	3470			2691		12	0	No	
SHP01	0856	N001	09/02/2010	Uranium	0.044	F	0.162			0.054	F	12	0	No	
SHP01	0857	N001	09/01/2010	Uranium	0.076	FQ	0.311			0.09	F	11	0	No	
SHP01	1008	N001	08/30/2010	Ammonia Total as N	21	F	17		F	12	F	9	0	No	
SHP01	1009	N001	09/02/2010	Magnesium	250	F	702			270	F	8	0	No	
SHP01	1009	N001	09/02/2010	Nitrate + Nitrite as Nitrogen	0.027	F	130		F	0.42	F	5	0	No	
SHP01	1009	N001	09/02/2010	Uranium	0.28	F	0.749			0.299	L	9	0	No	
SHP01	1089	N001	08/30/2010	Selenium	0.015		0.094		F	0.017		10	0	No	
SHP01	1105	N002	09/02/2010	Nitrate + Nitrite as Nitrogen	220	FJ	1100		F	270	F	6	0	No	
SHP01	1105	N001	09/02/2010	Nitrate + Nitrite as Nitrogen	220	F	1100		F	270	F	6	0	No	
SHP01	1110	N001	09/02/2010	Magnesium	830		2000			920		9	0	No	
SHP01	1110	N001	09/02/2010	Manganese	1		3			1.1		8	0	No	
SHP01	1110	N001	09/02/2010	Nitrate + Nitrite as Nitrogen	63		390			88		9	0	No	
SHP01	1110	N001	09/02/2010	Uranium	0.77		2.1			0.89		10	0	No	
SHP01	1111	N001	09/02/2010	Selenium	0.4	F	0.74		F	0.51	F	6	0	No	
SHP01	1111	N001	09/02/2010	Strontium	12	F	11		F	8.1	F	6	0	No	
SHP01	1112	N001	09/01/2010	Ammonia Total as N	91	F	64			26	F	8	0	No	
SHP01	1112	N001	09/01/2010	Magnesium	1100	F	2300		F	1400	F	8	0	No	

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083299

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP01	1112	N001	09/01/2010	Nitrate + Nitrite as Nitrogen	230	F	840	F	300	F	6	0	No		
SHP01	1112	N001	09/01/2010	Strontium	7.8	F	12	F	8.1	F	6	0	No		
SHP01	1112	N001	09/01/2010	Uranium	1.2	F	2.4	F	1.4	F	8	0	No		
SHP01	1114	N001	09/01/2010	Ammonia Total as N	440	F	420		82	F	11	0	No		
SHP01	1114	N001	09/01/2010	Selenium	0.012	F	0.011	F	0.0042	F	6	0	No		
SHP01	1115	N001	09/01/2010	Ammonia Total as N	410	F	380		65	F	12	0	No		
SHP01	1117	N001	09/01/2010	Selenium	0.00019	F	0.0048	F	0.00031	F	7	0	No		
SHP01	1117	N001	09/01/2010	Uranium	0.0038	F	0.0203		0.0047	F	11	0	No		
SHP01	1118	N001	08/31/2010	Chloride	380		360		168		9	0	No		
SHP01	1118	N001	08/31/2010	Magnesium	1100		930		350		9	0	No		
SHP01	1118	N001	08/31/2010	Potassium	65		58		21		9	0	No		
SHP01	1118	N001	08/31/2010	Selenium	0.061		0.16		0.062		8	0	No		
SHP01	1118	N001	08/31/2010	Sulfate	7900		7100		4100		10	0	No		
SHP01	1132	N001	09/01/2010	Ammonia Total as N	0.88	F	6		0.9	F	5	0	No		
SHP01	1132	N001	09/01/2010	Uranium	0.011	F	0.022		0.012	F	5	0	No		
SHP01	1203	0001	09/01/2010	Manganese	0.0021	B	0.47		0.0028	B	20	0	No		
SHP01	1203	0001	09/01/2010	Potassium	2.3		12	J	2.34		18	0	No		

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP02	0600	N001	09/02/2010	Magnesium	280	FQ	858			290	F	23	0	No	
SHP02	0600	N001	09/02/2010	Uranium	0.63	FQ	1.57			0.71	F	24	0	No	
SHP02	0602	N001	09/01/2010	Ammonia Total as N	150	FQ	460			290	F	5	0	No	
SHP02	0602	N001	09/01/2010	Chloride	1500	FQ	1100	F		610	N	23	0	Yes	
SHP02	0602	N001	09/01/2010	Uranium	0.53	FQ	1.37			0.57	FQ	27	0	No	
SHP02	0603	N001	08/31/2010	Calcium	990	F	980	F		367		17	0	No	
SHP02	0604	0001	08/31/2010	Magnesium	1700	FQ	1600	FQ		972	L	8	0	No	
SHP02	0604	0001	08/31/2010	Potassium	73	FQJ	62	FQ		27.9	L	8	0	No	
SHP02	0604	0001	08/31/2010	Selenium	0.65	FQ	0.391	L	0.0001		U L	9	1	Yes	
SHP02	0725	N001	09/02/2010	Nitrate + Nitrite as Nitrogen	8.5	F	8	FQ		0.37	F	6	0	No	
SHP02	0725	N001	09/02/2010	Potassium	19	FJ	18	F		9.7	FQ	17	0	No	
SHP02	0726	N001	08/30/2010	Potassium	42	FJ	41	F		20.7	F	15	0	No	
SHP02	0727	N001	09/01/2010	Sodium	1700	FQ	3130			1900	F	17	0	No	
SHP02	0728	N001	09/01/2010	Ammonia Total as N	69	F	220	F		74	F	5	0	No	
SHP02	0731	N001	08/31/2010	Ammonia Total as N	18	F	46	F		27	F	6	0	No	
SHP02	0731	N001	08/31/2010	Magnesium	400	F	856			470	F	13	0	No	
SHP02	0731	N001	08/31/2010	Sodium	660	F	1400			840	F	15	0	No	
SHP02	0731	N001	08/31/2010	Strontium	6.7	F	12.2			7.05		15	0	No	
SHP02	0731	N001	08/31/2010	Sulfate	3800	F	5740			4000	F	16	0	No	

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

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Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect			
SHP02	0731	N001	08/31/2010	Uranium	0.018	F	0.0568			0.029		18	0	No	
SHP02	0812	0001	08/31/2010	Calcium	440	FQ	495		L	446	L	12	0	No	
SHP02	0813	N001	08/31/2010	Selenium	0.1	F	0.0812			0.0334		15	0	Yes	
SHP02	0814	0001	08/31/2010	Potassium	150	J	140		FQ	84.6	L	9	0	No	
SHP02	0815	N001	09/01/2010	Ammonia Total as N	0.12	F	0.1	U	F	0.1	U F	7	7	Yes	
SHP02	0815	N001	09/01/2010	Magnesium	2700	F	2650			1300		12	0	No	
SHP02	0815	N001	09/01/2010	Selenium	0.032	F	0.633		L	0.039	F	13	0	No	
SHP02	0816	N001	09/01/2010	Selenium	0.013	FQ	0.242			0.015	FQ	13	0	No	
SHP02	0819	N001	09/01/2010	Sodium	4800	FQ	3500		L	2100	F	11	0	Yes	
SHP02	0819	N001	09/01/2010	Uranium	0.76	FQ	2.15		L	0.87	FQ	14	0	No	
SHP02	0820	N001	09/02/2010	Chloride	9000	FQ	8700		FQ	1620	L	9	0	No	
SHP02	0820	N001	09/02/2010	Manganese	1.3	FQ	1.2		FQ	0.161	L	7	0	No	
SHP02	0820	N001	09/02/2010	Sulfate	4200	FQ	7450		L	4328		10	0	No	
SHP02	0826	N001	09/01/2010	Ammonia Total as N	65	FQJ	130		F	99	FQ	7	0	Yes	
SHP02	0826	N001	09/01/2010	Manganese	2.3	FQ	2.9		F	2.5	F	14	0	No	
SHP02	0828	N001	09/01/2010	Calcium	480	F	470		F	196	F	10	0	No	
SHP02	0828	N001	09/01/2010	Uranium	0.65	F	0.58		F	0.21	F	12	0	No	
SHP02	0833	N001	08/31/2010	Nitrate + Nitrite as Nitrogen	360	F	510		FQ	370	F	5	0	No	
SHP02	0836	N002	08/31/2010	Manganese	0.78	FJ	7.2		F	1.24		25	0	No	

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect	
						Lab	Data		Lab	Data		Lab	Data			
SHP02	0836	N001	08/31/2010	Manganese	0.97		FJ	7.2		F	1.24			25	0	No
SHP02	0837	N001	08/31/2010	Chloride	82		F	68		F	16.5			12	0	No
SHP02	0837	N002	08/31/2010	Chloride	80		F	68		F	16.5			12	0	No
SHP02	0837	N002	08/31/2010	Potassium	14		FJ	9		F	5.03			12	0	Yes
SHP02	0837	N001	08/31/2010	Potassium	14	EN	FJ	9		F	5.03			12	0	Yes
SHP02	0837	N002	08/31/2010	Selenium	0.31		F	0.25		F	0.0099			13	0	No
SHP02	0837	N001	08/31/2010	Selenium	0.32	E	FJ	0.25		F	0.0099			13	0	No
SHP02	0837	N001	08/31/2010	Sodium	350		F	340		F	143			12	0	No
SHP02	0837	N001	08/31/2010	Sulfate	2700		F	2600		F	1190			14	0	Yes
SHP02	0837	N002	08/31/2010	Uranium	0.056		F	0.048		F	0.03			14	0	Yes
SHP02	0837	N001	08/31/2010	Uranium	0.055		F	0.048		F	0.03			14	0	No
SHP02	0838	N001	08/31/2010	Chloride	540		F	340		F	12.8			24	0	No
SHP02	0838	N001	08/31/2010	Magnesium	670		F	360		F	87.6			24	0	Yes
SHP02	0838	N001	08/31/2010	Manganese	0.062		F	0.048		F	0.00035	B		26	6	Yes
SHP02	0838	N001	08/31/2010	Nitrate + Nitrite as Nitrogen	440		F	310		F	32		F	14	0	No
SHP02	0838	N001	08/31/2010	Potassium	25		FJ	18		F	4			24	0	Yes
SHP02	0838	N001	08/31/2010	Selenium	0.93		F	0.64		F	0.0272			26	0	No
SHP02	0838	N001	08/31/2010	Sodium	1300		F	900		F	91.9			24	0	Yes
SHP02	0838	N001	08/31/2010	Strontium	11		F	10		F	3.51			24	0	No

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	Result	Qualifiers Lab	Data	N	N Below Detect	
SHP02	0838	N001	08/31/2010	Sulfate	5300		F	3700		F	1180			27	0	Yes
SHP02	0838	N001	08/31/2010	Uranium	0.084		F	0.068		F	0.023			27	0	Yes
SHP02	0843	N001	08/31/2010	Calcium	370		F	570			400		F	11	0	No
SHP02	0843	N001	08/31/2010	Selenium	0.26		F	0.24		F	0.00013	B		12	2	No
SHP02	0843	N001	08/31/2010	Strontium	3.8		F	7.32			4.4		F	11	0	No
SHP02	0843	N001	08/31/2010	Uranium	0.022		F	0.033		F	0.023		F	13	0	No
SHP02	0844	N001	08/31/2010	Nitrate + Nitrite as Nitrogen	800		F	750		F	650		FQ	5	0	No
SHP02	0844	N001	08/31/2010	Potassium	67		FJ	59		F	9.7			12	0	No
SHP02	0949	0001	08/31/2010	Calcium	630			550			500			5	0	Yes
SHP02	0949	0001	08/31/2010	Chloride	160			100			75			5	0	Yes
SHP02	0949	0001	08/31/2010	Selenium	0.49			0.38			0.27			5	0	No
SHP02	0949	0001	08/31/2010	Sodium	510			500			450			5	0	No
SHP02	0949	0001	08/31/2010	Strontium	6.3			6			5.5			5	0	No
SHP02	0949	0001	08/31/2010	Sulfate	2900			2800			2600			5	0	No
SHP02	0949	0001	08/31/2010	Uranium	0.025			0.039			0.035			5	0	Yes
SHP02	1007	N001	09/02/2010	Chloride	640		FQ	580		FQ	279		L	8	0	No
SHP02	1007	N001	09/02/2010	Sulfate	14000		FQ	13000		FQ	967		L	9	0	No
SHP02	1049	N001	08/31/2010	Potassium	53		FJ	50		F	40.2			5	0	No
SHP02	1058	N001	08/31/2010	Nitrate + Nitrite as Nitrogen	0.01	U	FQ	0.74		FQ	0.017		FQ	5	0	No

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect	
						Lab	Data		Lab	Data		Lab	Data			
SHP02	1058	N001	08/31/2010	Potassium	22		FQJ	19		FQ	12.6	E	J	7	0	No
SHP02	1058	N001	08/31/2010	Selenium	0.00028		FQ	0.001	B	JL	0.00029		UFQ	8	1	No
SHP02	1058	N001	08/31/2010	Sodium	2600		FQ	2400		FQ	872		L	7	0	No
SHP02	1058	N001	08/31/2010	Sulfate	5600		FQ	5500		FQ	889		L	8	0	No
SHP02	1068	0001	09/02/2010	Ammonia Total as N	22		FQ	120		FQ	40		FQ	5	0	No
SHP02	1070	N001	09/01/2010	Calcium	350			420			380			8	0	No
SHP02	1070	N001	09/01/2010	Magnesium	1100			1960			1200			8	0	No
SHP02	1070	N001	09/01/2010	Sodium	4900			7300			5100			8	0	No
SHP02	1070	N001	09/01/2010	Strontium	8.7			13.5			9.4			8	0	No
SHP02	1070	N001	09/01/2010	Uranium	0.087			0.14			0.089			17	0	No
SHP02	1073	0001	09/02/2010	Nitrate + Nitrite as Nitrogen	1200			1500		FQ	1300		FQ	5	0	No
SHP02	1073	0001	09/02/2010	Selenium	2.5			2.3		FQ	1.9		FQ	5	0	No
SHP02	1074	N001	09/02/2010	Calcium	500		FQ	600		FQ	550		FQ	5	0	No
SHP02	1074	N001	09/02/2010	Potassium	54		FQJ	67		FQ	56		FQ	5	0	No
SHP02	1074	N001	09/02/2010	Selenium	0.32		FQ	0.29		FQ	0.25		FQ	5	0	No
SHP02	1074	N001	09/02/2010	Strontium	9.7		FQ	12		FQ	10		FQ	5	0	No
SHP02	1078	N001	09/01/2010	Calcium	380			440			390			13	0	No
SHP02	1078	N001	09/01/2010	Magnesium	990			1200			1100			13	0	No
SHP02	1078	N001	09/01/2010	Manganese	0.065			0.134			0.07		J	13	0	No

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers	Result	Lab	Data	Result	Lab	Data	N	N Below Detect	
SHP02	1078	N001	09/01/2010	Strontium	8.9		11			9.1			13	0	No
SHP02	1079	N001	08/31/2010	Calcium	790	F	730		F	450		F	18	0	No
SHP02	1079	N002	08/31/2010	Calcium	800	F	730		F	450		F	18	0	No
SHP02	1079	N001	08/31/2010	Chloride	130	F	110		F	35.7		F	18	0	Yes
SHP02	1079	N002	08/31/2010	Chloride	140	F	110		F	35.7		F	18	0	Yes
SHP02	1079	N002	08/31/2010	Magnesium	160	F	150		F	99		F	18	0	No
SHP02	1079	N001	08/31/2010	Magnesium	160	F	150		F	99		F	18	0	No
SHP02	1079	N002	08/31/2010	Nitrate + Nitrite as Nitrogen	92	F	91		F	35		F	14	0	No
SHP02	1079	N002	08/31/2010	Sulfate	2600	F	2500		F	1600		F	18	0	No
SHP02	1079	N002	08/31/2010	Uranium	0.036	F	0.0323		F	0.023		F	18	0	No
SHP02	1079	N001	08/31/2010	Uranium	0.037	F	0.0323		F	0.023		F	18	0	No
SHP02	1087	N001	09/01/2010	Uranium	0.42		0.87			0.43			21	0	No
SHP02	1088	0001	09/01/2010	Calcium	360		450			380			12	0	No
SHP02	1088	0001	09/01/2010	Manganese	0.0011	U	0.11			0.0088	B		12	1	Yes
SHP02	1088	0001	09/01/2010	Selenium	2.1		1.71			1.2			12	0	No
SHP02	1088	0001	09/01/2010	Strontium	7.7		11			8.3			12	0	No
SHP02	1091	N001	09/01/2010	Ammonia Total as N	0.1	U	280			0.32			14	1	No
SHP02	1091	N001	09/01/2010	Calcium	410		650			440			9	0	No
SHP02	1091	N001	09/01/2010	Manganese	1		15			1.1			9	0	No

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect	
						Lab	Data		Lab	Data		Lab	Data			
SHP02	1091	N001	09/01/2010	Strontium	12			15			13			9	0	No
SHP02	1092	0001	09/01/2010	Magnesium	1300			2500			1600			9	0	No
SHP02	1092	0001	09/01/2010	Strontium	9.2			13			11			9	0	No
SHP02	1093R	N001	09/01/2010	Ammonia Total as N	620			870			670			5	0	No
SHP02	1093R	N001	09/01/2010	Chloride	740			690			580			5	0	No
SHP02	1093R	N001	09/01/2010	Magnesium	2300			2000			1700			5	0	No
SHP02	1093R	N001	09/01/2010	Selenium	0.71			0.67			0.38			5	0	No
SHP02	1093R	N001	09/01/2010	Sodium	2200			1900			1600			5	0	No
SHP02	1093R	N001	09/01/2010	Sulfate	7600			6700			5000			5	0	No
SHP02	1095	N001	09/01/2010	Calcium	800			750			640			6	0	No
SHP02	1095	N001	09/01/2010	Chloride	320			440			330			6	0	No
SHP02	1095	N001	09/01/2010	Sulfate	5100			7500			5500			8	0	No
SHP02	1096	N001	09/01/2010	Manganese	0.14			0.48			0.18			8	0	No
SHP02	1096	N001	09/01/2010	Nitrate + Nitrite as Nitrogen	610			780			630	J		9	0	No
SHP02	1096	N001	09/01/2010	Selenium	3.1			2.9			2.1			8	0	No
SHP02	1215	N001	09/01/2010	Magnesium	6700			6600			2400			6	0	No
SHP02	1215	N001	09/01/2010	Potassium	660		J	530			270			6	0	No
SHP02	1215	N001	09/01/2010	Selenium	2.2			2.1			0.86			6	0	No
SHP02	1215	N001	09/01/2010	Sodium	11000			10000			4600			6	0	No

Data Validation Outliers Report - No Field Parameters

Comparison: All Historical Data

Laboratory: ALS Laboratory Group

RIN: 10083302

Report Date: 12/15/2010

Site Code	Location Code	Sample ID	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
					Result	Qualifiers	Result	Lab	Data	Result	Lab	Data	N	N Below Detect	
SHP02	1215	N001	09/01/2010	Sulfate	45000		44000			19000			7	0	No
SHP02	DM7	N001	09/02/2010	Chloride	1700	FQ	1600		F	1500		FQ	5	0	No
SHP02	DM7	N001	09/02/2010	Nitrate + Nitrite as Nitrogen	730	FQ	290		FQ	220		FQ	5	0	Yes
SHP02	MW1	N001	09/02/2010	Ammonia Total as N	0.57	FQ	7			0.62		FQ	5	0	No
SHP02	MW1	N001	09/02/2010	Strontium	7.5	FQ	7.4		FQ	4.62		L	5	0	No
SHP02	MW1	N001	09/02/2010	Uranium	0.00036	FQ	0.01		U	0.0004		FQ	7	1	No

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: 12/15/2010

Location: 0608 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	10 - 15	447		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	10 - 15	130		F	#	10	
Calcium	mg/L	09/01/2010	N001	10 - 15	310		F	#	0.06	
Chloride	mg/L	09/01/2010	N001	10 - 15	180		F	#	20	
Magnesium	mg/L	09/01/2010	N001	10 - 15	540		F	#	0.065	
Manganese	mg/L	09/01/2010	N001	10 - 15	2.6		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	10 - 15	95		F	#	1	
Oxidation Reduction Potential	mV	09/01/2010	N001	10 - 15	-109.3		FR	#		
pH	s.u.	09/01/2010	N001	10 - 15	7.06		F	#		
Potassium	mg/L	09/01/2010	N001	10 - 15	78		F	#	0.54	
Selenium	mg/L	09/01/2010	N001	10 - 15	0.0046		F	#	0.00032	
Sodium	mg/L	09/01/2010	N001	10 - 15	1200		F	#	0.033	
Specific Conductance	umhos /cm	09/01/2010	N001	10 - 15	9563		F	#		
Strontium	mg/L	09/01/2010	N001	10 - 15	6.2		F	#	0.00039	
Sulfate	mg/L	09/01/2010	N001	10 - 15	5100		F	#	50	
Temperature	C	09/01/2010	N001	10 - 15	20.81		F	#		
Turbidity	NTU	09/01/2010	N001	10 - 15	9.56		F	#		
Uranium	mg/L	09/01/2010	N001	10 - 15	0.72		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0610 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	4	-	9	289		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	4	-	9	2.4		FQ	#	0.1	
Calcium	mg/L	09/01/2010	N001	4	-	9	450		FQ	#	0.06	
Chloride	mg/L	09/01/2010	N001	4	-	9	170		FQ	#	20	
Magnesium	mg/L	09/01/2010	N001	4	-	9	860		FQ	#	0.065	
Manganese	mg/L	09/01/2010	N001	4	-	9	0.15		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	4	-	9	250		FQ	#	2	
Oxidation Reduction Potential	mV	09/01/2010	N001	4	-	9	-91.7		FQR	#		
pH	s.u.	09/01/2010	N001	4	-	9	7.28		FQ	#		
Potassium	mg/L	09/01/2010	N001	4	-	9	120		FQ	#	0.54	
Selenium	mg/L	09/01/2010	N001	4	-	9	0.12		FQ	#	0.0016	
Sodium	mg/L	09/01/2010	N001	4	-	9	1100		FQ	#	0.033	
Specific Conductance	umhos/cm	09/01/2010	N001	4	-	9	9973		FQ	#		
Strontium	mg/L	09/01/2010	N001	4	-	9	6.3		FQ	#	0.00039	
Sulfate	mg/L	09/01/2010	N001	4	-	9	5700		FQ	#	50	
Temperature	C	09/01/2010	N001	4	-	9	25.89		FQ	#		
Turbidity	NTU	09/01/2010	N001	4	-	9	3.9		FQ	#		
Uranium	mg/L	09/01/2010	N001	4	-	9	0.93		FQ	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 0611 WELL SE part of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Ammonia Total as N	mg/L	09/01/2010	N001	9.5 - 14.5	1.9	F	#	0.1	
Calcium	mg/L	09/01/2010	N001	9.5 - 14.5	160	F	#	0.06	
Chloride	mg/L	09/01/2010	N001	9.5 - 14.5	570	F	#	20	
Magnesium	mg/L	09/01/2010	N001	9.5 - 14.5	92	F	#	0.065	
Manganese	mg/L	09/01/2010	N001	9.5 - 14.5	0.064	F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	9.5 - 14.5	0.5	F	#	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	9.5 - 14.5	-130.6	FR	#		
pH	s.u.	09/01/2010	N001	9.5 - 14.5	7.24	F	#		
Potassium	mg/L	09/01/2010	N001	9.5 - 14.5	21	F	#	0.54	
Selenium	mg/L	09/01/2010	N001	9.5 - 14.5	0.0014	F	#	0.00016	
Sodium	mg/L	09/01/2010	N001	9.5 - 14.5	2400	F	#	0.16	
Specific Conductance	umhos/cm	09/01/2010	N001	9.5 - 14.5	11848	F	#		
Strontium	mg/L	09/01/2010	N001	9.5 - 14.5	7	F	#	0.00039	
Sulfate	mg/L	09/01/2010	N001	9.5 - 14.5	5700	F	#	50	
Temperature	C	09/01/2010	N001	9.5 - 14.5	23.64	F	#		
Turbidity	NTU	09/01/2010	N001	9.5 - 14.5	1.89	F	#		
Uranium	mg/L	09/01/2010	N001	9.5 - 14.5	0.014	F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0612 WELL SE part of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	5 - 10	205		F #		
Ammonia Total as N	mg/L	09/02/2010	N001	5 - 10	0.7		F #	0.1	
Calcium	mg/L	09/02/2010	N001	5 - 10	46		F #	0.012	
Chloride	mg/L	09/02/2010	N001	5 - 10	20		F #	2	
Magnesium	mg/L	09/02/2010	N001	5 - 10	30		F #	0.013	
Manganese	mg/L	09/02/2010	N001	5 - 10	0.47		F #	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	5 - 10	0.026		F #	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	5 - 10	-180.8		FR #		
pH	s.u.	09/02/2010	N001	5 - 10	7.35		F #		
Potassium	mg/L	09/02/2010	N001	5 - 10	5.3		F #	0.11	
Selenium	mg/L	09/02/2010	N001	5 - 10	0.00029		F #	0.000032	
Sodium	mg/L	09/02/2010	N001	5 - 10	82		F #	0.0066	
Specific Conductance	umhos/cm	09/02/2010	N001	5 - 10	850		F #		
Strontium	mg/L	09/02/2010	N001	5 - 10	0.57		F #	0.000078	
Sulfate	mg/L	09/02/2010	N001	5 - 10	250		F #	5	
Temperature	C	09/02/2010	N001	5 - 10	19.65		F #		
Turbidity	NTU	09/02/2010	N001	5 - 10	0.96		F #		
Uranium	mg/L	09/02/2010	N001	5 - 10	0.021		F #	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0614 WELL SE part of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	10 - 15	496		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	10 - 15	78		F #	10	
Ammonia Total as N	mg/L	09/01/2010	N002	10 - 15	79		F #	5	
Calcium	mg/L	09/01/2010	N001	10 - 15	420		F #	0.06	
Calcium	mg/L	09/01/2010	N002	10 - 15	450		F #	0.06	
Chloride	mg/L	09/01/2010	N001	10 - 15	320		F #	20	
Chloride	mg/L	09/01/2010	N002	10 - 15	320		F #	20	
Magnesium	mg/L	09/01/2010	N001	10 - 15	1500		F #	0.065	
Magnesium	mg/L	09/01/2010	N002	10 - 15	1500		F #	0.065	
Manganese	mg/L	09/01/2010	N001	10 - 15	2.8		F #	0.00057	
Manganese	mg/L	09/01/2010	N002	10 - 15	2.8		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	10 - 15	360		F #	2	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N002	10 - 15	350		F #	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	10 - 15	-77.8		FR #		
pH	s.u.	09/01/2010	N001	10 - 15	7.04		F #		
Potassium	mg/L	09/01/2010	N001	10 - 15	170		F #	0.54	
Potassium	mg/L	09/01/2010	N002	10 - 15	170		F #	0.54	
Selenium	mg/L	09/01/2010	N001	10 - 15	1.1		F #	0.0065	

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

REPORT DATE: 12/15/2010

Location: 0614 WELL SE part of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Selenium	mg/L	09/01/2010	N002	10 - 15	1.2		F #	0.0032	
Sodium	mg/L	09/01/2010	N001	10 - 15	1700		F #	0.16	
Sodium	mg/L	09/01/2010	N002	10 - 15	1700		F #	0.16	
Specific Conductance	umhos/cm	09/01/2010	N001	10 - 15	15138		F #		
Strontium	mg/L	09/01/2010	N001	10 - 15	7.9		F #	0.00039	
Strontium	mg/L	09/01/2010	N002	10 - 15	8.2		F #	0.00039	
Sulfate	mg/L	09/01/2010	N001	10 - 15	9400		F #	50	
Sulfate	mg/L	09/01/2010	N002	10 - 15	9500		F #	50	
Temperature	C	09/01/2010	N001	10 - 15	19.88		F #		
Turbidity	NTU	09/01/2010	N001	10 - 15	0.98		F #		
Uranium	mg/L	09/01/2010	N001	10 - 15	1.6		F #	0.00058	
Uranium	mg/L	09/01/2010	N002	10 - 15	1.6		F #	0.00029	

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

REPORT DATE: 12/15/2010

Location: 0615 WELL S of floodplain fence, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	4.5 - 9.5	527		F #		
Ammonia Total as N	mg/L	09/02/2010	N001	4.5 - 9.5	10		F #	0.5	
Calcium	mg/L	09/02/2010	N001	4.5 - 9.5	450		F #	0.06	
Chloride	mg/L	09/02/2010	N001	4.5 - 9.5	130		F #	10	
Magnesium	mg/L	09/02/2010	N001	4.5 - 9.5	720		F #	0.065	
Manganese	mg/L	09/02/2010	N001	4.5 - 9.5	1.3		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	4.5 - 9.5	30		F #	0.2	
Oxidation Reduction Potential	mV	09/02/2010	N001	4.5 - 9.5	-228.9		FR #		
pH	s.u.	09/02/2010	N001	4.5 - 9.5	7.01		F #		
Potassium	mg/L	09/02/2010	N001	4.5 - 9.5	96		F #	0.54	
Selenium	mg/L	09/02/2010	N001	4.5 - 9.5	0.11		F #	0.0016	
Sodium	mg/L	09/02/2010	N001	4.5 - 9.5	870		F #	0.033	
Specific Conductance	umhos/cm	09/02/2010	N001	4.5 - 9.5	8340		F #		
Strontium	mg/L	09/02/2010	N001	4.5 - 9.5	5.7		F #	0.00039	
Sulfate	mg/L	09/02/2010	N001	4.5 - 9.5	5400		F #	50	
Temperature	C	09/02/2010	N001	4.5 - 9.5	22.1		F #		
Turbidity	NTU	09/02/2010	N001	4.5 - 9.5	2.17		F #		
Uranium	mg/L	09/02/2010	N001	4.5 - 9.5	0.76		F #	0.00015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	11 - 16	918		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	11 - 16	72		F	#	10	
Calcium	mg/L	08/31/2010	N001	11 - 16	420		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	11 - 16	690		F	#	40	
Magnesium	mg/L	08/31/2010	N001	11 - 16	1800		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	11 - 16	9.4		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	11 - 16	220		F	#	2	
Oxidation Reduction Potential	mV	08/31/2010	N001	11 - 16	-277.5		FR	#		
pH	s.u.	08/31/2010	N001	11 - 16	6.87		F	#		
Potassium	mg/L	08/31/2010	N001	11 - 16	130		F	#	0.54	
Selenium	mg/L	08/31/2010	N001	11 - 16	0.25		F	#	0.0032	
Sodium	mg/L	08/31/2010	N001	11 - 16	2800		F	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	11 - 16	19611		F	#		
Strontium	mg/L	08/31/2010	N001	11 - 16	8.9		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	11 - 16	13000		F	#	100	
Temperature	C	08/31/2010	N001	11 - 16	20.45		F	#		
Turbidity	NTU	08/31/2010	N001	11 - 16	1.49		F	#		
Uranium	mg/L	08/31/2010	N001	11 - 16	2		F	#	0.00029	

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

REPORT DATE: 12/15/2010

Location: 0619 WELL Center of floodplain

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	8 - 13	497		F #		
Ammonia Total as N	mg/L	08/31/2010	N001	8 - 13	0.48		F #	0.1	
Calcium	mg/L	08/31/2010	N001	8 - 13	260		F #	0.06	
Chloride	mg/L	08/31/2010	N001	8 - 13	96		F #	10	
Magnesium	mg/L	08/31/2010	N001	8 - 13	140		F #	0.065	
Manganese	mg/L	08/31/2010	N001	8 - 13	1.5		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	8 - 13	0.023		F #	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	8 - 13	-216.2		FR #		
pH	s.u.	08/31/2010	N001	8 - 13	7.1		F #		
Potassium	mg/L	08/31/2010	N001	8 - 13	30		F #	0.54	
Selenium	mg/L	08/31/2010	N001	8 - 13	0.00065		F #	0.00016	
Sodium	mg/L	08/31/2010	N001	8 - 13	1100		F #	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	8 - 13	6635		F #		
Strontium	mg/L	08/31/2010	N001	8 - 13	6.2		F #	0.00039	
Sulfate	mg/L	08/31/2010	N001	8 - 13	3500		F #	25	
Temperature	C	08/31/2010	N001	8 - 13	20.41		F #		
Turbidity	NTU	08/31/2010	N001	8 - 13	1.18		F #		
Uranium	mg/L	08/31/2010	N001	8 - 13	0.13		F #	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	5 - 10	396		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	5 - 10	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	5 - 10	220		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	5 - 10	100		F	#	10	
Magnesium	mg/L	08/31/2010	N001	5 - 10	130		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	5 - 10	2.2		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	5 - 10	0.019		F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	5 - 10	-189.2		FR	#		
pH	s.u.	08/31/2010	N001	5 - 10	7.26		F	#		
Potassium	mg/L	08/31/2010	N001	5 - 10	27		F	#	0.54	
Selenium	mg/L	08/31/2010	N001	5 - 10	0.024		F	#	0.00032	
Sodium	mg/L	08/31/2010	N001	5 - 10	1100		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	5 - 10	6439		F	#		
Strontium	mg/L	08/31/2010	N001	5 - 10	5.9		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	5 - 10	3400		F	#	25	
Temperature	C	08/31/2010	N001	5 - 10	20.88		F	#		
Turbidity	NTU	08/31/2010	N001	5 - 10	3.03		F	#		
Uranium	mg/L	08/31/2010	N001	5 - 10	0.097		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0623 WELL Center of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	10 - 15	484		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	10 - 15	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	10 - 15	220		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	10 - 15	77		F	#	10	
Magnesium	mg/L	08/31/2010	N001	10 - 15	55		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	10 - 15	1.8		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	10 - 15	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	10 - 15	-327.3		FR	#		
pH	s.u.	08/31/2010	N001	10 - 15	7.12		F	#		
Potassium	mg/L	08/31/2010	N001	10 - 15	17		F	#	0.54	
Selenium	mg/L	08/31/2010	N001	10 - 15	0.0014		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	10 - 15	1000		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	10 - 15	5590		F	#		
Strontium	mg/L	08/31/2010	N001	10 - 15	8.1		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	10 - 15	2700		F	#	25	
Temperature	C	08/31/2010	N001	10 - 15	19.73		F	#		
Turbidity	NTU	08/31/2010	N001	10 - 15	2.59		F	#		
Uranium	mg/L	08/31/2010	N001	10 - 15	0.053		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0625 WELL Center of floodplain, well nest

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	4.5 - 9.5	420		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	4.5 - 9.5	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	4.5 - 9.5	220		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	4.5 - 9.5	79		F	#	10	
Magnesium	mg/L	08/31/2010	N001	4.5 - 9.5	50		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	4.5 - 9.5	3		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	4.5 - 9.5	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	4.5 - 9.5	-298.9		FR	#		
pH	s.u.	08/31/2010	N001	4.5 - 9.5	7.12		F	#		
Potassium	mg/L	08/31/2010	N001	4.5 - 9.5	16		F	#	0.54	
Selenium	mg/L	08/31/2010	N001	4.5 - 9.5	0.0018		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	4.5 - 9.5	1000		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	4.5 - 9.5	5621		F	#		
Strontium	mg/L	08/31/2010	N001	4.5 - 9.5	8.7		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	4.5 - 9.5	2800		F	#	25	
Temperature	C	08/31/2010	N001	4.5 - 9.5	21.95		F	#		
Turbidity	NTU	08/31/2010	N001	4.5 - 9.5	8.61		F	#		
Uranium	mg/L	08/31/2010	N001	4.5 - 9.5	0.048		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	9.5 - 14.5	250		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	9.5 - 14.5	0.14		F	#	0.1	
Calcium	mg/L	08/31/2010	N001	9.5 - 14.5	220		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	9.5 - 14.5	79		F	#	10	
Magnesium	mg/L	08/31/2010	N001	9.5 - 14.5	36		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	9.5 - 14.5	3.1		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	9.5 - 14.5	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	9.5 - 14.5	-308.8		FR	#		
pH	s.u.	08/31/2010	N001	9.5 - 14.5	7.16		F	#		
Potassium	mg/L	08/31/2010	N001	9.5 - 14.5	13		F	#	0.54	
Selenium	mg/L	08/31/2010	N001	9.5 - 14.5	0.0024		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	9.5 - 14.5	1000		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	9.5 - 14.5	5516		F	#		
Strontium	mg/L	08/31/2010	N001	9.5 - 14.5	11		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	9.5 - 14.5	2800		F	#	25	
Temperature	C	08/31/2010	N001	9.5 - 14.5	19.56		F	#		
Turbidity	NTU	08/31/2010	N001	9.5 - 14.5	0.93		F	#		
Uranium	mg/L	08/31/2010	N001	9.5 - 14.5	0.013		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	6 - 10	238		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	6 - 10	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	08/31/2010	N002	6 - 10	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	6 - 10	160		F	#	0.06	
Calcium	mg/L	08/31/2010	N002	6 - 10	160		F	#	0.024	
Chloride	mg/L	08/31/2010	N001	6 - 10	67		F	#	10	
Chloride	mg/L	08/31/2010	N002	6 - 10	66		F	#	10	
Magnesium	mg/L	08/31/2010	N001	6 - 10	22		F	#	0.065	
Magnesium	mg/L	08/31/2010	N002	6 - 10	21		F	#	0.026	
Manganese	mg/L	08/31/2010	N001	6 - 10	1.4		F	#	0.00057	
Manganese	mg/L	08/31/2010	N002	6 - 10	1.3		F	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	6 - 10	0.01	U	F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N002	6 - 10	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	6 - 10	-296.7		FR	#		
pH	s.u.	08/31/2010	N001	6 - 10	7.3		F	#		
Potassium	mg/L	08/31/2010	N001	6 - 10	12		FJ	#	0.54	
Potassium	mg/L	08/31/2010	N002	6 - 10	15		FJ	#	0.22	
Selenium	mg/L	08/31/2010	N001	6 - 10	0.00074		F	#	0.00016	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Selenium	mg/L	08/31/2010	N002	6 - 10	0.00058		F	#	0.000032	
Sodium	mg/L	08/31/2010	N001	6 - 10	780		F	#	0.033	
Sodium	mg/L	08/31/2010	N002	6 - 10	730		F	#	0.066	
Specific Conductance	umhos /cm	08/31/2010	N001	6 - 10	4475		F	#		
Strontium	mg/L	08/31/2010	N001	6 - 10	12		F	#	0.00039	
Strontium	mg/L	08/31/2010	N002	6 - 10	12		F	#	0.00016	
Sulfate	mg/L	08/31/2010	N001	6 - 10	2200		F	#	25	
Sulfate	mg/L	08/31/2010	N002	6 - 10	2200		F	#	25	
Temperature	C	08/31/2010	N001	6 - 10	21.76		F	#		
Turbidity	NTU	08/31/2010	N001	6 - 10	2.71		F	#		
Uranium	mg/L	08/31/2010	N001	6 - 10	0.0064		F	#	0.000015	
Uranium	mg/L	08/31/2010	N002	6 - 10	0.0062		F	#	0.0000029	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	5 - 10	277		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	5 - 10	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	5 - 10	240		F	#	0.06	
Chloride	mg/L	09/02/2010	N001	5 - 10	85		F	#	10	
Magnesium	mg/L	09/02/2010	N001	5 - 10	49		F	#	0.065	
Manganese	mg/L	09/02/2010	N001	5 - 10	1.2		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	5 - 10	2.6		F	#	0.02	
Oxidation Reduction Potential	mV	09/02/2010	N001	5 - 10	-317		FR	#		
pH	s.u.	09/02/2010	N001	5 - 10	7.2		F	#		
Potassium	mg/L	09/02/2010	N001	5 - 10	13		F	#	0.54	
Selenium	mg/L	09/02/2010	N001	5 - 10	0.042		F	#	0.00016	
Sodium	mg/L	09/02/2010	N001	5 - 10	960		F	#	0.033	
Specific Conductance	umhos/cm	09/02/2010	N001	5 - 10	5482		F	#		
Strontium	mg/L	09/02/2010	N001	5 - 10	13		F	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	5 - 10	2900		F	#	25	
Temperature	C	09/02/2010	N001	5 - 10	19.38		F	#		
Turbidity	NTU	09/02/2010	N001	5 - 10	1.24		F	#		
Uranium	mg/L	09/02/2010	N001	5 - 10	0.056		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0734 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	2 - 4	579		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	2 - 4	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/02/2010	N001	2 - 4	280		FQ	#	0.06	
Chloride	mg/L	09/02/2010	N001	2 - 4	160		FQ	#	20	
Magnesium	mg/L	09/02/2010	N001	2 - 4	240		FQ	#	0.065	
Manganese	mg/L	09/02/2010	N001	2 - 4	0.47		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	2 - 4	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	2 - 4	-134.2		FQR	#		
pH	s.u.	09/02/2010	N001	2 - 4	7.38		FQ	#		
Potassium	mg/L	09/02/2010	N001	2 - 4	26		FQ	#	0.54	
Selenium	mg/L	09/02/2010	N001	2 - 4	0.0032		FQ	#	0.00016	
Sodium	mg/L	09/02/2010	N001	2 - 4	1800		FQ	#	0.16	
Specific Conductance	umhos/cm	09/02/2010	N001	2 - 4	8889		FQ	#		
Strontium	mg/L	09/02/2010	N001	2 - 4	7.5		FQ	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	2 - 4	5600		FQ	#	50	
Temperature	C	09/02/2010	N001	2 - 4	21.28		FQ	#		
Turbidity	NTU	09/02/2010	N001	2 - 4	4.96		FQ	#		
Uranium	mg/L	09/02/2010	N001	2 - 4	0.076		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0735 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	3 - 8	693		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	3 - 8	15		F	#	1	
Ammonia Total as N	mg/L	09/01/2010	N002	3 - 8	15		F	#	1	
Calcium	mg/L	09/01/2010	N001	3 - 8	260		F	#	0.06	
Calcium	mg/L	09/01/2010	N002	3 - 8	270		F	#	0.06	
Chloride	mg/L	09/01/2010	N001	3 - 8	380		F	#	20	
Chloride	mg/L	09/01/2010	N002	3 - 8	380		F	#	20	
Magnesium	mg/L	09/01/2010	N001	3 - 8	760		F	#	0.065	
Magnesium	mg/L	09/01/2010	N002	3 - 8	740		F	#	0.065	
Manganese	mg/L	09/01/2010	N001	3 - 8	2		F	#	0.00057	
Manganese	mg/L	09/01/2010	N002	3 - 8	1.9		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	3 - 8	390		F	#	2	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N002	3 - 8	390		F	#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	3 - 8	3.8		FR	#		
pH	s.u.	09/01/2010	N001	3 - 8	7.05		F	#		
Potassium	mg/L	09/01/2010	N001	3 - 8	64		F	#	0.54	
Potassium	mg/L	09/01/2010	N002	3 - 8	62		F	#	0.54	
Selenium	mg/L	09/01/2010	N001	3 - 8	0.054		F	#	0.00016	

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

REPORT DATE: 12/15/2010

Location: 0735 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Selenium	mg/L	09/01/2010	N002	3 - 8	0.053		F	#	0.00016	
Sodium	mg/L	09/01/2010	N001	3 - 8	2200		F	#	0.16	
Sodium	mg/L	09/01/2010	N002	3 - 8	2100		F	#	0.16	
Specific Conductance	umhos /cm	09/01/2010	N001	3 - 8	14141		F	#		
Strontium	mg/L	09/01/2010	N001	3 - 8	6.7		F	#	0.00039	
Strontium	mg/L	09/01/2010	N002	3 - 8	6.8		F	#	0.00039	
Sulfate	mg/L	09/01/2010	N001	3 - 8	7000		F	#	50	
Sulfate	mg/L	09/01/2010	N002	3 - 8	7100		F	#	50	
Temperature	C	09/01/2010	N001	3 - 8	16.66		F	#		
Turbidity	NTU	09/01/2010	N001	3 - 8	4.05		F	#		
Uranium	mg/L	09/01/2010	N001	3 - 8	0.17		F	#	0.000015	
Uranium	mg/L	09/01/2010	N002	3 - 8	0.16		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0736 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	3 - 5	309		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	3 - 5	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	3 - 5	430		F	#	0.06	
Chloride	mg/L	09/02/2010	N001	3 - 5	100		F	#	20	
Magnesium	mg/L	09/02/2010	N001	3 - 5	110		F	#	0.065	
Manganese	mg/L	09/02/2010	N001	3 - 5	0.38		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	3 - 5	0.074		F	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	3 - 5	-168.7		FR	#		
pH	s.u.	09/02/2010	N001	3 - 5	7.36		F	#		
Potassium	mg/L	09/02/2010	N001	3 - 5	43		F	#	0.54	
Selenium	mg/L	09/02/2010	N001	3 - 5	0.0018		F	#	0.00016	
Sodium	mg/L	09/02/2010	N001	3 - 5	1300		F	#	0.16	
Specific Conductance	umhos/cm	09/02/2010	N001	3 - 5	7973		F	#		
Strontium	mg/L	09/02/2010	N001	3 - 5	6.2		F	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	3 - 5	4500		F	#	50	
Temperature	C	09/02/2010	N001	3 - 5	23.9		F	#		
Turbidity	NTU	09/02/2010	N001	3 - 5	1.3		F	#		
Uranium	mg/L	09/02/2010	N001	3 - 5	0.11		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0766 WELL Well Point

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	6.25 - 8.75	563		FQ	#		
Ammonia Total as N	mg/L	08/31/2010	N001	6.25 - 8.75	0.11		FQ	#	0.1	
Calcium	mg/L	08/31/2010	N001	6.25 - 8.75	380		FQ	#	0.06	
Chloride	mg/L	08/31/2010	N001	6.25 - 8.75	170		FQ	#	20	
Magnesium	mg/L	08/31/2010	N001	6.25 - 8.75	500		FQ	#	0.065	
Manganese	mg/L	08/31/2010	N001	6.25 - 8.75	0.15		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	6.25 - 8.75	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	6.25 - 8.75	-227.1		FQR	#		
pH	s.u.	08/31/2010	N001	6.25 - 8.75	7.31		FQ	#		
Potassium	mg/L	08/31/2010	N001	6.25 - 8.75	87		FQ	#	0.54	
Selenium	mg/L	08/31/2010	N001	6.25 - 8.75	0.00065		FQ	#	0.00016	
Sodium	mg/L	08/31/2010	N001	6.25 - 8.75	2300		FQ	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	6.25 - 8.75	12840		FQ	#		
Strontium	mg/L	08/31/2010	N001	6.25 - 8.75	6.1		FQ	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	6.25 - 8.75	8100		FQ	#	50	
Temperature	C	08/31/2010	N001	6.25 - 8.75	24.92		FQ	#		
Turbidity	NTU	08/31/2010	N001	6.25 - 8.75	4.7		FQ	#		
Uranium	mg/L	08/31/2010	N001	6.25 - 8.75	0.37		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0768 WELL Well Point

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	4.58 - 7.08	508		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	4.58 - 7.08	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	4.58 - 7.08	250		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	4.58 - 7.08	110		F	#	20	
Magnesium	mg/L	08/31/2010	N001	4.58 - 7.08	180		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	4.58 - 7.08	1.5		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	4.58 - 7.08	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	4.58 - 7.08	-146.7		FR	#		
pH	s.u.	08/31/2010	N001	4.58 - 7.08	7.12		F	#		
Potassium	mg/L	08/31/2010	N001	4.58 - 7.08	50	EN	FJ	#	0.54	
Selenium	mg/L	08/31/2010	N001	4.58 - 7.08	0.0012		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	4.58 - 7.08	1400		F	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	4.58 - 7.08	7678		F	#		
Strontium	mg/L	08/31/2010	N001	4.58 - 7.08	6.9		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	4.58 - 7.08	4300	N	FJ	#	50	
Temperature	C	08/31/2010	N001	4.58 - 7.08	23.09		F	#		
Turbidity	NTU	08/31/2010	N001	4.58 - 7.08	1.71		F	#		
Uranium	mg/L	08/31/2010	N001	4.58 - 7.08	0.16		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0779 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	7 - 9.5	843		F #		
Ammonia Total as N	mg/L	08/31/2010	N001	7 - 9.5	11		F #	0.5	
Calcium	mg/L	08/31/2010	N001	7 - 9.5	320		F #	0.06	
Chloride	mg/L	08/31/2010	N001	7 - 9.5	250		F #	20	
Magnesium	mg/L	08/31/2010	N001	7 - 9.5	770		F #	0.065	
Manganese	mg/L	08/31/2010	N001	7 - 9.5	3.3		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	7 - 9.5	2		F #	0.02	
Oxidation Reduction Potential	mV	08/31/2010	N001	7 - 9.5	-298.4		FR #		
pH	s.u.	08/31/2010	N001	7 - 9.5	7.26		F #		
Potassium	mg/L	08/31/2010	N001	7 - 9.5	81		F #	0.54	
Selenium	mg/L	08/31/2010	N001	7 - 9.5	0.024		F #	0.0016	
Sodium	mg/L	08/31/2010	N001	7 - 9.5	1600		F #	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	7 - 9.5	10783		F #		
Strontium	mg/L	08/31/2010	N001	7 - 9.5	6.7		F #	0.00039	
Sulfate	mg/L	08/31/2010	N001	7 - 9.5	6900		F #	50	
Temperature	C	08/31/2010	N001	7 - 9.5	20.38		F #		
Turbidity	NTU	08/31/2010	N001	7 - 9.5	1.16		F #		
Uranium	mg/L	08/31/2010	N001	7 - 9.5	0.9		F #	0.00015	

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

REPORT DATE: 12/15/2010

Location: 0782R WELL Island area NW of US Hwy 666 bridge.

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	4.71 - 9.46	161		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	4.71 - 9.46	0.1	U	F	#	0.1	
Calcium	mg/L	09/01/2010	N001	4.71 - 9.46	86		F	#	0.012	
Chloride	mg/L	09/01/2010	N001	4.71 - 9.46	28		F	#	4	
Magnesium	mg/L	09/01/2010	N001	4.71 - 9.46	34		F	#	0.013	
Manganese	mg/L	09/01/2010	N001	4.71 - 9.46	1.8		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	4.71 - 9.46	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	4.71 - 9.46	35.2		F	#		
pH	s.u.	09/01/2010	N001	4.71 - 9.46	7.26		F	#		
Potassium	mg/L	09/01/2010	N001	4.71 - 9.46	4.8		F	#	0.11	
Selenium	mg/L	09/01/2010	N001	4.71 - 9.46	0.00014		F	#	0.000032	
Sodium	mg/L	09/01/2010	N001	4.71 - 9.46	130		F	#	0.0066	
Specific Conductance	umhos/cm	09/01/2010	N001	4.71 - 9.46	1518		F	#		
Strontium	mg/L	09/01/2010	N001	4.71 - 9.46	1.1		F	#	0.000078	
Sulfate	mg/L	09/01/2010	N001	4.71 - 9.46	530		F	#	10	
Temperature	C	09/01/2010	N001	4.71 - 9.46	18.66		F	#		
Turbidity	NTU	09/01/2010	N001	4.71 - 9.46	3.34		F	#		
Uranium	mg/L	09/01/2010	N001	4.71 - 9.46	0.0068		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0783R WELL Island area NW of US Hwy 666 bridge.

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	4.375 - 9.375	232		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	4.375 - 9.375	0.1	U	F	#	0.1	
Calcium	mg/L	09/01/2010	N001	4.375 - 9.375	99		F	#	0.012	
Chloride	mg/L	09/01/2010	N001	4.375 - 9.375	28		F	#	4	
Magnesium	mg/L	09/01/2010	N001	4.375 - 9.375	37		F	#	0.013	
Manganese	mg/L	09/01/2010	N001	4.375 - 9.375	0.95		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	4.375 - 9.375	0.015		F	#	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	4.375 - 9.375	24.9		F	#		
pH	s.u.	09/01/2010	N001	4.375 - 9.375	7.21		F	#		
Potassium	mg/L	09/01/2010	N001	4.375 - 9.375	5.3		F	#	0.11	
Selenium	mg/L	09/01/2010	N001	4.375 - 9.375	0.00095		F	#	0.000032	
Sodium	mg/L	09/01/2010	N001	4.375 - 9.375	140		F	#	0.0066	
Specific Conductance	umhos/cm	09/01/2010	N001	4.375 - 9.375	1420		F	#		
Strontium	mg/L	09/01/2010	N001	4.375 - 9.375	1.2		F	#	0.000078	
Sulfate	mg/L	09/01/2010	N001	4.375 - 9.375	540		F	#	10	
Temperature	C	09/01/2010	N001	4.375 - 9.375	25.35		F	#		
Turbidity	NTU	09/01/2010	N001	4.375 - 9.375	8.27		F	#		
Uranium	mg/L	09/01/2010	N001	4.375 - 9.375	0.0072		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0792 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	6 - 8	1074		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	6 - 8	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	6 - 8	450		F	#	0.12	
Chloride	mg/L	08/31/2010	N001	6 - 8	320		F	#	40	
Magnesium	mg/L	08/31/2010	N001	6 - 8	720		F	#	0.13	
Manganese	mg/L	08/31/2010	N001	6 - 8	5.6		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	6 - 8	0.012		F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	6 - 8	-301.6		FR	#		
pH	s.u.	08/31/2010	N001	6 - 8	7.33		F	#		
Potassium	mg/L	08/31/2010	N001	6 - 8	130		F	#	1.1	
Selenium	mg/L	08/31/2010	N001	6 - 8	0.004		F	#	0.00032	
Sodium	mg/L	08/31/2010	N001	6 - 8	3800		F	#	0.33	
Specific Conductance	umhos/cm	08/31/2010	N001	6 - 8	18956		F	#		
Strontium	mg/L	08/31/2010	N001	6 - 8	13		F	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	6 - 8	13000		F	#	100	
Temperature	C	08/31/2010	N001	6 - 8	20.99		F	#		
Turbidity	NTU	08/31/2010	N001	6 - 8	3.24		F	#		
Uranium	mg/L	08/31/2010	N001	6 - 8	0.8		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0793 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	5.2 - 7.2	621		F #		
Ammonia Total as N	mg/L	09/02/2010	N001	5.2 - 7.2	2.3		F #	0.1	
Calcium	mg/L	09/02/2010	N001	5.2 - 7.2	220		F #	0.06	
Chloride	mg/L	09/02/2010	N001	5.2 - 7.2	160		F #	20	
Magnesium	mg/L	09/02/2010	N001	5.2 - 7.2	640		F #	0.065	
Manganese	mg/L	09/02/2010	N001	5.2 - 7.2	0.18		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	5.2 - 7.2	4		F #	0.05	
Oxidation Reduction Potential	mV	09/02/2010	N001	5.2 - 7.2	-237.5		FR #		
pH	s.u.	09/02/2010	N001	5.2 - 7.2	7.29		F #		
Potassium	mg/L	09/02/2010	N001	5.2 - 7.2	94		F #	0.54	
Selenium	mg/L	09/02/2010	N001	5.2 - 7.2	0.16		F #	0.0016	
Sodium	mg/L	09/02/2010	N001	5.2 - 7.2	1100		F #	0.033	
Specific Conductance	umhos/cm	09/02/2010	N001	5.2 - 7.2	8194		F #		
Strontium	mg/L	09/02/2010	N001	5.2 - 7.2	4.4		F #	0.00039	
Sulfate	mg/L	09/02/2010	N001	5.2 - 7.2	5100		F #	50	
Temperature	C	09/02/2010	N001	5.2 - 7.2	21.38		F #		
Turbidity	NTU	09/02/2010	N001	5.2 - 7.2	0.93		F #		
Uranium	mg/L	09/02/2010	N001	5.2 - 7.2	1		F #	0.00015	

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

REPORT DATE: 12/15/2010

Location: 0797 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	7.3 - 9.3	506		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	7.3 - 9.3	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/01/2010	N001	7.3 - 9.3	410		FQ	#	0.06	
Chloride	mg/L	09/01/2010	N001	7.3 - 9.3	280		FQ	#	20	
Magnesium	mg/L	09/01/2010	N001	7.3 - 9.3	110		FQ	#	0.065	
Manganese	mg/L	09/01/2010	N001	7.3 - 9.3	0.18		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	7.3 - 9.3	0.036		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	7.3 - 9.3	79		FQ	#		
pH	s.u.	09/01/2010	N001	7.3 - 9.3	7.08		FQ	#		
Potassium	mg/L	09/01/2010	N001	7.3 - 9.3	10		FQ	#	0.54	
Selenium	mg/L	09/01/2010	N001	7.3 - 9.3	0.00054		FQ	#	0.00016	
Sodium	mg/L	09/01/2010	N001	7.3 - 9.3	1400		FQ	#	0.16	
Specific Conductance	umhos/cm	09/01/2010	N001	7.3 - 9.3	7935		FQ	#		
Strontium	mg/L	09/01/2010	N001	7.3 - 9.3	6.9		FQ	#	0.00039	
Sulfate	mg/L	09/01/2010	N001	7.3 - 9.3	4100		FQ	#	50	
Temperature	C	09/01/2010	N001	7.3 - 9.3	21.5		FQ	#		
Turbidity	NTU	09/01/2010	N001	7.3 - 9.3	3.91		FQ	#		
Uranium	mg/L	09/01/2010	N001	7.3 - 9.3	0.032		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0798 WELL

Parameter	Units	Sample		Depth Range			Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	7.1	-	9.1	1223	F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	7.1	-	9.1	1.8	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	7.1	-	9.1	430	F	#	0.12	
Chloride	mg/L	08/31/2010	N001	7.1	-	9.1	400	F	#	40	
Magnesium	mg/L	08/31/2010	N001	7.1	-	9.1	840	F	#	0.13	
Manganese	mg/L	08/31/2010	N001	7.1	-	9.1	4.2	F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	7.1	-	9.1	0.014	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	7.1	-	9.1	-295.1	FR	#		
pH	s.u.	08/31/2010	N001	7.1	-	9.1	7.17	F	#		
Potassium	mg/L	08/31/2010	N001	7.1	-	9.1	110	F	#	1.1	
Selenium	mg/L	08/31/2010	N001	7.1	-	9.1	0.02	F	#	0.00032	
Sodium	mg/L	08/31/2010	N001	7.1	-	9.1	3600	F	#	0.33	
Specific Conductance	umhos/cm	08/31/2010	N001	7.1	-	9.1	18832	F	#		
Strontium	mg/L	08/31/2010	N001	7.1	-	9.1	10	F	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	7.1	-	9.1	13000	F	#	100	
Temperature	C	08/31/2010	N001	7.1	-	9.1	20.05	F	#		
Turbidity	NTU	08/31/2010	N001	7.1	-	9.1	1.53	F	#		
Uranium	mg/L	08/31/2010	N001	7.1	-	9.1	0.97	F	#	0.000029	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	5.6 - 15.4	241		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	5.6 - 15.4	0.1	U	F	#	0.1	
Calcium	mg/L	09/01/2010	N001	5.6 - 15.4	12		F	#	0.012	
Chloride	mg/L	09/01/2010	N001	5.6 - 15.4	16		F	#	2	
Magnesium	mg/L	09/01/2010	N001	5.6 - 15.4	2.5		F	#	0.013	
Manganese	mg/L	09/01/2010	N001	5.6 - 15.4	0.086		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	5.6 - 15.4	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	5.6 - 15.4	-11.1		F	#		
pH	s.u.	09/01/2010	N001	5.6 - 15.4	8		F	#		
Potassium	mg/L	09/01/2010	N001	5.6 - 15.4	1.6		F	#	0.11	
Selenium	mg/L	09/01/2010	N001	5.6 - 15.4	0.00017		F	#	0.000032	
Sodium	mg/L	09/01/2010	N001	5.6 - 15.4	160		F	#	0.0066	
Specific Conductance	umhos/cm	09/01/2010	N001	5.6 - 15.4	875		F	#		
Strontium	mg/L	09/01/2010	N001	5.6 - 15.4	0.18		F	#	0.000078	
Sulfate	mg/L	09/01/2010	N001	5.6 - 15.4	210		F	#	5	
Temperature	C	09/01/2010	N001	5.6 - 15.4	18.16		F	#		
Turbidity	NTU	09/01/2010	N001	5.6 - 15.4	7.28		F	#		
Uranium	mg/L	09/01/2010	N001	5.6 - 15.4	0.0038		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0853 WELL S of floodplain fence

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	10 - 15	195		F #		
Ammonia Total as N	mg/L	09/02/2010	N001	10 - 15	10		F #	1	
Calcium	mg/L	09/02/2010	N001	10 - 15	82		F #	0.012	
Chloride	mg/L	09/02/2010	N001	10 - 15	16		F #	2	
Magnesium	mg/L	09/02/2010	N001	10 - 15	27		F #	0.013	
Manganese	mg/L	09/02/2010	N001	10 - 15	0.37		F #	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	10 - 15	0.019		F #	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	10 - 15	-282.4		FR #		
pH	s.u.	09/02/2010	N001	10 - 15	7.45		F #		
Potassium	mg/L	09/02/2010	N001	10 - 15	9.9		F #	0.11	
Selenium	mg/L	09/02/2010	N001	10 - 15	0.00012		F #	0.000032	
Sodium	mg/L	09/02/2010	N001	10 - 15	71		F #	0.0066	
Specific Conductance	umhos/cm	09/02/2010	N001	10 - 15	1040		F #		
Strontium	mg/L	09/02/2010	N001	10 - 15	0.9		F #	0.000078	
Sulfate	mg/L	09/02/2010	N001	10 - 15	330		F #	5	
Temperature	C	09/02/2010	N001	10 - 15	21.5		F #		
Turbidity	NTU	09/02/2010	N001	10 - 15	1.64		F #		
Uranium	mg/L	09/02/2010	N001	10 - 15	0.037		F #	0.0000029	

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

REPORT DATE: 12/15/2010

Location: 0854 WELL NE part of floodplain

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/30/2010	N001	9.05 - 11.55	834		F	#		
Ammonia Total as N	mg/L	08/30/2010	N001	9.05 - 11.55	8.5		F	#	0.5	
Calcium	mg/L	08/30/2010	N001	9.05 - 11.55	390		F	#	0.12	
Chloride	mg/L	08/30/2010	N001	9.05 - 11.55	560		F	#	40	
Magnesium	mg/L	08/30/2010	N001	9.05 - 11.55	1500		F	#	0.13	
Manganese	mg/L	08/30/2010	N001	9.05 - 11.55	3.1		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/30/2010	N001	9.05 - 11.55	110		F	#	1	
Oxidation Reduction Potential	mV	08/30/2010	N001	9.05 - 11.55	-305.2		FR	#		
pH	s.u.	08/30/2010	N001	9.05 - 11.55	7.04		F	#		
Potassium	mg/L	08/30/2010	N001	9.05 - 11.55	110		F	#	1.1	
Selenium	mg/L	08/30/2010	N001	9.05 - 11.55	0.022		F	#	0.0016	
Sodium	mg/L	08/30/2010	N001	9.05 - 11.55	2600		F	#	0.33	
Specific Conductance	umhos/cm	08/30/2010	N001	9.05 - 11.55	17340		F	#		
Strontium	mg/L	08/30/2010	N001	9.05 - 11.55	8.8		F	#	0.00078	
Sulfate	mg/L	08/30/2010	N001	9.05 - 11.55	12000		F	#	100	
Temperature	C	08/30/2010	N001	9.05 - 11.55	22.43		F	#		
Turbidity	NTU	08/30/2010	N001	9.05 - 11.55	8.15		F	#		
Uranium	mg/L	08/30/2010	N001	9.05 - 11.55	1.8		F	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 0855 WELL NW part of floodplain

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	4.9 - 14.9	349		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	4.9 - 14.9	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	4.9 - 14.9	280		F	#	0.06	
Chloride	mg/L	09/02/2010	N001	4.9 - 14.9	100		F	#	10	
Magnesium	mg/L	09/02/2010	N001	4.9 - 14.9	66		F	#	0.065	
Manganese	mg/L	09/02/2010	N001	4.9 - 14.9	1.3		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	4.9 - 14.9	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	4.9 - 14.9	-323.5		FR	#		
pH	s.u.	09/02/2010	N001	4.9 - 14.9	7.43		F	#		
Potassium	mg/L	09/02/2010	N001	4.9 - 14.9	18		F	#	0.54	
Selenium	mg/L	09/02/2010	N001	4.9 - 14.9	0.0028		F	#	0.00016	
Sodium	mg/L	09/02/2010	N001	4.9 - 14.9	1200		F	#	0.033	
Specific Conductance	umhos/cm	09/02/2010	N001	4.9 - 14.9	6524		F	#		
Strontium	mg/L	09/02/2010	N001	4.9 - 14.9	8.9		F	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	4.9 - 14.9	3600		F	#	25	
Temperature	C	09/02/2010	N001	4.9 - 14.9	19.09		F	#		
Turbidity	NTU	09/02/2010	N001	4.9 - 14.9	6.16		F	#		
Uranium	mg/L	09/02/2010	N001	4.9 - 14.9	0.074		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0856 WELL NW part of floodplain

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	18.8 - 23.8	257		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	18.8 - 23.8	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	18.8 - 23.8	170		F	#	0.06	
Chloride	mg/L	09/02/2010	N001	18.8 - 23.8	76		F	#	10	
Magnesium	mg/L	09/02/2010	N001	18.8 - 23.8	48		F	#	0.065	
Manganese	mg/L	09/02/2010	N001	18.8 - 23.8	1.1		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	18.8 - 23.8	0.041		F	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	18.8 - 23.8	-318.9		FR	#		
pH	s.u.	09/02/2010	N001	18.8 - 23.8	7.59		F	#		
Potassium	mg/L	09/02/2010	N001	18.8 - 23.8	15		F	#	0.54	
Selenium	mg/L	09/02/2010	N001	18.8 - 23.8	0.00039		F	#	0.000065	
Sodium	mg/L	09/02/2010	N001	18.8 - 23.8	900		F	#	0.033	
Specific Conductance	umhos/cm	09/02/2010	N001	18.8 - 23.8	5016		F	#		
Strontium	mg/L	09/02/2010	N001	18.8 - 23.8	5.2		F	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	18.8 - 23.8	2600		F	#	25	
Temperature	C	09/02/2010	N001	18.8 - 23.8	16.11		F	#		
Turbidity	NTU	09/02/2010	N001	18.8 - 23.8	4.42		F	#		
Uranium	mg/L	09/02/2010	N001	18.8 - 23.8	0.044		F	#	0.000058	

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

REPORT DATE: 12/15/2010

Location: 0857 WELL Near E end of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	13.2	-	18.2	286		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	13.2	-	18.2	6.3		FQ	#	0.5	
Calcium	mg/L	09/01/2010	N001	13.2	-	18.2	85		FQ	#	0.012	
Chloride	mg/L	09/01/2010	N001	13.2	-	18.2	23		FQ	#	4	
Magnesium	mg/L	09/01/2010	N001	13.2	-	18.2	52		FQ	#	0.013	
Manganese	mg/L	09/01/2010	N001	13.2	-	18.2	0.77		FQ	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	13.2	-	18.2	0.014		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	13.2	-	18.2	-115.5		FQR	#		
pH	s.u.	09/01/2010	N001	13.2	-	18.2	7.24		FQ	#		
Potassium	mg/L	09/01/2010	N001	13.2	-	18.2	12		FQ	#	0.11	
Selenium	mg/L	09/01/2010	N001	13.2	-	18.2	0.00017		FQ	#	0.000032	
Sodium	mg/L	09/01/2010	N001	13.2	-	18.2	160		FQ	#	0.0066	
Specific Conductance	umhos/cm	09/01/2010	N001	13.2	-	18.2	2574		FQ	#		
Strontium	mg/L	09/01/2010	N001	13.2	-	18.2	0.95		FQ	#	0.000078	
Sulfate	mg/L	09/01/2010	N001	13.2	-	18.2	590		FQ	#	10	
Temperature	C	09/01/2010	N001	13.2	-	18.2	19.4		FQ	#		
Turbidity	NTU	09/01/2010	N001	13.2	-	18.2	4.22		FQ	#		
Uranium	mg/L	09/01/2010	N001	13.2	-	18.2	0.076		FQ	#	0.0000029	

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

REPORT DATE: 12/15/2010

Location: 1008 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/30/2010	N001	6.9 - 16.9	1040		F	#		
Ammonia Total as N	mg/L	08/30/2010	N001	6.9 - 16.9	21		F	#	1	
Calcium	mg/L	08/30/2010	N001	6.9 - 16.9	400		F	#	0.12	
Chloride	mg/L	08/30/2010	N001	6.9 - 16.9	850		F	#	40	
Magnesium	mg/L	08/30/2010	N001	6.9 - 16.9	2300		F	#	0.13	
Manganese	mg/L	08/30/2010	N001	6.9 - 16.9	8.2		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/30/2010	N001	6.9 - 16.9	130		F	#	1	
Oxidation Reduction Potential	mV	08/30/2010	N001	6.9 - 16.9	-277.5		FR	#		
pH	s.u.	08/30/2010	N001	6.9 - 16.9	6.86		F	#		
Potassium	mg/L	08/30/2010	N001	6.9 - 16.9	160		F	#	1.1	
Selenium	mg/L	08/30/2010	N001	6.9 - 16.9	0.021		F	#	0.0016	
Sodium	mg/L	08/30/2010	N001	6.9 - 16.9	3900		F	#	0.33	
Specific Conductance	umhos/cm	08/30/2010	N001	6.9 - 16.9	25023		F	#		
Strontium	mg/L	08/30/2010	N001	6.9 - 16.9	12		F	#	0.00078	
Sulfate	mg/L	08/30/2010	N001	6.9 - 16.9	18000		F	#	100	
Temperature	C	08/30/2010	N001	6.9 - 16.9	19.09		F	#		
Turbidity	NTU	08/30/2010	N001	6.9 - 16.9	1.03		F	#		
Uranium	mg/L	08/30/2010	N001	6.9 - 16.9	3.1		F	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1009 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	7.4 - 17.4	338		F #		
Ammonia Total as N	mg/L	09/02/2010	N001	7.4 - 17.4	14		F #	1	
Calcium	mg/L	09/02/2010	N001	7.4 - 17.4	480		F #	0.024	
Chloride	mg/L	09/02/2010	N001	7.4 - 17.4	52		F #	10	
Magnesium	mg/L	09/02/2010	N001	7.4 - 17.4	250		F #	0.026	
Manganese	mg/L	09/02/2010	N001	7.4 - 17.4	0.49		F #	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	7.4 - 17.4	0.027		F #	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	7.4 - 17.4	-270.6		FR #		
pH	s.u.	09/02/2010	N001	7.4 - 17.4	7.04		F #		
Potassium	mg/L	09/02/2010	N001	7.4 - 17.4	34		F #	0.22	
Selenium	mg/L	09/02/2010	N001	7.4 - 17.4	0.13		F #	0.0016	
Sodium	mg/L	09/02/2010	N001	7.4 - 17.4	340		F #	0.013	
Specific Conductance	umhos/cm	09/02/2010	N001	7.4 - 17.4	4506		F #		
Strontium	mg/L	09/02/2010	N001	7.4 - 17.4	4.5		F #	0.00016	
Sulfate	mg/L	09/02/2010	N001	7.4 - 17.4	2800		F #	25	
Temperature	C	09/02/2010	N001	7.4 - 17.4	20.56		F #		
Turbidity	NTU	09/02/2010	N001	7.4 - 17.4	1.03		F #		
Uranium	mg/L	09/02/2010	N001	7.4 - 17.4	0.28		F #	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1089 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Ammonia Total as N	mg/L	08/30/2010	N001	4.8 - 14.8	0.56		#	0.1	
Calcium	mg/L	08/30/2010	N001	4.8 - 14.8	350		#	0.06	
Chloride	mg/L	08/30/2010	N001	4.8 - 14.8	190		#	20	
Magnesium	mg/L	08/30/2010	N001	4.8 - 14.8	450		#	0.065	
Manganese	mg/L	08/30/2010	N001	4.8 - 14.8	1.1		#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/30/2010	N001	4.8 - 14.8	5.9		#	0.1	
Oxidation Reduction Potential	mV	08/30/2010	N001	4.8 - 14.8	-172.8		R #		
pH	s.u.	08/30/2010	N001	4.8 - 14.8	7.11		#		
Potassium	mg/L	08/30/2010	N001	4.8 - 14.8	69		#	0.54	
Selenium	mg/L	08/30/2010	N001	4.8 - 14.8	0.015		#	0.00032	
Sodium	mg/L	08/30/2010	N001	4.8 - 14.8	1600		#	0.16	
Specific Conductance	umhos/cm	08/30/2010	N001	4.8 - 14.8	10950		#		
Strontium	mg/L	08/30/2010	N001	4.8 - 14.8	5.5		#	0.00039	
Sulfate	mg/L	08/30/2010	N001	4.8 - 14.8	6500		#	50	
Temperature	C	08/30/2010	N001	4.8 - 14.8	21.63		#		
Turbidity	NTU	08/30/2010	N001	4.8 - 14.8	1.12		#		
Uranium	mg/L	08/30/2010	N001	4.8 - 14.8	0.55		#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 1104 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/30/2010	N001	-	703		#		
Ammonia Total as N	mg/L	08/30/2010	N001	-	1.6		#	0.1	
Calcium	mg/L	08/30/2010	N001	-	370		#	0.06	
Chloride	mg/L	08/30/2010	N001	-	380		#	20	
Magnesium	mg/L	08/30/2010	N001	-	1000		#	0.065	
Manganese	mg/L	08/30/2010	N001	-	1.3		#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/30/2010	N001	-	57		#	0.5	
Oxidation Reduction Potential	mV	08/30/2010	N001	-	-142.1	R	#		
pH	s.u.	08/30/2010	N001	-	7.02		#		
Potassium	mg/L	08/30/2010	N001	-	92		#	0.54	
Selenium	mg/L	08/30/2010	N001	-	0.02		#	0.0016	
Sodium	mg/L	08/30/2010	N001	-	1900		#	0.16	
Specific Conductance	umhos/cm	08/30/2010	N001	-	18760		#		
Strontium	mg/L	08/30/2010	N001	-	7.1		#	0.00039	
Sulfate	mg/L	08/30/2010	N001	-	8900		#	50	
Temperature	C	08/30/2010	N001	-	22.4		#		
Turbidity	NTU	08/30/2010	N001	-	1.92		#		
Uranium	mg/L	08/30/2010	N001	-	1.2		#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1105 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	4.5 - 14.5	820		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	4.5 - 14.5	4.8		FJ	#	0.1	
Ammonia Total as N	mg/L	09/02/2010	N002	4.5 - 14.5	6.7		FJ	#	0.5	
Calcium	mg/L	09/02/2010	N001	4.5 - 14.5	490		F	#	0.06	
Calcium	mg/L	09/02/2010	N002	4.5 - 14.5	490		F	#	0.06	
Chloride	mg/L	09/02/2010	N001	4.5 - 14.5	370		F	#	20	
Chloride	mg/L	09/02/2010	N002	4.5 - 14.5	380		F	#	20	
Magnesium	mg/L	09/02/2010	N001	4.5 - 14.5	1400		F	#	0.065	
Magnesium	mg/L	09/02/2010	N002	4.5 - 14.5	1400		F	#	0.065	
Manganese	mg/L	09/02/2010	N001	4.5 - 14.5	3		F	#	0.00057	
Manganese	mg/L	09/02/2010	N002	4.5 - 14.5	3		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	4.5 - 14.5	220		F	#	2	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N002	4.5 - 14.5	220		FJ	#	2	
Oxidation Reduction Potential	mV	09/02/2010	N001	4.5 - 14.5	-229.2		FR	#		
pH	s.u.	09/02/2010	N001	4.5 - 14.5	7.02		F	#		
Potassium	mg/L	09/02/2010	N001	4.5 - 14.5	120		F	#	0.54	
Potassium	mg/L	09/02/2010	N002	4.5 - 14.5	120		F	#	0.54	
Selenium	mg/L	09/02/2010	N001	4.5 - 14.5	0.095		F	#	0.0016	

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

REPORT DATE: 12/15/2010

Location: 1105 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Selenium	mg/L	09/02/2010	N002	4.5 - 14.5	0.095		F	#	0.0016	
Sodium	mg/L	09/02/2010	N001	4.5 - 14.5	2000		F	#	0.16	
Sodium	mg/L	09/02/2010	N002	4.5 - 14.5	2000		F	#	0.16	
Specific Conductance	umhos /cm	09/02/2010	N001	4.5 - 14.5	15618		F	#		
Strontium	mg/L	09/02/2010	N001	4.5 - 14.5	10		F	#	0.00039	
Strontium	mg/L	09/02/2010	N002	4.5 - 14.5	10		F	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	4.5 - 14.5	9900		F	#	100	
Sulfate	mg/L	09/02/2010	N002	4.5 - 14.5	9800		F	#	100	
Temperature	C	09/02/2010	N001	4.5 - 14.5	19.23		F	#		
Turbidity	NTU	09/02/2010	N001	4.5 - 14.5	2.92		F	#		
Uranium	mg/L	09/02/2010	N001	4.5 - 14.5	1.7		F	#	0.00015	
Uranium	mg/L	09/02/2010	N002	4.5 - 14.5	1.6		F	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1111 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	7 - 12	1208		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	7 - 12	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	7 - 12	410		F	#	0.12	
Chloride	mg/L	09/02/2010	N001	7 - 12	440		F	#	20	
Magnesium	mg/L	09/02/2010	N001	7 - 12	1100		F	#	0.13	
Manganese	mg/L	09/02/2010	N001	7 - 12	0.58		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	7 - 12	16		F	#	0.2	
Oxidation Reduction Potential	mV	09/02/2010	N001	7 - 12	-241.3		FR	#		
pH	s.u.	09/02/2010	N001	7 - 12	6.95		F	#		
Potassium	mg/L	09/02/2010	N001	7 - 12	69		F	#	1.1	
Selenium	mg/L	09/02/2010	N001	7 - 12	0.4		F	#	0.0016	
Sodium	mg/L	09/02/2010	N001	7 - 12	2200		F	#	0.066	
Specific Conductance	umhos/cm	09/02/2010	N001	7 - 12	14358		F	#		
Strontium	mg/L	09/02/2010	N001	7 - 12	12		F	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	7 - 12	9400		F	#	50	
Temperature	C	09/02/2010	N001	7 - 12	20.93		F	#		
Turbidity	NTU	09/02/2010	N001	7 - 12	2.24		F	#		
Uranium	mg/L	09/02/2010	N001	7 - 12	0.89		F	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1112 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	7 - 12	598		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	7 - 12	91		F #	5	
Calcium	mg/L	09/01/2010	N001	7 - 12	440		F #	0.06	
Chloride	mg/L	09/01/2010	N001	7 - 12	350		F #	20	
Magnesium	mg/L	09/01/2010	N001	7 - 12	1100		F #	0.065	
Manganese	mg/L	09/01/2010	N001	7 - 12	2.5		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	7 - 12	230		F #	2	
Oxidation Reduction Potential	mV	09/01/2010	N001	7 - 12	-107		FR #		
pH	s.u.	09/01/2010	N001	7 - 12	7.01		F #		
Potassium	mg/L	09/01/2010	N001	7 - 12	150		F #	0.54	
Selenium	mg/L	09/01/2010	N001	7 - 12	0.5		F #	0.0032	
Sodium	mg/L	09/01/2010	N001	7 - 12	1700		F #	0.16	
Specific Conductance	umhos/cm	09/01/2010	N001	7 - 12	14012		F #		
Strontium	mg/L	09/01/2010	N001	7 - 12	7.8		F #	0.00039	
Sulfate	mg/L	09/01/2010	N001	7 - 12	8600		F #	50	
Temperature	C	09/01/2010	N001	7 - 12	21.73		F #		
Turbidity	NTU	09/01/2010	N001	7 - 12	0.68		F #		
Uranium	mg/L	09/01/2010	N001	7 - 12	1.2		F #	0.00029	

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

REPORT DATE: 12/15/2010

Location: 1113 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	7 - 12	515		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	7 - 12	10		F #	0.5	
Calcium	mg/L	09/01/2010	N001	7 - 12	400		F #	0.06	
Chloride	mg/L	09/01/2010	N001	7 - 12	280		F #	20	
Magnesium	mg/L	09/01/2010	N001	7 - 12	1200		F #	0.065	
Manganese	mg/L	09/01/2010	N001	7 - 12	0.59		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	7 - 12	380		F #	2	
Oxidation Reduction Potential	mV	09/01/2010	N001	7 - 12	-102.6		FR #		
pH	s.u.	09/01/2010	N001	7 - 12	7.24		F #		
Potassium	mg/L	09/01/2010	N001	7 - 12	220		F #	0.54	
Selenium	mg/L	09/01/2010	N001	7 - 12	0.32		F #	0.0032	
Sodium	mg/L	09/01/2010	N001	7 - 12	1500		F #	0.16	
Specific Conductance	umhos/cm	09/01/2010	N001	7 - 12	14770		F #		
Strontium	mg/L	09/01/2010	N001	7 - 12	8.6		F #	0.00039	
Sulfate	mg/L	09/01/2010	N001	7 - 12	8100		F #	50	
Temperature	C	09/01/2010	N001	7 - 12	22.93		F #		
Turbidity	NTU	09/01/2010	N001	7 - 12	8.12		F #		
Uranium	mg/L	09/01/2010	N001	7 - 12	1.4		F #	0.00029	

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

REPORT DATE: 12/15/2010

Location: 1114 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	7 - 12	576		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	7 - 12	440		F #	20	
Calcium	mg/L	09/01/2010	N001	7 - 12	160		F #	0.06	
Chloride	mg/L	09/01/2010	N001	7 - 12	140		F #	10	
Magnesium	mg/L	09/01/2010	N001	7 - 12	380		F #	0.065	
Manganese	mg/L	09/01/2010	N001	7 - 12	2.3		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	7 - 12	100		F #	1	
Oxidation Reduction Potential	mV	09/01/2010	N001	7 - 12	-61.3		FR #		
pH	s.u.	09/01/2010	N001	7 - 12	7.08		F #		
Potassium	mg/L	09/01/2010	N001	7 - 12	84		F #	0.54	
Selenium	mg/L	09/01/2010	N001	7 - 12	0.012		F #	0.00032	
Sodium	mg/L	09/01/2010	N001	7 - 12	530		F #	0.033	
Specific Conductance	umhos/cm	09/01/2010	N001	7 - 12	6326		F #		
Strontium	mg/L	09/01/2010	N001	7 - 12	3.1		F #	0.00039	
Sulfate	mg/L	09/01/2010	N001	7 - 12	2800		F #	25	
Temperature	C	09/01/2010	N001	7 - 12	21.89		F #		
Turbidity	NTU	09/01/2010	N001	7 - 12	1.75		F #		
Uranium	mg/L	09/01/2010	N001	7 - 12	0.45		F #	0.000029	

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

REPORT DATE: 12/15/2010

Location: 1115 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	7 - 12	708		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	7 - 12	410		F #	20	
Calcium	mg/L	09/01/2010	N001	7 - 12	260		F #	0.06	
Chloride	mg/L	09/01/2010	N001	7 - 12	160		F #	20	
Magnesium	mg/L	09/01/2010	N001	7 - 12	660		F #	0.065	
Manganese	mg/L	09/01/2010	N001	7 - 12	1.7		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	7 - 12	160		F #	1	
Oxidation Reduction Potential	mV	09/01/2010	N001	7 - 12	-68.9		FR #		
pH	s.u.	09/01/2010	N001	7 - 12	6.86		F #		
Potassium	mg/L	09/01/2010	N001	7 - 12	95		F #	0.54	
Selenium	mg/L	09/01/2010	N001	7 - 12	0.024		F #	0.0016	
Sodium	mg/L	09/01/2010	N001	7 - 12	710		F #	0.033	
Specific Conductance	umhos/cm	09/01/2010	N001	7 - 12	8759		F #		
Strontium	mg/L	09/01/2010	N001	7 - 12	4.4		F #	0.00039	
Sulfate	mg/L	09/01/2010	N001	7 - 12	4300		F #	50	
Temperature	C	09/01/2010	N001	7 - 12	20.72		F #		
Turbidity	NTU	09/01/2010	N001	7 - 12	2.42		F #		
Uranium	mg/L	09/01/2010	N001	7 - 12	0.66		F #	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1117 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	7 - 12	137		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	7 - 12	0.1	U	F	#	0.1	
Calcium	mg/L	09/01/2010	N001	7 - 12	53		F	#	0.012	
Chloride	mg/L	09/01/2010	N001	7 - 12	9.6		F	#	1	
Magnesium	mg/L	09/01/2010	N001	7 - 12	9		F	#	0.013	
Manganese	mg/L	09/01/2010	N001	7 - 12	0.62		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	7 - 12	0.022		F	#	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	7 - 12	-83.7		FR	#		
pH	s.u.	09/01/2010	N001	7 - 12	7.56		F	#		
Potassium	mg/L	09/01/2010	N001	7 - 12	2.1		F	#	0.11	
Selenium	mg/L	09/01/2010	N001	7 - 12	0.00019		F	#	0.000032	
Sodium	mg/L	09/01/2010	N001	7 - 12	28		F	#	0.0066	
Specific Conductance	umhos/cm	09/01/2010	N001	7 - 12	480		F	#		
Strontium	mg/L	09/01/2010	N001	7 - 12	0.55		F	#	0.000078	
Sulfate	mg/L	09/01/2010	N001	7 - 12	97		F	#	2.5	
Temperature	C	09/01/2010	N001	7 - 12	19.81		F	#		
Turbidity	NTU	09/01/2010	N001	7 - 12	4.2		F	#		
Uranium	mg/L	09/01/2010	N001	7 - 12	0.0038		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 1128 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	6.81 - 11.81	987		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	6.81 - 11.81	430		F	#	20	
Calcium	mg/L	09/01/2010	N001	6.81 - 11.81	460		F	#	0.12	
Chloride	mg/L	09/01/2010	N001	6.81 - 11.81	380		F	#	40	
Magnesium	mg/L	09/01/2010	N001	6.81 - 11.81	1700		F	#	0.13	
Manganese	mg/L	09/01/2010	N001	6.81 - 11.81	4.3		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	6.81 - 11.81	560		F	#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	6.81 - 11.81	-16.7		FR	#		
pH	s.u.	09/01/2010	N001	6.81 - 11.81	6.7		F	#		
Potassium	mg/L	09/01/2010	N001	6.81 - 11.81	190	E	F	#	1.1	
Selenium	mg/L	09/01/2010	N001	6.81 - 11.81	0.025		F	#	0.00065	
Sodium	mg/L	09/01/2010	N001	6.81 - 11.81	1600		F	#	0.066	
Specific Conductance	umhos/cm	09/01/2010	N001	6.81 - 11.81	17310		F	#		
Strontium	mg/L	09/01/2010	N001	6.81 - 11.81	9.4		F	#	0.00078	
Sulfate	mg/L	09/01/2010	N001	6.81 - 11.81	10000		F	#	100	
Temperature	C	09/01/2010	N001	6.81 - 11.81	20.11		F	#		
Turbidity	NTU	09/01/2010	N001	6.81 - 11.81	3.63		F	#		
Uranium	mg/L	09/01/2010	N001	6.81 - 11.81	1.6		F	#	0.000058	

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

REPORT DATE: 12/15/2010

Location: 1132 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	6.07 - 11.07	168		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	6.07 - 11.07	0.88		F #	0.1	
Calcium	mg/L	09/01/2010	N001	6.07 - 11.07	48		F #	0.012	
Chloride	mg/L	09/01/2010	N001	6.07 - 11.07	11		F #	1	
Magnesium	mg/L	09/01/2010	N001	6.07 - 11.07	15		F #	0.013	
Manganese	mg/L	09/01/2010	N001	6.07 - 11.07	0.35		F #	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	6.07 - 11.07	0.02		F #	0.01	
Oxidation Reduction Potential	mV	09/01/2010	N001	6.07 - 11.07	-135.8		FR #		
pH	s.u.	09/01/2010	N001	6.07 - 11.07	7.56		F #		
Potassium	mg/L	09/01/2010	N001	6.07 - 11.07	2.7		F #	0.11	
Selenium	mg/L	09/01/2010	N001	6.07 - 11.07	0.00035		F #	0.000032	
Sodium	mg/L	09/01/2010	N001	6.07 - 11.07	35		F #	0.0066	
Specific Conductance	umhos/cm	09/01/2010	N001	6.07 - 11.07	553		F #		
Strontium	mg/L	09/01/2010	N001	6.07 - 11.07	0.57		F #	0.000078	
Sulfate	mg/L	09/01/2010	N001	6.07 - 11.07	120		F #	2.5	
Temperature	C	09/01/2010	N001	6.07 - 11.07	21.04		F #		
Turbidity	NTU	09/01/2010	N001	6.07 - 11.07	0.85		F #		
Uranium	mg/L	09/01/2010	N001	6.07 - 11.07	0.011		F #	0.000029	

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

REPORT DATE: 12/15/2010

Location: 1135 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	0001	6.39 - 11.39	410		F	#		
Ammonia Total as N	mg/L	08/31/2010	0001	6.39 - 11.39	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	0001	6.39 - 11.39	430		F	#	0.06	
Chloride	mg/L	08/31/2010	0001	6.39 - 11.39	130		F	#	20	
Magnesium	mg/L	08/31/2010	0001	6.39 - 11.39	400		F	#	0.065	
Manganese	mg/L	08/31/2010	0001	6.39 - 11.39	3.2		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	6.39 - 11.39	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	6.39 - 11.39	-307.8		FR	#		
pH	s.u.	08/31/2010	N001	6.39 - 11.39	7.11		F	#		
Potassium	mg/L	08/31/2010	0001	6.39 - 11.39	47		F	#	0.54	
Selenium	mg/L	08/31/2010	0001	6.39 - 11.39	0.00059		F	#	0.00016	
Sodium	mg/L	08/31/2010	0001	6.39 - 11.39	1700		F	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	6.39 - 11.39	10391		F	#		
Strontium	mg/L	08/31/2010	0001	6.39 - 11.39	6		F	#	0.00039	
Sulfate	mg/L	08/31/2010	0001	6.39 - 11.39	6100		F	#	50	
Temperature	C	08/31/2010	N001	6.39 - 11.39	18.25		F	#		
Turbidity	NTU	08/31/2010	N001	6.39 - 11.39	95.2		F	#		
Uranium	mg/L	08/31/2010	0001	6.39 - 11.39	0.22		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1136 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	6.29 - 11.29	208		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	6.29 - 11.29	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	6.29 - 11.29	97		F	#	0.012	
Chloride	mg/L	08/31/2010	N001	6.29 - 11.29	18		F	#	2	
Magnesium	mg/L	08/31/2010	N001	6.29 - 11.29	24		F	#	0.013	
Manganese	mg/L	08/31/2010	N001	6.29 - 11.29	1		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	6.29 - 11.29	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	6.29 - 11.29	-313.7		FR	#		
pH	s.u.	08/31/2010	N001	6.29 - 11.29	7.35		F	#		
Potassium	mg/L	08/31/2010	N001	6.29 - 11.29	3.3		F	#	0.11	
Selenium	mg/L	08/31/2010	N001	6.29 - 11.29	0.000068	B	UF	#	0.000032	
Sodium	mg/L	08/31/2010	N001	6.29 - 11.29	64		F	#	0.0066	
Specific Conductance	umhos/cm	08/31/2010	N001	6.29 - 11.29	955		F	#		
Strontium	mg/L	08/31/2010	N001	6.29 - 11.29	1		F	#	0.000078	
Sulfate	mg/L	08/31/2010	N001	6.29 - 11.29	310		F	#	5	
Temperature	C	08/31/2010	N001	6.29 - 11.29	17.38		F	#		
Turbidity	NTU	08/31/2010	N001	6.29 - 11.29	1.25		F	#		
Uranium	mg/L	08/31/2010	N001	6.29 - 11.29	0.0046		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 1137 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	9.4 - 14.4	322		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	9.4 - 14.4	0.54		F	#	0.1	
Calcium	mg/L	08/31/2010	N001	9.4 - 14.4	140		F	#	0.024	
Chloride	mg/L	08/31/2010	N001	9.4 - 14.4	73		F	#	10	
Magnesium	mg/L	08/31/2010	N001	9.4 - 14.4	260		F	#	0.026	
Manganese	mg/L	08/31/2010	N001	9.4 - 14.4	1.3		F	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	9.4 - 14.4	6.5		F	#	0.1	
Oxidation Reduction Potential	mV	08/31/2010	N001	9.4 - 14.4	-132.9		FR	#		
pH	s.u.	08/31/2010	N001	9.4 - 14.4	7.38		F	#		
Potassium	mg/L	08/31/2010	N001	9.4 - 14.4	20		F	#	0.22	
Selenium	mg/L	08/31/2010	N001	9.4 - 14.4	0.0029		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	9.4 - 14.4	570		F	#	0.066	
Specific Conductance	umhos/cm	08/31/2010	N001	9.4 - 14.4	4628		F	#		
Strontium	mg/L	08/31/2010	N001	9.4 - 14.4	1.9		F	#	0.00016	
Sulfate	mg/L	08/31/2010	N001	9.4 - 14.4	2500		F	#	25	
Temperature	C	08/31/2010	N001	9.4 - 14.4	16.41		F	#		
Turbidity	NTU	08/31/2010	N001	9.4 - 14.4	1.96		F	#		
Uranium	mg/L	08/31/2010	N001	9.4 - 14.4	0.28		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1138 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	8.09 - 13.09	300		F #		
Ammonia Total as N	mg/L	08/31/2010	N001	8.09 - 13.09	0.3		F #	0.1	
Calcium	mg/L	08/31/2010	N001	8.09 - 13.09	110		F #	0.012	
Chloride	mg/L	08/31/2010	N001	8.09 - 13.09	58		F #	10	
Magnesium	mg/L	08/31/2010	N001	8.09 - 13.09	120		F #	0.013	
Manganese	mg/L	08/31/2010	N001	8.09 - 13.09	0.56		F #	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	8.09 - 13.09	5.8		F #	0.1	
Oxidation Reduction Potential	mV	08/31/2010	N001	8.09 - 13.09	-112.6		FR #		
pH	s.u.	08/31/2010	N001	8.09 - 13.09	7.55		F #		
Potassium	mg/L	08/31/2010	N001	8.09 - 13.09	21		F #	0.11	
Selenium	mg/L	08/31/2010	N001	8.09 - 13.09	0.0018		F #	0.00016	
Sodium	mg/L	08/31/2010	N001	8.09 - 13.09	490		F #	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	8.09 - 13.09	3528		F #		
Strontium	mg/L	08/31/2010	N001	8.09 - 13.09	1.1		F #	0.000078	
Sulfate	mg/L	08/31/2010	N001	8.09 - 13.09	1700		F #	25	
Temperature	C	08/31/2010	N001	8.09 - 13.09	15.04		F #		
Turbidity	NTU	08/31/2010	N001	8.09 - 13.09	5.79		F #		
Uranium	mg/L	08/31/2010	N001	8.09 - 13.09	0.16		F #	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1139 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	6.19 - 11.19	374		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	6.19 - 11.19	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	6.19 - 11.19	160		F	#	0.012	
Chloride	mg/L	08/31/2010	N001	6.19 - 11.19	48		F	#	10	
Magnesium	mg/L	08/31/2010	N001	6.19 - 11.19	140		F	#	0.013	
Manganese	mg/L	08/31/2010	N001	6.19 - 11.19	0.083		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	6.19 - 11.19	3.2		F	#	0.1	
Oxidation Reduction Potential	mV	08/31/2010	N001	6.19 - 11.19	-63.7		FR	#		
pH	s.u.	08/31/2010	N001	6.19 - 11.19	7.28		F	#		
Potassium	mg/L	08/31/2010	N001	6.19 - 11.19	20		F	#	0.11	
Selenium	mg/L	08/31/2010	N001	6.19 - 11.19	0.0065		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	6.19 - 11.19	330		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	6.19 - 11.19	2947		F	#		
Strontium	mg/L	08/31/2010	N001	6.19 - 11.19	1.8		F	#	0.000078	
Sulfate	mg/L	08/31/2010	N001	6.19 - 11.19	1400		F	#	25	
Temperature	C	08/31/2010	N001	6.19 - 11.19	19.03		F	#		
Turbidity	NTU	08/31/2010	N001	6.19 - 11.19	4.34		F	#		
Uranium	mg/L	08/31/2010	N001	6.19 - 11.19	0.13		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1140 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	7.6 - 12.6	511		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	7.6 - 12.6	23		F	#	1	
Calcium	mg/L	09/02/2010	N001	7.6 - 12.6	450		F	#	0.06	
Chloride	mg/L	09/02/2010	N001	7.6 - 12.6	230		F	#	20	
Magnesium	mg/L	09/02/2010	N001	7.6 - 12.6	1000		F	#	0.065	
Manganese	mg/L	09/02/2010	N001	7.6 - 12.6	2.8		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	7.6 - 12.6	130		FJ	#	1	
Oxidation Reduction Potential	mV	09/02/2010	N001	7.6 - 12.6	-88.1		FR	#		
pH	s.u.	09/02/2010	N001	7.6 - 12.6	7		F	#		
Potassium	mg/L	09/02/2010	N001	7.6 - 12.6	100		F	#	0.54	
Selenium	mg/L	09/02/2010	N001	7.6 - 12.6	0.14		F	#	0.0032	
Sodium	mg/L	09/02/2010	N001	7.6 - 12.6	1300		F	#	0.16	
Specific Conductance	umhos/cm	09/02/2010	N001	7.6 - 12.6	11380		F	#		
Strontium	mg/L	09/02/2010	N001	7.6 - 12.6	6.6		F	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	7.6 - 12.6	7400		F	#	50	
Temperature	C	09/02/2010	N001	7.6 - 12.6	20.48		F	#		
Turbidity	NTU	09/02/2010	N001	7.6 - 12.6	2.83		F	#		
Uranium	mg/L	09/02/2010	N001	7.6 - 12.6	1.2		F	#	0.00029	

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

REPORT DATE: 12/15/2010

Location: 1141 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	5.6 - 10.6	477		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	5.6 - 10.6	15		F #	1	
Calcium	mg/L	09/01/2010	N001	5.6 - 10.6	520		F #	0.06	
Chloride	mg/L	09/01/2010	N001	5.6 - 10.6	140		F #	10	
Magnesium	mg/L	09/01/2010	N001	5.6 - 10.6	700		F #	0.065	
Manganese	mg/L	09/01/2010	N001	5.6 - 10.6	2.1		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	5.6 - 10.6	39		F #	1	
Oxidation Reduction Potential	mV	09/01/2010	N001	5.6 - 10.6	-127.5		FR #		
pH	s.u.	09/01/2010	N001	5.6 - 10.6	7.05		F #		
Potassium	mg/L	09/01/2010	N001	5.6 - 10.6	72		F #	0.54	
Selenium	mg/L	09/01/2010	N001	5.6 - 10.6	0.19		F #	0.0032	
Sodium	mg/L	09/01/2010	N001	5.6 - 10.6	740		F #	0.033	
Specific Conductance	umhos/cm	09/01/2010	N001	5.6 - 10.6	8148		F #		
Strontium	mg/L	09/01/2010	N001	5.6 - 10.6	6.1		F #	0.00039	
Sulfate	mg/L	09/01/2010	N001	5.6 - 10.6	5200		F #	50	
Temperature	C	09/01/2010	N001	5.6 - 10.6	21.21		F #		
Turbidity	NTU	09/01/2010	N001	5.6 - 10.6	6.56		F #		
Uranium	mg/L	09/01/2010	N001	5.6 - 10.6	1.1		F #	0.00029	

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

REPORT DATE: 12/15/2010

Location: 1142 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	9 - 14	172		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	9 - 14	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	9 - 14	62		F	#	0.012	
Chloride	mg/L	09/02/2010	N001	9 - 14	12		F	#	1	
Magnesium	mg/L	09/02/2010	N001	9 - 14	12		F	#	0.013	
Manganese	mg/L	09/02/2010	N001	9 - 14	0.33		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	9 - 14	0.077		F	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	9 - 14	-264.9		FR	#		
pH	s.u.	09/02/2010	N001	9 - 14	7.59		F	#		
Potassium	mg/L	09/02/2010	N001	9 - 14	2.3		F	#	0.11	
Selenium	mg/L	09/02/2010	N001	9 - 14	0.00055		F	#	0.000032	
Sodium	mg/L	09/02/2010	N001	9 - 14	32		F	#	0.0066	
Specific Conductance	umhos/cm	09/02/2010	N001	9 - 14	552		F	#		
Strontium	mg/L	09/02/2010	N001	9 - 14	0.66		F	#	0.000078	
Sulfate	mg/L	09/02/2010	N001	9 - 14	130		F	#	2.5	
Temperature	C	09/02/2010	N001	9 - 14	16.07		F	#		
Turbidity	NTU	09/02/2010	N001	9 - 14	1.01		F	#		
Uranium	mg/L	09/02/2010	N001	9 - 14	0.0042		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 1143 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	8.3	-	13.3	256		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	8.3	-	13.3	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	8.3	-	13.3	220		F	#	0.024	
Chloride	mg/L	09/02/2010	N001	8.3	-	13.3	76		F	#	10	
Magnesium	mg/L	09/02/2010	N001	8.3	-	13.3	72		F	#	0.026	
Manganese	mg/L	09/02/2010	N001	8.3	-	13.3	0.89		F	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	8.3	-	13.3	0.078		F	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	8.3	-	13.3	-191.2		FR	#		
pH	s.u.	09/02/2010	N001	8.3	-	13.3	7.49		F	#		
Potassium	mg/L	09/02/2010	N001	8.3	-	13.3	20		F	#	0.22	
Selenium	mg/L	09/02/2010	N001	8.3	-	13.3	0.00025		F	#	0.000032	
Sodium	mg/L	09/02/2010	N001	8.3	-	13.3	840		F	#	0.066	
Specific Conductance	umhos /cm	09/02/2010	N001	8.3	-	13.3	5197		F	#		
Strontium	mg/L	09/02/2010	N001	8.3	-	13.3	2.4		F	#	0.00016	
Sulfate	mg/L	09/02/2010	N001	8.3	-	13.3	2800		F	#	25	
Temperature	C	09/02/2010	N001	8.3	-	13.3	17.7		F	#		
Turbidity	NTU	09/02/2010	N001	8.3	-	13.3	3.92		F	#		
Uranium	mg/L	09/02/2010	N001	8.3	-	13.3	0.056		F	#	0.0000029	

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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Groundwater Quality Data Terrace Locations

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

REPORT DATE: 12/15/2010

Location: 0600 WELL Just N of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	29 - 48.8	1320		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	29 - 48.8	26		FQ	#	2	
Calcium	mg/L	09/02/2010	N001	29 - 48.8	280		FQ	#	0.12	
Chloride	mg/L	09/02/2010	N001	29 - 48.8	1400		FQ	#	40	
Magnesium	mg/L	09/02/2010	N001	29 - 48.8	280		FQ	#	0.13	
Manganese	mg/L	09/02/2010	N001	29 - 48.8	0.25		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	29 - 48.8	83		FQ	#	1	
Oxidation Reduction Potential	mV	09/02/2010	N001	29 - 48.8	-275		FQR	#		
pH	s.u.	09/02/2010	N001	29 - 48.8	6.7		FQ	#		
Potassium	mg/L	09/02/2010	N001	29 - 48.8	56		FQJ	#	1.1	
Selenium	mg/L	09/02/2010	N001	29 - 48.8	0.0019		FQ	#	0.00016	
Sodium	mg/L	09/02/2010	N001	29 - 48.8	4200		FQ	#	0.33	
Specific Conductance	umhos/cm	09/02/2010	N001	29 - 48.8	21200		FQ	#		
Strontium	mg/L	09/02/2010	N001	29 - 48.8	8.2		FQ	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	29 - 48.8	10000		FQ	#	100	
Temperature	C	09/02/2010	N001	29 - 48.8	17.29		FQ	#		
Turbidity	NTU	09/02/2010	N001	29 - 48.8	1.43		FQ	#		
Uranium	mg/L	09/02/2010	N001	29 - 48.8	0.63		FQ	#	0.00029	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	27 - 47	2100		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	27 - 47	150		FQ	#	5	
Calcium	mg/L	09/01/2010	N001	27 - 47	420		FQ	#	0.12	
Chloride	mg/L	09/01/2010	N001	27 - 47	1500		FQ	#	40	
Magnesium	mg/L	09/01/2010	N001	27 - 47	2300		FQ	#	0.13	
Manganese	mg/L	09/01/2010	N001	27 - 47	1.6		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	27 - 47	17		FQ	#	0.2	
Oxidation Reduction Potential	mV	09/01/2010	N001	27 - 47	6		FQR	#		
pH	s.u.	09/01/2010	N001	27 - 47	6.39		FQ	#		
Potassium	mg/L	09/01/2010	N001	27 - 47	210		FQJ	#	1.1	
Selenium	mg/L	09/01/2010	N001	27 - 47	0.0084		FQ	#	0.00016	
Sodium	mg/L	09/01/2010	N001	27 - 47	3300		FQ	#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	27 - 47	24434		FQ	#		
Strontium	mg/L	09/01/2010	N001	27 - 47	11		FQ	#	0.00078	
Sulfate	mg/L	09/01/2010	N001	27 - 47	18000		FQ	#	100	
Temperature	C	09/01/2010	N001	27 - 47	27.66		FQ	#		
Turbidity	NTU	09/01/2010	N001	27 - 47	5.51		FQ	#		
Uranium	mg/L	09/01/2010	N001	27 - 47	0.53		FQ	#	0.00029	

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

REPORT DATE: 12/15/2010

Location: 0603 WELL Just SE of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	25.9 - 35.9	132		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	25.9 - 35.9	800		F	#	20	
Calcium	mg/L	08/31/2010	N001	25.9 - 35.9	990		F	#	0.12	
Chloride	mg/L	08/31/2010	N001	25.9 - 35.9	190		F	#	40	
Magnesium	mg/L	08/31/2010	N001	25.9 - 35.9	640		F	#	0.13	
Manganese	mg/L	08/31/2010	N001	25.9 - 35.9	57		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	25.9 - 35.9	1800		F	#	10	
Oxidation Reduction Potential	mV	08/31/2010	N001	25.9 - 35.9	151.4		F	#		
pH	s.u.	08/31/2010	N001	25.9 - 35.9	6.12		F	#		
Potassium	mg/L	08/31/2010	N001	25.9 - 35.9	140		FJ	#	1.1	
Selenium	mg/L	08/31/2010	N001	25.9 - 35.9	0.098		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	25.9 - 35.9	620		F	#	0.066	
Specific Conductance	umhos/cm	08/31/2010	N001	25.9 - 35.9	17452		F	#		
Strontium	mg/L	08/31/2010	N001	25.9 - 35.9	4.5		F	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	25.9 - 35.9	2800		F	#	100	
Temperature	C	08/31/2010	N001	25.9 - 35.9	18.57		F	#		
Turbidity	NTU	08/31/2010	N001	25.9 - 35.9	1.7		F	#		
Uranium	mg/L	08/31/2010	N001	25.9 - 35.9	0.008		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0604 WELL Just W of radon cover borrow pit

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	62.7	- 72.7	462		FQ	#		
Ammonia Total as N	mg/L	08/31/2010	0001	62.7	- 72.7	1.6		FQ	#	0.1	
Calcium	mg/L	08/31/2010	0001	62.7	- 72.7	500		FQ	#	0.12	
Chloride	mg/L	08/31/2010	0001	62.7	- 72.7	2300		FQ	#	40	
Magnesium	mg/L	08/31/2010	0001	62.7	- 72.7	1700		FQ	#	0.13	
Manganese	mg/L	08/31/2010	0001	62.7	- 72.7	0.77		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	62.7	- 72.7	1200		FQ	#	10	
Oxidation Reduction Potential	mV	08/31/2010	N001	62.7	- 72.7	254.6		FQ	#		
pH	s.u.	08/31/2010	N001	62.7	- 72.7	6.8		FQ	#		
Potassium	mg/L	08/31/2010	0001	62.7	- 72.7	73		FQJ	#	1.1	
Selenium	mg/L	08/31/2010	0001	62.7	- 72.7	0.65		FQ	#	0.00016	
Sodium	mg/L	08/31/2010	0001	62.7	- 72.7	4200		FQ	#	0.33	
Specific Conductance	umhos /cm	08/31/2010	N001	62.7	- 72.7	27483		FQ	#		
Strontium	mg/L	08/31/2010	0001	62.7	- 72.7	17		FQ	#	0.00078	
Sulfate	mg/L	08/31/2010	0001	62.7	- 72.7	11000		FQ	#	100	
Temperature	C	08/31/2010	N001	62.7	- 72.7	19.92		FQ	#		
Turbidity	NTU	08/31/2010	N001	62.7	- 72.7	32.7		FQ	#		
Uranium	mg/L	08/31/2010	0001	62.7	- 72.7	0.085		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0725 WELL West side, lower Bob Lee Wash

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	7.5 - 17.5	434		F	#		
Ammonia Total as N	mg/L	09/02/2010	N001	7.5 - 17.5	0.1	U	F	#	0.1	
Calcium	mg/L	09/02/2010	N001	7.5 - 17.5	320		F	#	0.024	
Chloride	mg/L	09/02/2010	N001	7.5 - 17.5	110		F	#	10	
Magnesium	mg/L	09/02/2010	N001	7.5 - 17.5	110		F	#	0.026	
Manganese	mg/L	09/02/2010	N001	7.5 - 17.5	0.54		F	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	7.5 - 17.5	8.5		F	#	0.1	
Oxidation Reduction Potential	mV	09/02/2010	N001	7.5 - 17.5	-286		FR	#		
pH	s.u.	09/02/2010	N001	7.5 - 17.5	6.66		F	#		
Potassium	mg/L	09/02/2010	N001	7.5 - 17.5	19		FJ	#	0.22	
Selenium	mg/L	09/02/2010	N001	7.5 - 17.5	0.01		F	#	0.000032	
Sodium	mg/L	09/02/2010	N001	7.5 - 17.5	1100		F	#	0.066	
Specific Conductance	umhos/cm	09/02/2010	N001	7.5 - 17.5	6759		F	#		
Strontium	mg/L	09/02/2010	N001	7.5 - 17.5	12		F	#	0.00016	
Sulfate	mg/L	09/02/2010	N001	7.5 - 17.5	3600		F	#	25	
Temperature	C	09/02/2010	N001	7.5 - 17.5	20.72		F	#		
Turbidity	NTU	09/02/2010	N001	7.5 - 17.5	1.35		F	#		
Uranium	mg/L	09/02/2010	N001	7.5 - 17.5	0.077		F	#	0.0000029	

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

REPORT DATE: 12/15/2010

Location: 0726 WELL West side, upper Bob Lee Wash

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/30/2010	N001	27.2 - 37.2	418		F #		
Ammonia Total as N	mg/L	08/30/2010	N001	27.2 - 37.2	0.14		F #	0.1	
Calcium	mg/L	08/30/2010	N001	27.2 - 37.2	400		F #	0.06	
Chloride	mg/L	08/30/2010	N001	27.2 - 37.2	150		F #	10	
Magnesium	mg/L	08/30/2010	N001	27.2 - 37.2	360		F #	0.065	
Manganese	mg/L	08/30/2010	N001	27.2 - 37.2	0.59		F #	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/30/2010	N001	27.2 - 37.2	11		F #	0.1	
Oxidation Reduction Potential	mV	08/30/2010	N001	27.2 - 37.2	84.6		F #		
pH	s.u.	08/30/2010	N001	27.2 - 37.2	6.77		F #		
Potassium	mg/L	08/30/2010	N001	27.2 - 37.2	42		FJ #	0.54	
Selenium	mg/L	08/30/2010	N001	27.2 - 37.2	0.051		F #	0.000032	
Sodium	mg/L	08/30/2010	N001	27.2 - 37.2	1200		F #	0.16	
Specific Conductance	umhos/cm	08/30/2010	N001	27.2 - 37.2	8543		F #		
Strontium	mg/L	08/30/2010	N001	27.2 - 37.2	6.3		F #	0.00039	
Sulfate	mg/L	08/30/2010	N001	27.2 - 37.2	5000		F #	50	
Temperature	C	08/30/2010	N001	27.2 - 37.2	16.8		F #		
Turbidity	NTU	08/30/2010	N001	27.2 - 37.2	2.45		F #		
Uranium	mg/L	08/30/2010	N001	27.2 - 37.2	0.021		F #	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0727 WELL West side, upper Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	6.7 - 16.7	1280		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	6.7 - 16.7	31		FQ	#	2	
Calcium	mg/L	09/01/2010	N001	6.7 - 16.7	420		FQ	#	0.06	
Chloride	mg/L	09/01/2010	N001	6.7 - 16.7	330		FQ	#	20	
Magnesium	mg/L	09/01/2010	N001	6.7 - 16.7	1800		FQ	#	0.065	
Manganese	mg/L	09/01/2010	N001	6.7 - 16.7	1.2		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	6.7 - 16.7	92		FQ	#	0.5	
Oxidation Reduction Potential	mV	09/01/2010	N001	6.7 - 16.7	-145		FQR	#		
pH	s.u.	09/01/2010	N001	6.7 - 16.7	6.38		FQ	#		
Potassium	mg/L	09/01/2010	N001	6.7 - 16.7	100		FQJ	#	0.54	
Selenium	mg/L	09/01/2010	N001	6.7 - 16.7	0.0018		FQ	#	0.00032	
Sodium	mg/L	09/01/2010	N001	6.7 - 16.7	1700		FQ	#	0.16	
Specific Conductance	umhos/cm	09/01/2010	N001	6.7 - 16.7	16560		FQ	#		
Strontium	mg/L	09/01/2010	N001	6.7 - 16.7	11		FQ	#	0.00039	
Sulfate	mg/L	09/01/2010	N001	6.7 - 16.7	11000		FQ	#	100	
Temperature	C	09/01/2010	N001	6.7 - 16.7	23.1		FQ	#		
Turbidity	NTU	09/01/2010	N001	6.7 - 16.7	3.44		FQ	#		
Uranium	mg/L	09/01/2010	N001	6.7 - 16.7	0.29		FQ	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0728 WELL W of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	17 - 27	352		F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	17 - 27	69		F	#	2	
Calcium	mg/L	09/01/2010	N001	17 - 27	490		F	#	0.024	
Chloride	mg/L	09/01/2010	N001	17 - 27	59		F	#	10	
Magnesium	mg/L	09/01/2010	N001	17 - 27	540		F	#	0.026	
Manganese	mg/L	09/01/2010	N001	17 - 27	0.93		F	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	17 - 27	120		F	#	1	
Oxidation Reduction Potential	mV	09/01/2010	N001	17 - 27	-95		FR	#		
pH	s.u.	09/01/2010	N001	17 - 27	6.68		F	#		
Potassium	mg/L	09/01/2010	N001	17 - 27	71		FJ	#	0.22	
Selenium	mg/L	09/01/2010	N001	17 - 27	0.0057		F	#	0.00016	
Sodium	mg/L	09/01/2010	N001	17 - 27	460		F	#	0.013	
Specific Conductance	umhos/cm	09/01/2010	N001	17 - 27	6614		F	#		
Strontium	mg/L	09/01/2010	N001	17 - 27	5.1		F	#	0.00016	
Sulfate	mg/L	09/01/2010	N001	17 - 27	4100		F	#	25	
Temperature	C	09/01/2010	N001	17 - 27	17.17		F	#		
Turbidity	NTU	09/01/2010	N001	17 - 27	1.26		F	#		
Uranium	mg/L	09/01/2010	N001	17 - 27	0.21		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0731 WELL SE of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	17 - 27	211		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	17 - 27	18		F	#	0.5	
Calcium	mg/L	08/31/2010	N001	17 - 27	510		F	#	0.024	
Chloride	mg/L	08/31/2010	N001	17 - 27	210		F	#	10	
Magnesium	mg/L	08/31/2010	N001	17 - 27	400		F	#	0.026	
Manganese	mg/L	08/31/2010	N001	17 - 27	0.045		F	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	17 - 27	160		F	#	1	
Oxidation Reduction Potential	mV	08/31/2010	N001	17 - 27	122.8		F	#		
pH	s.u.	08/31/2010	N001	17 - 27	6.89		F	#		
Potassium	mg/L	08/31/2010	N001	17 - 27	47		FJ	#	0.22	
Selenium	mg/L	08/31/2010	N001	17 - 27	0.25		F	#	0.000032	
Sodium	mg/L	08/31/2010	N001	17 - 27	660		F	#	0.066	
Specific Conductance	umhos/cm	08/31/2010	N001	17 - 27	7452		F	#		
Strontium	mg/L	08/31/2010	N001	17 - 27	6.7		F	#	0.00016	
Sulfate	mg/L	08/31/2010	N001	17 - 27	3800		F	#	25	
Temperature	C	08/31/2010	N001	17 - 27	18.93		F	#		
Turbidity	NTU	08/31/2010	N001	17 - 27	1.9		F	#		
Uranium	mg/L	08/31/2010	N001	17 - 27	0.018		F	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0812 WELL W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	0001	51.3	- 61.3	828		FQ	#		
Ammonia Total as N	mg/L	08/31/2010	0001	51.3	- 61.3	0.1	U	FQ	#	0.1	
Calcium	mg/L	08/31/2010	0001	51.3	- 61.3	440		FQ	#	0.12	
Chloride	mg/L	08/31/2010	0001	51.3	- 61.3	2500		FQ	#	40	
Magnesium	mg/L	08/31/2010	0001	51.3	- 61.3	2300		FQ	#	0.13	
Manganese	mg/L	08/31/2010	0001	51.3	- 61.3	0.24		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	51.3	- 61.3	1500		FQ	#	10	
Oxidation Reduction Potential	mV	08/31/2010	N001	51.3	- 61.3	196.5		FQ	#		
pH	s.u.	08/31/2010	N001	51.3	- 61.3	6.94		FQ	#		
Potassium	mg/L	08/31/2010	0001	51.3	- 61.3	99		FQJ	#	1.1	
Selenium	mg/L	08/31/2010	0001	51.3	- 61.3	5.6		FQ	#	0.0065	
Sodium	mg/L	08/31/2010	0001	51.3	- 61.3	5500		FQ	#	0.33	
Specific Conductance	umhos /cm	08/31/2010	N001	51.3	- 61.3	34113		FQ	#		
Strontium	mg/L	08/31/2010	0001	51.3	- 61.3	13		FQ	#	0.00078	
Sulfate	mg/L	08/31/2010	0001	51.3	- 61.3	16000		FQ	#	100	
Temperature	C	08/31/2010	N001	51.3	- 61.3	16.63		FQ	#		
Turbidity	NTU	08/31/2010	N001	51.3	- 61.3	13.3		FQ	#		
Uranium	mg/L	08/31/2010	0001	51.3	- 61.3	0.13		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0813 WELL W of radon cover borrow pit

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	40.8 - 50.8	944		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	40.8 - 50.8	57		F	#	5	
Calcium	mg/L	08/31/2010	N001	40.8 - 50.8	610		F	#	0.12	
Chloride	mg/L	08/31/2010	N001	40.8 - 50.8	760		F	#	40	
Magnesium	mg/L	08/31/2010	N001	40.8 - 50.8	3300		F	#	0.13	
Manganese	mg/L	08/31/2010	N001	40.8 - 50.8	0.71		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	40.8 - 50.8	2300		F	#	20	
Oxidation Reduction Potential	mV	08/31/2010	N001	40.8 - 50.8	156.8		F	#		
pH	s.u.	08/31/2010	N001	40.8 - 50.8	6.39		F	#		
Potassium	mg/L	08/31/2010	N001	40.8 - 50.8	140		FJ	#	1.1	
Selenium	mg/L	08/31/2010	N001	40.8 - 50.8	0.1		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	40.8 - 50.8	2600		F	#	0.33	
Specific Conductance	umhos/cm	08/31/2010	N001	40.8 - 50.8	27256		F	#		
Strontium	mg/L	08/31/2010	N001	40.8 - 50.8	17		F	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	40.8 - 50.8	11000		F	#	100	
Temperature	C	08/31/2010	N001	40.8 - 50.8	17.58		F	#		
Turbidity	NTU	08/31/2010	N001	40.8 - 50.8	4.6		F	#		
Uranium	mg/L	08/31/2010	N001	40.8 - 50.8	0.12		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	23.8	-	33.8	624			#		
Ammonia Total as N	mg/L	08/31/2010	0001	23.8	-	33.8	160			#	20	
Calcium	mg/L	08/31/2010	0001	23.8	-	33.8	460			#	0.12	
Chloride	mg/L	08/31/2010	0001	23.8	-	33.8	1000			#	40	
Magnesium	mg/L	08/31/2010	0001	23.8	-	33.8	2200			#	0.13	
Manganese	mg/L	08/31/2010	0001	23.8	-	33.8	1.4			#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	23.8	-	33.8	960			#	10	
Oxidation Reduction Potential	mV	08/31/2010	N001	23.8	-	33.8	180.9			#		
pH	s.u.	08/31/2010	N001	23.8	-	33.8	6.82			#		
Potassium	mg/L	08/31/2010	0001	23.8	-	33.8	150		J	#	1.1	
Selenium	mg/L	08/31/2010	0001	23.8	-	33.8	2.3			#	0.00016	
Sodium	mg/L	08/31/2010	0001	23.8	-	33.8	3200			#	0.33	
Specific Conductance	umhos/cm	08/31/2010	N001	23.8	-	33.8	24980			#		
Strontium	mg/L	08/31/2010	0001	23.8	-	33.8	12			#	0.00078	
Sulfate	mg/L	08/31/2010	0001	23.8	-	33.8	14000			#	100	
Temperature	C	08/31/2010	N001	23.8	-	33.8	17.84			#		
Turbidity	NTU	08/31/2010	N001	23.8	-	33.8	17.1			#		
Uranium	mg/L	08/31/2010	0001	23.8	-	33.8	0.085			#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range			Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	22.3	-	32.3	1450	F	#		
Ammonia Total as N	mg/L	09/01/2010	N001	22.3	-	32.3	0.12	F	#	0.1	
Calcium	mg/L	09/01/2010	N001	22.3	-	32.3	440	F	#	0.12	
Chloride	mg/L	09/01/2010	N001	22.3	-	32.3	610	F	#	40	
Magnesium	mg/L	09/01/2010	N001	22.3	-	32.3	2700	F	#	0.13	
Manganese	mg/L	09/01/2010	N001	22.3	-	32.3	1.4	F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	22.3	-	32.3	720	F	#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	22.3	-	32.3	-88	FR	#		
pH	s.u.	09/01/2010	N001	22.3	-	32.3	6.45	F	#		
Potassium	mg/L	09/01/2010	N001	22.3	-	32.3	110	FJ	#	1.1	
Selenium	mg/L	09/01/2010	N001	22.3	-	32.3	0.032	F	#	0.00016	
Sodium	mg/L	09/01/2010	N001	22.3	-	32.3	3100	F	#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	22.3	-	32.3	23050	F	#		
Strontium	mg/L	09/01/2010	N001	22.3	-	32.3	12	F	#	0.00078	
Sulfate	mg/L	09/01/2010	N001	22.3	-	32.3	15000	F	#	100	
Temperature	C	09/01/2010	N001	22.3	-	32.3	18.18	F	#		
Turbidity	NTU	09/01/2010	N001	22.3	-	32.3	2.51	F	#		
Uranium	mg/L	09/01/2010	N001	22.3	-	32.3	0.34	F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0816 WELL N of artesian well 648

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	20.1	-	25.1	302		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	20.1	-	25.1	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/01/2010	N001	20.1	-	25.1	55		FQ	#	0.012	
Chloride	mg/L	09/01/2010	N001	20.1	-	25.1	58		FQ	#	4	
Magnesium	mg/L	09/01/2010	N001	20.1	-	25.1	75		FQ	#	0.013	
Manganese	mg/L	09/01/2010	N001	20.1	-	25.1	0.00059	B	FQ	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	20.1	-	25.1	24		FQ	#	0.2	
Oxidation Reduction Potential	mV	09/01/2010	N001	20.1	-	25.1	-123		FQR	#		
pH	s.u.	09/01/2010	N001	20.1	-	25.1	7.62		FQ	#		
Potassium	mg/L	09/01/2010	N001	20.1	-	25.1	12	EN	FQJ	#	0.11	
Selenium	mg/L	09/01/2010	N001	20.1	-	25.1	0.013		FQ	#	0.000032	
Sodium	mg/L	09/01/2010	N001	20.1	-	25.1	400		FQ	#	0.033	
Specific Conductance	umhos /cm	09/01/2010	N001	20.1	-	25.1	2963		FQ	#		
Strontium	mg/L	09/01/2010	N001	20.1	-	25.1	1.1		FQ	#	0.000078	
Sulfate	mg/L	09/01/2010	N001	20.1	-	25.1	1100		FQ	#	10	
Temperature	C	09/01/2010	N001	20.1	-	25.1	21.36		FQ	#		
Turbidity	NTU	09/01/2010	N001	20.1	-	25.1	5.95		FQ	#		
Uranium	mg/L	09/01/2010	N001	20.1	-	25.1	0.014		FQ	#	0.000029	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	21.6 - 31.62	1640		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	21.6 - 31.62	1000		FQ	#	50	
Calcium	mg/L	09/01/2010	N001	21.6 - 31.62	450		FQ	#	0.12	
Chloride	mg/L	09/01/2010	N001	21.6 - 31.62	530		FQ	#	40	
Magnesium	mg/L	09/01/2010	N001	21.6 - 31.62	1900		FQ	#	0.13	
Manganese	mg/L	09/01/2010	N001	21.6 - 31.62	2.2		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	21.6 - 31.62	520		FQ	#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	21.6 - 31.62	-40		FQR	#		
pH	s.u.	09/01/2010	N001	21.6 - 31.62	6.3		FQ	#		
Potassium	mg/L	09/01/2010	N001	21.6 - 31.62	260		FQJ	#	1.1	
Selenium	mg/L	09/01/2010	N001	21.6 - 31.62	0.0031		FQ	#	0.00032	
Sodium	mg/L	09/01/2010	N001	21.6 - 31.62	1500		FQ	#	0.066	
Specific Conductance	umhos/cm	09/01/2010	N001	21.6 - 31.62	20777		FQ	#		
Strontium	mg/L	09/01/2010	N001	21.6 - 31.62	11		FQ	#	0.00078	
Sulfate	mg/L	09/01/2010	N001	21.6 - 31.62	12000		FQ	#	100	
Temperature	C	09/01/2010	N001	21.6 - 31.62	18.57		FQ	#		
Turbidity	NTU	09/01/2010	N001	21.6 - 31.62	3.05		FQ	#		
Uranium	mg/L	09/01/2010	N001	21.6 - 31.62	6.8		FQ	#	0.00058	

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

REPORT DATE: 12/15/2010

Location: 0818 WELL Just W of radon cover borrow pit

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	52 - 61.5	650			#		
Ammonia Total as N	mg/L	09/01/2010	N001	52 - 61.5	130			#	10	
Calcium	mg/L	09/01/2010	N001	52 - 61.5	460			#	0.12	
Chloride	mg/L	09/01/2010	N001	52 - 61.5	1000			#	40	
Magnesium	mg/L	09/01/2010	N001	52 - 61.5	2000			#	0.13	
Manganese	mg/L	09/01/2010	N001	52 - 61.5	0.59			#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	52 - 61.5	880			#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	52 - 61.5	204		R	#		
pH	s.u.	09/01/2010	N001	52 - 61.5	6.86			#		
Potassium	mg/L	09/01/2010	N001	52 - 61.5	100		J	#	1.1	
Selenium	mg/L	09/01/2010	N001	52 - 61.5	2.6			#	0.00016	
Sodium	mg/L	09/01/2010	N001	52 - 61.5	3200			#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	52 - 61.5	22832			#		
Strontium	mg/L	09/01/2010	N001	52 - 61.5	12			#	0.00078	
Sulfate	mg/L	09/01/2010	N001	52 - 61.5	13000			#	100	
Temperature	C	09/01/2010	N001	52 - 61.5	15.96			#		
Turbidity	NTU	09/01/2010	N001	52 - 61.5	5.28			#		
Uranium	mg/L	09/01/2010	N001	52 - 61.5	0.11			#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	15.67	- 25.67	1880		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	15.67	- 25.67	510		FQ	#	20	
Calcium	mg/L	09/01/2010	N001	15.67	- 25.67	420		FQ	#	0.12	
Chloride	mg/L	09/01/2010	N001	15.67	- 25.67	690		FQ	#	40	
Magnesium	mg/L	09/01/2010	N001	15.67	- 25.67	1600		FQ	#	0.13	
Manganese	mg/L	09/01/2010	N001	15.67	- 25.67	1.7		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	15.67	- 25.67	37		FQ	#	0.5	
Oxidation Reduction Potential	mV	09/01/2010	N001	15.67	- 25.67	-72		FQR	#		
pH	s.u.	09/01/2010	N001	15.67	- 25.67	6.3		FQ	#		
Potassium	mg/L	09/01/2010	N001	15.67	- 25.67	200		FQJ	#	1.1	
Selenium	mg/L	09/01/2010	N001	15.67	- 25.67	0.013		FQ	#	0.00032	
Sodium	mg/L	09/01/2010	N001	15.67	- 25.67	4800		FQ	#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	15.67	- 25.67	20460		FQ	#		
Strontium	mg/L	09/01/2010	N001	15.67	- 25.67	8.9		FQ	#	0.00078	
Sulfate	mg/L	09/01/2010	N001	15.67	- 25.67	12000		FQ	#	100	
Temperature	C	09/01/2010	N001	15.67	- 25.67	22.32		FQ	#		
Turbidity	NTU	09/01/2010	N001	15.67	- 25.67	7.32		FQ	#		
Uranium	mg/L	09/01/2010	N001	15.67	- 25.67	0.76		FQ	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0820 WELL Just N of Disposal Cell, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	149 - 151.5	428		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	149 - 151.5	3.5		FQ	#	0.1	
Calcium	mg/L	09/02/2010	N001	149 - 151.5	190		FQ	#	0.12	
Chloride	mg/L	09/02/2010	N001	149 - 151.5	9000		FQ	#	100	
Magnesium	mg/L	09/02/2010	N001	149 - 151.5	85		FQ	#	0.13	
Manganese	mg/L	09/02/2010	N001	149 - 151.5	1.3		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	149 - 151.5	0.053		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	149 - 151.5	-220		FQR	#		
pH	s.u.	09/02/2010	N001	149 - 151.5	7.18		FQ	#		
Potassium	mg/L	09/02/2010	N001	149 - 151.5	36		FQJ	#	1.1	
Selenium	mg/L	09/02/2010	N001	149 - 151.5	0.001		FQ	#	0.00032	
Sodium	mg/L	09/02/2010	N001	149 - 151.5	6400		FQ	#	0.33	
Specific Conductance	umhos/cm	09/02/2010	N001	149 - 151.5	31000		FQ	#		
Strontium	mg/L	09/02/2010	N001	149 - 151.5	19		FQ	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	149 - 151.5	4200		FQ	#	100	
Temperature	C	09/02/2010	N001	149 - 151.5	19.22		FQ	#		
Turbidity	NTU	09/02/2010	N001	149 - 151.5	8.75		FQ	#		
Uranium	mg/L	09/02/2010	N001	149 - 151.5	0.072		FQ	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0822 WELL Just N of Disposal Cell, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	199 - 201.5	374		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	199 - 201.5	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/02/2010	N001	199 - 201.5	160		FQ	#	0.12	
Chloride	mg/L	09/02/2010	N001	199 - 201.5	6000		FQ	#	100	
Magnesium	mg/L	09/02/2010	N001	199 - 201.5	70		FQ	#	0.13	
Manganese	mg/L	09/02/2010	N001	199 - 201.5	0.37		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	199 - 201.5	12		FQ	#	0.2	
Oxidation Reduction Potential	mV	09/02/2010	N001	199 - 201.5	-200		FQR	#		
pH	s.u.	09/02/2010	N001	199 - 201.5	7.35		FQ	#		
Potassium	mg/L	09/02/2010	N001	199 - 201.5	100		FQJ	#	1.1	
Selenium	mg/L	09/02/2010	N001	199 - 201.5	0.0013		FQ	#	0.00032	
Sodium	mg/L	09/02/2010	N001	199 - 201.5	5300		FQ	#	0.33	
Specific Conductance	umhos/cm	09/02/2010	N001	199 - 201.5	26230		FQ	#		
Strontium	mg/L	09/02/2010	N001	199 - 201.5	17		FQ	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	199 - 201.5	6100		FQ	#	100	
Temperature	C	09/02/2010	N001	199 - 201.5	16.47		FQ	#		
Turbidity	NTU	09/02/2010	N001	199 - 201.5	1.98		FQ	#		
Uranium	mg/L	09/02/2010	N001	199 - 201.5	0.088		FQ	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0824 WELL Just NE of Disposal Cell, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	198.5 - 201	170		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	198.5 - 201	3.6		FQ	#	0.1	
Calcium	mg/L	09/02/2010	N001	198.5 - 201	160		FQ	#	0.12	
Chloride	mg/L	09/02/2010	N001	198.5 - 201	5200		FQ	#	100	
Magnesium	mg/L	09/02/2010	N001	198.5 - 201	89		FQ	#	0.13	
Manganese	mg/L	09/02/2010	N001	198.5 - 201	0.21		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	198.5 - 201	200		FQ	#	2	
Oxidation Reduction Potential	mV	09/02/2010	N001	198.5 - 201	-268		FQR	#		
pH	s.u.	09/02/2010	N001	198.5 - 201	7.03		FQ	#		
Potassium	mg/L	09/02/2010	N001	198.5 - 201	170		FQJ	#	1.1	
Selenium	mg/L	09/02/2010	N001	198.5 - 201	0.0028		FQ	#	0.00016	
Sodium	mg/L	09/02/2010	N001	198.5 - 201	4600		FQ	#	0.33	
Specific Conductance	umhos/cm	09/02/2010	N001	198.5 - 201	27700		FQ	#		
Strontium	mg/L	09/02/2010	N001	198.5 - 201	14		FQ	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	198.5 - 201	5500		FQ	#	100	
Temperature	C	09/02/2010	N001	198.5 - 201	18.18		FQ	#		
Turbidity	NTU	09/02/2010	N001	198.5 - 201	4.51		FQ	#		
Uranium	mg/L	09/02/2010	N001	198.5 - 201	0.27		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 0825 WELL Just NE of Disposal Cell, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	147.79 - 150.23	189		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	147.79 - 150.23	4		FQ	#	0.1	
Calcium	mg/L	09/02/2010	N001	147.79 - 150.23	250		FQ	#	0.24	
Chloride	mg/L	09/02/2010	N001	147.79 - 150.23	6700		FQ	#	100	
Magnesium	mg/L	09/02/2010	N001	147.79 - 150.23	92		FQ	#	0.26	
Manganese	mg/L	09/02/2010	N001	147.79 - 150.23	0.51		FQ	#	0.0023	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	147.79 - 150.23	28		FQ	#	0.5	
Oxidation Reduction Potential	mV	09/02/2010	N001	147.79 - 150.23	-280		FQR	#		
pH	s.u.	09/02/2010	N001	147.79 - 150.23	6.84		FQ	#		
Potassium	mg/L	09/02/2010	N001	147.79 - 150.23	120		FQJ	#	2.2	
Selenium	mg/L	09/02/2010	N001	147.79 - 150.23	0.00098		FQ	#	0.00016	
Sodium	mg/L	09/02/2010	N001	147.79 - 150.23	5800		FQ	#	0.66	
Specific Conductance	umhos/cm	09/02/2010	N001	147.79 - 150.23	29700		FQ	#		
Strontium	mg/L	09/02/2010	N001	147.79 - 150.23	20		FQ	#	0.0016	
Sulfate	mg/L	09/02/2010	N001	147.79 - 150.23	6500		FQ	#	100	
Temperature	C	09/02/2010	N001	147.79 - 150.23	19.55		FQ	#		
Turbidity	NTU	09/02/2010	N001	147.79 - 150.23	1.54		FQ	#		
Uranium	mg/L	09/02/2010	N001	147.79 - 150.23	0.041		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	10 - 20	1740		FQ	#		
Ammonia Total as N	mg/L	09/01/2010	N001	10 - 20	65		FQJ	#	20	
Calcium	mg/L	09/01/2010	N001	10 - 20	420		FQ	#	0.12	
Chloride	mg/L	09/01/2010	N001	10 - 20	590		FQ	#	40	
Magnesium	mg/L	09/01/2010	N001	10 - 20	2800		FQ	#	0.13	
Manganese	mg/L	09/01/2010	N001	10 - 20	2.3		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	10 - 20	59		FQ	#	0.5	
Oxidation Reduction Potential	mV	09/01/2010	N001	10 - 20	-125		FQR	#		
pH	s.u.	09/01/2010	N001	10 - 20	6.43		FQ	#		
Potassium	mg/L	09/01/2010	N001	10 - 20	160		FQJ	#	1.1	
Selenium	mg/L	09/01/2010	N001	10 - 20	0.007		FQ	#	0.0016	
Sodium	mg/L	09/01/2010	N001	10 - 20	2100		FQ	#	0.066	
Specific Conductance	umhos/cm	09/01/2010	N001	10 - 20	19349		FQ	#		
Strontium	mg/L	09/01/2010	N001	10 - 20	12		FQ	#	0.00078	
Sulfate	mg/L	09/01/2010	N001	10 - 20	15000		FQ	#	100	
Temperature	C	09/01/2010	N001	10 - 20	20.33		FQ	#		
Turbidity	NTU	09/01/2010	N001	10 - 20	7.69		FQ	#		
Uranium	mg/L	09/01/2010	N001	10 - 20	3.5		FQ	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 0827 WELL Just NW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	19.9	- 29.9	1680		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	19.9	- 29.9	7.7		FQ	#	1	
Calcium	mg/L	09/02/2010	N001	19.9	- 29.9	450		FQ	#	0.06	
Chloride	mg/L	09/02/2010	N001	19.9	- 29.9	480		FQ	#	20	
Magnesium	mg/L	09/02/2010	N001	19.9	- 29.9	1300		FQ	#	0.065	
Manganese	mg/L	09/02/2010	N001	19.9	- 29.9	1.4		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	19.9	- 29.9	18		FQ	#	0.2	
Oxidation Reduction Potential	mV	09/02/2010	N001	19.9	- 29.9	-27		FQR	#		
pH	s.u.	09/02/2010	N001	19.9	- 29.9	6.56		FQ	#		
Potassium	mg/L	09/02/2010	N001	19.9	- 29.9	66		FQJ	#	0.54	
Selenium	mg/L	09/02/2010	N001	19.9	- 29.9	0.024		FQ	#	0.00032	
Sodium	mg/L	09/02/2010	N001	19.9	- 29.9	1900		FQ	#	0.16	
Specific Conductance	umhos/cm	09/02/2010	N001	19.9	- 29.9	15000		FQ	#		
Strontium	mg/L	09/02/2010	N001	19.9	- 29.9	9.9		FQ	#	0.00039	
Sulfate	mg/L	09/02/2010	N001	19.9	- 29.9	9300		FQ	#	50	
Temperature	C	09/02/2010	N001	19.9	- 29.9	16.65		FQ	#		
Turbidity	NTU	09/02/2010	N001	19.9	- 29.9	8.29		FQ	#		
Uranium	mg/L	09/02/2010	N001	19.9	- 29.9	0.88		FQ	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0828 WELL Just E of upper Bob Lee Wash, NECA yard

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	5.3 - 15.3	434		F #		
Ammonia Total as N	mg/L	09/01/2010	N001	5.3 - 15.3	0.17		F #	0.1	
Calcium	mg/L	09/01/2010	N001	5.3 - 15.3	480		F #	0.024	
Chloride	mg/L	09/01/2010	N001	5.3 - 15.3	220		F #	10	
Magnesium	mg/L	09/01/2010	N001	5.3 - 15.3	240		F #	0.026	
Manganese	mg/L	09/01/2010	N001	5.3 - 15.3	0.54		F #	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	5.3 - 15.3	73		F #	0.5	
Oxidation Reduction Potential	mV	09/01/2010	N001	5.3 - 15.3	-104		FR #		
pH	s.u.	09/01/2010	N001	5.3 - 15.3	6.82		F #		
Potassium	mg/L	09/01/2010	N001	5.3 - 15.3	20		FJ #	0.22	
Selenium	mg/L	09/01/2010	N001	5.3 - 15.3	0.063		F #	0.00032	
Sodium	mg/L	09/01/2010	N001	5.3 - 15.3	470		F #	0.066	
Specific Conductance	umhos/cm	09/01/2010	N001	5.3 - 15.3	5201		F #		
Strontium	mg/L	09/01/2010	N001	5.3 - 15.3	5		F #	0.00016	
Sulfate	mg/L	09/01/2010	N001	5.3 - 15.3	2500		F #	25	
Temperature	C	09/01/2010	N001	5.3 - 15.3	18.85		F #		
Turbidity	NTU	09/01/2010	N001	5.3 - 15.3	2		F #		
Uranium	mg/L	09/01/2010	N001	5.3 - 15.3	0.65		F #	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0830 WELL Just SE of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	7.7 - 17.7	0		F #		
Ammonia Total as N	mg/L	09/02/2010	N001	7.7 - 17.7	0.25		F #	0.1	
Calcium	mg/L	09/02/2010	N001	7.7 - 17.7	610		F #	0.06	
Chloride	mg/L	09/02/2010	N001	7.7 - 17.7	68		F #	10	
Magnesium	mg/L	09/02/2010	N001	7.7 - 17.7	49		F #	0.013	
Manganese	mg/L	09/02/2010	N001	7.7 - 17.7	4.2		F #	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	7.7 - 17.7	49		F #	0.5	
Oxidation Reduction Potential	mV	09/02/2010	N001	7.7 - 17.7	107		FR #		
pH	s.u.	09/02/2010	N001	7.7 - 17.7	3.45		F #		
Potassium	mg/L	09/02/2010	N001	7.7 - 17.7	7.2		FJ #	0.11	
Selenium	mg/L	09/02/2010	N001	7.7 - 17.7	0.033		F #	0.000032	
Sodium	mg/L	09/02/2010	N001	7.7 - 17.7	180		F #	0.0066	
Specific Conductance	umhos/cm	09/02/2010	N001	7.7 - 17.7	3410		F #		
Strontium	mg/L	09/02/2010	N001	7.7 - 17.7	0.26		F #	0.000078	
Sulfate	mg/L	09/02/2010	N001	7.7 - 17.7	1900		F #	25	
Temperature	C	09/02/2010	N001	7.7 - 17.7	24.43		F #		
Turbidity	NTU	09/02/2010	N001	7.7 - 17.7	1.42		F #		
Uranium	mg/L	09/02/2010	N001	7.7 - 17.7	0.0099		F #	0.000029	

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

REPORT DATE: 12/15/2010

Location: 0833 WELL Just NE of Dine College tract

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	24.9 - 34.9	466		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	24.9 - 34.9	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	24.9 - 34.9	430		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	24.9 - 34.9	470		F	#	20	
Magnesium	mg/L	08/31/2010	N001	24.9 - 34.9	1200		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	24.9 - 34.9	0.024	B	F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	24.9 - 34.9	360		F	#	2	
Oxidation Reduction Potential	mV	08/31/2010	N001	24.9 - 34.9	-18		FR	#		
pH	s.u.	08/31/2010	N001	24.9 - 34.9	6.88		F	#		
Potassium	mg/L	08/31/2010	N001	24.9 - 34.9	40		FJ	#	0.54	
Selenium	mg/L	08/31/2010	N001	24.9 - 34.9	0.35		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	24.9 - 34.9	1600		F	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	24.9 - 34.9	13309		F	#		
Strontium	mg/L	08/31/2010	N001	24.9 - 34.9	8.4		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	24.9 - 34.9	7500		F	#	50	
Temperature	C	08/31/2010	N001	24.9 - 34.9	17.28		F	#		
Turbidity	NTU	08/31/2010	N001	24.9 - 34.9	2.27		F	#		
Uranium	mg/L	08/31/2010	N001	24.9 - 34.9	0.18		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	21.9 - 31.9	408		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	21.9 - 31.9	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	21.9 - 31.9	450		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	21.9 - 31.9	210		F	#	10	
Magnesium	mg/L	08/31/2010	N001	21.9 - 31.9	410		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	21.9 - 31.9	0.00057	U	F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	21.9 - 31.9	83		F	#	0.5	
Oxidation Reduction Potential	mV	08/31/2010	N001	21.9 - 31.9	-147		FR	#		
pH	s.u.	08/31/2010	N001	21.9 - 31.9	6.88		F	#		
Potassium	mg/L	08/31/2010	N001	21.9 - 31.9	15		FJ	#	0.54	
Selenium	mg/L	08/31/2010	N001	21.9 - 31.9	0.35		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	21.9 - 31.9	820		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	21.9 - 31.9	7395		F	#		
Strontium	mg/L	08/31/2010	N001	21.9 - 31.9	5.4		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	21.9 - 31.9	4000		F	#	25	
Temperature	C	08/31/2010	N001	21.9 - 31.9	19.81		F	#		
Turbidity	NTU	08/31/2010	N001	21.9 - 31.9	1.98		F	#		
Uranium	mg/L	08/31/2010	N001	21.9 - 31.9	0.07		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	26.8 - 36.8	291		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	26.8 - 36.8	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	08/31/2010	N002	26.8 - 36.8	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	26.8 - 36.8	510		F	#	0.024	
Calcium	mg/L	08/31/2010	N002	26.8 - 36.8	490		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	26.8 - 36.8	43		F	#	10	
Chloride	mg/L	08/31/2010	N002	26.8 - 36.8	45		F	#	10	
Magnesium	mg/L	08/31/2010	N001	26.8 - 36.8	240		F	#	0.026	
Magnesium	mg/L	08/31/2010	N002	26.8 - 36.8	250		F	#	0.013	
Manganese	mg/L	08/31/2010	N001	26.8 - 36.8	0.97		FJ	#	0.00023	
Manganese	mg/L	08/31/2010	N002	26.8 - 36.8	0.78		FJ	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	26.8 - 36.8	18		F	#	0.2	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N002	26.8 - 36.8	18		F	#	0.2	
Oxidation Reduction Potential	mV	08/31/2010	N001	26.8 - 36.8	35		FR	#		
pH	s.u.	08/31/2010	N001	26.8 - 36.8	6.88		F	#		
Potassium	mg/L	08/31/2010	N001	26.8 - 36.8	6.8		FJ	#	0.22	
Potassium	mg/L	08/31/2010	N002	26.8 - 36.8	8	EN	FJ	#	0.11	
Selenium	mg/L	08/31/2010	N001	26.8 - 36.8	0.2		FJ	#	0.000032	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Selenium	mg/L	08/31/2010	N002	26.8 - 36.8	0.19	E	FJ	#	0.000032	
Sodium	mg/L	08/31/2010	N001	26.8 - 36.8	350		F	#	0.013	
Sodium	mg/L	08/31/2010	N002	26.8 - 36.8	330		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	26.8 - 36.8	4448		F	#		
Strontium	mg/L	08/31/2010	N001	26.8 - 36.8	5.8		F	#	0.00016	
Strontium	mg/L	08/31/2010	N002	26.8 - 36.8	5.7		F	#	0.000078	
Sulfate	mg/L	08/31/2010	N001	26.8 - 36.8	2700		F	#	25	
Sulfate	mg/L	08/31/2010	N002	26.8 - 36.8	2700		F	#	25	
Temperature	C	08/31/2010	N001	26.8 - 36.8	16.46		F	#		
Turbidity	NTU	08/31/2010	N001	26.8 - 36.8	8.1		F	#		
Uranium	mg/L	08/31/2010	N001	26.8 - 36.8	0.041		F	#	0.0000029	
Uranium	mg/L	08/31/2010	N002	26.8 - 36.8	0.042		F	#	0.0000029	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	17 - 27.1	607		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	17 - 27.1	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	08/31/2010	N002	17 - 27.1	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	17 - 27.1	600		F	#	0.12	
Calcium	mg/L	08/31/2010	N002	17 - 27.1	620		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	17 - 27.1	82		F	#	10	
Chloride	mg/L	08/31/2010	N002	17 - 27.1	80		F	#	10	
Magnesium	mg/L	08/31/2010	N001	17 - 27.1	230		F	#	0.013	
Magnesium	mg/L	08/31/2010	N002	17 - 27.1	230		F	#	0.013	
Manganese	mg/L	08/31/2010	N001	17 - 27.1	4.1		F	#	0.00011	
Manganese	mg/L	08/31/2010	N002	17 - 27.1	4.1		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	17 - 27.1	5.2		F	#	0.1	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N002	17 - 27.1	5.1		F	#	0.1	
Oxidation Reduction Potential	mV	08/31/2010	N001	17 - 27.1	-145		FR	#		
pH	s.u.	08/31/2010	N001	17 - 27.1	6.7		F	#		
Potassium	mg/L	08/31/2010	N001	17 - 27.1	14	EN	FJ	#	0.11	
Potassium	mg/L	08/31/2010	N002	17 - 27.1	14		FJ	#	0.11	
Selenium	mg/L	08/31/2010	N001	17 - 27.1	0.32	E	FJ	#	0.000032	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Selenium	mg/L	08/31/2010	N002	17 - 27.1	0.31		F	#	0.000032	
Sodium	mg/L	08/31/2010	N001	17 - 27.1	350		F	#	0.066	
Sodium	mg/L	08/31/2010	N002	17 - 27.1	340		F	#	0.033	
Specific Conductance	umhos /cm	08/31/2010	N001	17 - 27.1	4763		F	#		
Strontium	mg/L	08/31/2010	N001	17 - 27.1	6		F	#	0.000078	
Strontium	mg/L	08/31/2010	N002	17 - 27.1	5.9		F	#	0.000078	
Sulfate	mg/L	08/31/2010	N001	17 - 27.1	2700		F	#	25	
Sulfate	mg/L	08/31/2010	N002	17 - 27.1	2600		F	#	25	
Temperature	C	08/31/2010	N001	17 - 27.1	17.55		F	#		
Turbidity	NTU	08/31/2010	N001	17 - 27.1	3.83		F	#		
Uranium	mg/L	08/31/2010	N001	17 - 27.1	0.055		F	#	0.0000029	
Uranium	mg/L	08/31/2010	N002	17 - 27.1	0.056		F	#	0.0000029	

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

REPORT DATE: 12/15/2010

Location: 0838 WELL W part of Dine College tract

Parameter	Units	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	21.9	-	31.9	426		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	21.9	-	31.9	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	21.9	-	31.9	700		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	21.9	-	31.9	540		F	#	10	
Magnesium	mg/L	08/31/2010	N001	21.9	-	31.9	670		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	21.9	-	31.9	0.062		F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	21.9	-	31.9	440		F	#	5	
Oxidation Reduction Potential	mV	08/31/2010	N001	21.9	-	31.9	-111		FR	#		
pH	s.u.	08/31/2010	N001	21.9	-	31.9	6.73		F	#		
Potassium	mg/L	08/31/2010	N001	21.9	-	31.9	25		FJ	#	0.54	
Selenium	mg/L	08/31/2010	N001	21.9	-	31.9	0.93		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	21.9	-	31.9	1300		F	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	21.9	-	31.9	11632		F	#		
Strontium	mg/L	08/31/2010	N001	21.9	-	31.9	11		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	21.9	-	31.9	5300		F	#	50	
Temperature	C	08/31/2010	N001	21.9	-	31.9	18.51		F	#		
Turbidity	NTU	08/31/2010	N001	21.9	-	31.9	5.58		F	#		
Uranium	mg/L	08/31/2010	N001	21.9	-	31.9	0.084		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	42 - 52	800		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	42 - 52	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	42 - 52	380		F	#	0.12	
Chloride	mg/L	08/31/2010	N001	42 - 52	1000		F	#	40	
Magnesium	mg/L	08/31/2010	N001	42 - 52	880		F	#	0.13	
Manganese	mg/L	08/31/2010	N001	42 - 52	0.068		F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	42 - 52	670		F	#	5	
Oxidation Reduction Potential	mV	08/31/2010	N001	42 - 52	-95		FR	#		
pH	s.u.	08/31/2010	N001	42 - 52	7.12		F	#		
Potassium	mg/L	08/31/2010	N001	42 - 52	81		FJ	#	1.1	
Selenium	mg/L	08/31/2010	N001	42 - 52	4		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	42 - 52	5600		F	#	0.33	
Specific Conductance	umhos/cm	08/31/2010	N001	42 - 52	28190		F	#		
Strontium	mg/L	08/31/2010	N001	42 - 52	8.4		F	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	42 - 52	16000		F	#	100	
Temperature	C	08/31/2010	N001	42 - 52	17.52		F	#		
Turbidity	NTU	08/31/2010	N001	42 - 52	6.69		F	#		
Uranium	mg/L	08/31/2010	N001	42 - 52	0.13		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	11.9 - 21.9	323		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	11.9 - 21.9	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	11.9 - 21.9	370		F	#	0.012	
Chloride	mg/L	08/31/2010	N001	11.9 - 21.9	58		F	#	10	
Magnesium	mg/L	08/31/2010	N001	11.9 - 21.9	130		F	#	0.013	
Manganese	mg/L	08/31/2010	N001	11.9 - 21.9	1.5		F	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	11.9 - 21.9	22		F	#	0.2	
Oxidation Reduction Potential	mV	08/31/2010	N001	11.9 - 21.9	138		FR	#		
pH	s.u.	08/31/2010	N001	11.9 - 21.9	6.84		F	#		
Potassium	mg/L	08/31/2010	N001	11.9 - 21.9	13		FJ	#	0.11	
Selenium	mg/L	08/31/2010	N001	11.9 - 21.9	0.26		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	11.9 - 21.9	280		F	#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	11.9 - 21.9	3382		F	#		
Strontium	mg/L	08/31/2010	N001	11.9 - 21.9	3.8		F	#	0.000078	
Sulfate	mg/L	08/31/2010	N001	11.9 - 21.9	1700		F	#	25	
Temperature	C	08/31/2010	N001	11.9 - 21.9	16.77		F	#		
Turbidity	NTU	08/31/2010	N001	11.9 - 21.9	3.72		F	#		
Uranium	mg/L	08/31/2010	N001	11.9 - 21.9	0.022		F	#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	28.91 - 38.91	684		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	28.91 - 38.91	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	28.91 - 38.91	480		F	#	0.06	
Chloride	mg/L	08/31/2010	N001	28.91 - 38.91	850		F	#	20	
Magnesium	mg/L	08/31/2010	N001	28.91 - 38.91	1800		F	#	0.065	
Manganese	mg/L	08/31/2010	N001	28.91 - 38.91	0.0075	B	F	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	28.91 - 38.91	800		F	#	5	
Oxidation Reduction Potential	mV	08/31/2010	N001	28.91 - 38.91	-87		FR	#		
pH	s.u.	08/31/2010	N001	28.91 - 38.91	7.23		F	#		
Potassium	mg/L	08/31/2010	N001	28.91 - 38.91	67		FJ	#	0.54	
Selenium	mg/L	08/31/2010	N001	28.91 - 38.91	1.9		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	28.91 - 38.91	2200		F	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	28.91 - 38.91	18295		F	#		
Strontium	mg/L	08/31/2010	N001	28.91 - 38.91	12		F	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	28.91 - 38.91	9400		F	#	50	
Temperature	C	08/31/2010	N001	28.91 - 38.91	17.8		F	#		
Turbidity	NTU	08/31/2010	N001	28.91 - 38.91	4.62		F	#		
Uranium	mg/L	08/31/2010	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: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Ammonia Total as N	mg/L	08/31/2010	0001	17.9 - 27.9	0.1	U	#	0.1	
Calcium	mg/L	08/31/2010	0001	17.9 - 27.9	550		#	0.06	
Magnesium	mg/L	08/31/2010	0001	17.9 - 27.9	200		#	0.013	
Manganese	mg/L	08/31/2010	0001	17.9 - 27.9	0.0049	B	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	17.9 - 27.9	38		#	1	
Oxidation Reduction Potential	mV	08/31/2010	N001	17.9 - 27.9	-214		R #		
pH	s.u.	08/31/2010	N001	17.9 - 27.9	7.02		#		
Potassium	mg/L	08/31/2010	0001	17.9 - 27.9	12		J #	0.11	
Selenium	mg/L	08/31/2010	0001	17.9 - 27.9	0.34		#	0.00016	
Sodium	mg/L	08/31/2010	0001	17.9 - 27.9	300		#	0.033	
Specific Conductance	umhos/cm	08/31/2010	N001	17.9 - 27.9	4368		#		
Strontium	mg/L	08/31/2010	0001	17.9 - 27.9	4.7		#	0.000078	
Temperature	C	08/31/2010	N001	17.9 - 27.9	22.09		#		
Turbidity	NTU	08/31/2010	N001	17.9 - 27.9	1000		#		
Uranium	mg/L	08/31/2010	0001	17.9 - 27.9	0.039		#	0.000015	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	45 - 142.58	1748		F #		
Ammonia Total as N	mg/L	08/31/2010	N001	45 - 142.58	3.9		F #	0.1	
Ammonia Total as N	mg/L	08/31/2010	N002	45 - 142.58	4.1		F #	0.1	
Calcium	mg/L	08/31/2010	N001	45 - 142.58	360		F #	0.12	
Calcium	mg/L	08/31/2010	N002	45 - 142.58	380		F #	0.12	
Chloride	mg/L	08/31/2010	N001	45 - 142.58	1100		F #	40	
Chloride	mg/L	08/31/2010	N002	45 - 142.58	1000		F #	40	
Magnesium	mg/L	08/31/2010	N001	45 - 142.58	490		F #	0.13	
Magnesium	mg/L	08/31/2010	N002	45 - 142.58	530		F #	0.13	
Manganese	mg/L	08/31/2010	N001	45 - 142.58	2.8		F #	0.0011	
Manganese	mg/L	08/31/2010	N002	45 - 142.58	3		F #	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	45 - 142.58	0.014		F #	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N002	45 - 142.58	0.016		F #	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	45 - 142.58	-155		FR #		
pH	s.u.	08/31/2010	N001	45 - 142.58	6.54		F #		
Potassium	mg/L	08/31/2010	N001	45 - 142.58	44		FJ #	1.1	
Potassium	mg/L	08/31/2010	N002	45 - 142.58	49		FJ #	1.1	
Selenium	mg/L	08/31/2010	N001	45 - 142.58	0.054		F #	0.00016	

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

REPORT DATE: 12/15/2010

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	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Selenium	mg/L	08/31/2010	N002	45 - 142.58	0.052		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	45 - 142.58	6000		F	#	0.33	
Sodium	mg/L	08/31/2010	N002	45 - 142.58	5900		F	#	0.33	
Specific Conductance	umhos /cm	08/31/2010	N001	45 - 142.58	26400		F	#		
Strontium	mg/L	08/31/2010	N001	45 - 142.58	18		F	#	0.00078	
Strontium	mg/L	08/31/2010	N002	45 - 142.58	19		F	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	45 - 142.58	16000		F	#	100	
Sulfate	mg/L	08/31/2010	N002	45 - 142.58	15000		F	#	100	
Temperature	C	08/31/2010	N001	45 - 142.58	18.1		F	#		
Turbidity	NTU	08/31/2010	N001	45 - 142.58	8.15		F	#		
Uranium	mg/L	08/31/2010	N001	45 - 142.58	0.021		F	#	0.000015	
Uranium	mg/L	08/31/2010	N002	45 - 142.58	0.022		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1007 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	36.8	- 46.3	1440		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	36.8	- 46.3	39		FQ	#	5	
Calcium	mg/L	09/02/2010	N001	36.8	- 46.3	440		FQ	#	0.12	
Chloride	mg/L	09/02/2010	N001	36.8	- 46.3	640		FQ	#	40	
Magnesium	mg/L	09/02/2010	N001	36.8	- 46.3	2300		FQ	#	0.13	
Manganese	mg/L	09/02/2010	N001	36.8	- 46.3	1.4		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	36.8	- 46.3	700		FQ	#	5	
Oxidation Reduction Potential	mV	09/02/2010	N001	36.8	- 46.3	-353		FQR	#		
pH	s.u.	09/02/2010	N001	36.8	- 46.3	6.53		FQ	#		
Potassium	mg/L	09/02/2010	N001	36.8	- 46.3	130		FQJ	#	1.1	
Selenium	mg/L	09/02/2010	N001	36.8	- 46.3	0.1		FQ	#	0.0016	
Sodium	mg/L	09/02/2010	N001	36.8	- 46.3	2400		FQ	#	0.33	
Specific Conductance	umhos/cm	09/02/2010	N001	36.8	- 46.3	21240		FQ	#		
Strontium	mg/L	09/02/2010	N001	36.8	- 46.3	11		FQ	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	36.8	- 46.3	14000		FQ	#	100	
Temperature	C	09/02/2010	N001	36.8	- 46.3	18.9		FQ	#		
Turbidity	NTU	09/02/2010	N001	36.8	- 46.3	7.69		FQ	#		
Uranium	mg/L	09/02/2010	N001	36.8	- 46.3	2.5		FQ	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1011 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	09/02/2010	0001	16.5	-	26	0.13		FQ	#	0.1	
Calcium	mg/L	09/02/2010	0001	16.5	-	26	410		FQ	#	0.012	
Magnesium	mg/L	09/02/2010	0001	16.5	-	26	970		FQ	#	0.13	
Manganese	mg/L	09/02/2010	0001	16.5	-	26	0.0086		FQ	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	16.5	-	26	150		FQ	#	1	
Oxidation Reduction Potential	mV	09/02/2010	N001	16.5	-	26	-95		FQR	#		
pH	s.u.	09/02/2010	N001	16.5	-	26	6.95		FQ	#		
Potassium	mg/L	09/02/2010	0001	16.5	-	26	80		FQJ	#	0.11	
Selenium	mg/L	09/02/2010	0001	16.5	-	26	0.21		FQ	#	0.00016	
Sodium	mg/L	09/02/2010	0001	16.5	-	26	1600		FQ	#	0.066	
Specific Conductance	umhos/cm	09/02/2010	N001	16.5	-	26	12040		FQ	#		
Strontium	mg/L	09/02/2010	0001	16.5	-	26	6		FQ	#	0.000078	
Temperature	C	09/02/2010	N001	16.5	-	26	16.44		FQ	#		
Turbidity	NTU	09/02/2010	N001	16.5	-	26	1000	>	FQ	#		
Uranium	mg/L	09/02/2010	0001	16.5	-	26	0.42		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1049 WELL Many Devils Wash, just E of knickpoint, flush mount.

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	4.3 - 9.3	659		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	4.3 - 9.3	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	4.3 - 9.3	390		F	#	0.12	
Chloride	mg/L	08/31/2010	N001	4.3 - 9.3	1600		F	#	40	
Magnesium	mg/L	08/31/2010	N001	4.3 - 9.3	1300		F	#	0.13	
Manganese	mg/L	08/31/2010	N001	4.3 - 9.3	0.0011	U	F	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	4.3 - 9.3	550		F	#	5	
Oxidation Reduction Potential	mV	08/31/2010	N001	4.3 - 9.3	189.5		F	#		
pH	s.u.	08/31/2010	N001	4.3 - 9.3	7.24		F	#		
Potassium	mg/L	08/31/2010	N001	4.3 - 9.3	53		FJ	#	1.1	
Selenium	mg/L	08/31/2010	N001	4.3 - 9.3	1.4		F	#	0.00016	
Sodium	mg/L	08/31/2010	N001	4.3 - 9.3	6000		F	#	0.33	
Specific Conductance	umhos/cm	08/31/2010	N001	4.3 - 9.3	14371		F	#		
Strontium	mg/L	08/31/2010	N001	4.3 - 9.3	9.3		F	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	4.3 - 9.3	18000		F	#	100	
Temperature	C	08/31/2010	N001	4.3 - 9.3	18.53		F	#		
Turbidity	NTU	08/31/2010	N001	4.3 - 9.3	6.03		F	#		
Uranium	mg/L	08/31/2010	N001	4.3 - 9.3	0.16		F	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1058 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	41.7	-	51.2	602		FQ	#		
Ammonia Total as N	mg/L	08/31/2010	N001	41.7	-	51.2	2.6		FQ	#	0.1	
Calcium	mg/L	08/31/2010	N001	41.7	-	51.2	230		FQ	#	0.06	
Chloride	mg/L	08/31/2010	N001	41.7	-	51.2	1200		FQ	#	20	
Magnesium	mg/L	08/31/2010	N001	41.7	-	51.2	130		FQ	#	0.065	
Manganese	mg/L	08/31/2010	N001	41.7	-	51.2	0.2		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	41.7	-	51.2	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	08/31/2010	N001	41.7	-	51.2	-3.1		FQ	#		
pH	s.u.	08/31/2010	N001	41.7	-	51.2	7.04		FQ	#		
Potassium	mg/L	08/31/2010	N001	41.7	-	51.2	22		FQJ	#	0.54	
Selenium	mg/L	08/31/2010	N001	41.7	-	51.2	0.00028		FQ	#	0.000032	
Sodium	mg/L	08/31/2010	N001	41.7	-	51.2	2600		FQ	#	0.16	
Specific Conductance	umhos/cm	08/31/2010	N001	41.7	-	51.2	13624		FQ	#		
Strontium	mg/L	08/31/2010	N001	41.7	-	51.2	10		FQ	#	0.00039	
Sulfate	mg/L	08/31/2010	N001	41.7	-	51.2	5600		FQ	#	50	
Temperature	C	08/31/2010	N001	41.7	-	51.2	17.8		FQ	#		
Turbidity	NTU	08/31/2010	N001	41.7	-	51.2	3.35		FQ	#		
Uranium	mg/L	08/31/2010	N001	41.7	-	51.2	0.0052		FQ	#	0.000029	

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

REPORT DATE: 12/15/2010

Location: 1059 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	39.5	-	49	578		FQ	#		
Ammonia Total as N	mg/L	08/31/2010	N001	39.5	-	49	1.8		FQ	#	0.1	
Calcium	mg/L	08/31/2010	N001	39.5	-	49	350		FQ	#	0.12	
Chloride	mg/L	08/31/2010	N001	39.5	-	49	720		FQ	#	40	
Magnesium	mg/L	08/31/2010	N001	39.5	-	49	450		FQ	#	0.13	
Manganese	mg/L	08/31/2010	N001	39.5	-	49	0.1		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	39.5	-	49	350		FQ	#	2	
Oxidation Reduction Potential	mV	08/31/2010	N001	39.5	-	49	187		FQ	#		
pH	s.u.	08/31/2010	N001	39.5	-	49	6.91		FQ	#		
Potassium	mg/L	08/31/2010	N001	39.5	-	49	35		FQJ	#	1.1	
Selenium	mg/L	08/31/2010	N001	39.5	-	49	0.013		FQ	#	0.00016	
Sodium	mg/L	08/31/2010	N001	39.5	-	49	3400		FQ	#	0.33	
Specific Conductance	umhos/cm	08/31/2010	N001	39.5	-	49	18665		FQ	#		
Strontium	mg/L	08/31/2010	N001	39.5	-	49	17		FQ	#	0.00078	
Sulfate	mg/L	08/31/2010	N001	39.5	-	49	9500		FQ	#	100	
Temperature	C	08/31/2010	N001	39.5	-	49	16.22		FQ	#		
Turbidity	NTU	08/31/2010	N001	39.5	-	49	4.89		FQ	#		
Uranium	mg/L	08/31/2010	N001	39.5	-	49	0.063		FQ	#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1068 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	09/02/2010	0001	6.95 - 8.95	22		FQ	#	1	
Calcium	mg/L	09/02/2010	0001	6.95 - 8.95	460		FQ	#	0.06	
Chloride	mg/L	09/02/2010	0001	6.95 - 8.95	250		FQ	#	10	
Magnesium	mg/L	09/02/2010	0001	6.95 - 8.95	730		FQ	#	0.065	
Manganese	mg/L	09/02/2010	0001	6.95 - 8.95	1.1		FQ	#	0.00057	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	6.95 - 8.95	250		FQ	#	2	
Oxidation Reduction Potential	mV	09/02/2010	N001	6.95 - 8.95	-174		FQR	#		
pH	s.u.	09/02/2010	N001	6.95 - 8.95	6.56		FQ	#		
Potassium	mg/L	09/02/2010	0001	6.95 - 8.95	55		FQJ	#	0.54	
Selenium	mg/L	09/02/2010	0001	6.95 - 8.95	0.019		FQ	#	0.00016	
Sodium	mg/L	09/02/2010	0001	6.95 - 8.95	890		FQ	#	0.033	
Specific Conductance	umhos/cm	09/02/2010	N001	6.95 - 8.95	9460		FQ	#		
Strontium	mg/L	09/02/2010	0001	6.95 - 8.95	8.4		FQ	#	0.00039	
Sulfate	mg/L	09/02/2010	0001	6.95 - 8.95	4900		FQ	#	25	
Temperature	C	09/02/2010	N001	6.95 - 8.95	26		FQ	#		
Turbidity	NTU	09/02/2010	N001	6.95 - 8.95	1000	>	FQ	#		
Uranium	mg/L	09/02/2010	0001	6.95 - 8.95	0.55		FQ	#	0.00029	

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

REPORT DATE: 12/15/2010

Location: 1070 WELL

Parameter	Units	Sample		Depth Range			Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	52.5	-	62	734		#		
Ammonia Total as N	mg/L	09/01/2010	N001	52.5	-	62	7.9		#	0.5	
Calcium	mg/L	09/01/2010	N001	52.5	-	62	350		#	0.12	
Chloride	mg/L	09/01/2010	N001	52.5	-	62	1300		#	40	
Magnesium	mg/L	09/01/2010	N001	52.5	-	62	1100		#	0.13	
Manganese	mg/L	09/01/2010	N001	52.5	-	62	0.25		#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	52.5	-	62	710		#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	52.5	-	62	21		R #		
pH	s.u.	09/01/2010	N001	52.5	-	62	6.94		#		
Potassium	mg/L	09/01/2010	N001	52.5	-	62	81		J #	1.1	
Selenium	mg/L	09/01/2010	N001	52.5	-	62	3		#	0.00016	
Sodium	mg/L	09/01/2010	N001	52.5	-	62	4900		#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	52.5	-	62	28784		#		
Strontium	mg/L	09/01/2010	N001	52.5	-	62	8.7		#	0.00078	
Sulfate	mg/L	09/01/2010	N001	52.5	-	62	16000		#	100	
Temperature	C	09/01/2010	N001	52.5	-	62	19.9		#		
Turbidity	NTU	09/01/2010	N001	52.5	-	62	7.93		#		
Uranium	mg/L	09/01/2010	N001	52.5	-	62	0.087		#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1071 WELL

Parameter	Units	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	36.5	-	46	515			#		
Ammonia Total as N	mg/L	09/01/2010	N001	36.5	-	46	52			#	5	
Calcium	mg/L	09/01/2010	N001	36.5	-	46	610			#	0.12	
Chloride	mg/L	09/01/2010	N001	36.5	-	46	1100			#	40	
Magnesium	mg/L	09/01/2010	N001	36.5	-	46	1000			#	0.13	
Manganese	mg/L	09/01/2010	N001	36.5	-	46	12			#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	36.5	-	46	950			#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	36.5	-	46	172		R	#		
pH	s.u.	09/01/2010	N001	36.5	-	46	6.99			#		
Potassium	mg/L	09/01/2010	N001	36.5	-	46	120		J	#	1.1	
Selenium	mg/L	09/01/2010	N001	36.5	-	46	2.8			#	0.00016	
Sodium	mg/L	09/01/2010	N001	36.5	-	46	2800			#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	36.5	-	46	20678			#		
Strontium	mg/L	09/01/2010	N001	36.5	-	46	7.5			#	0.00078	
Sulfate	mg/L	09/01/2010	N001	36.5	-	46	8900			#	100	
Temperature	C	09/01/2010	N001	36.5	-	46	20.38			#		
Turbidity	NTU	09/01/2010	N001	36.5	-	46	3.56			#		
Uranium	mg/L	09/01/2010	N001	36.5	-	46	0.1			#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1073 WELL

Parameter	Units	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	0001	40.5	-	50	232			#		
Ammonia Total as N	mg/L	09/02/2010	0001	40.5	-	50	130			#	10	
Calcium	mg/L	09/02/2010	0001	40.5	-	50	520			#	0.12	
Chloride	mg/L	09/02/2010	0001	40.5	-	50	1100			#	40	
Magnesium	mg/L	09/02/2010	0001	40.5	-	50	1600			#	0.13	
Manganese	mg/L	09/02/2010	0001	40.5	-	50	1.1			#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	40.5	-	50	1200			#	10	
Oxidation Reduction Potential	mV	09/02/2010	N001	40.5	-	50	225.7			#		
pH	s.u.	09/02/2010	N001	40.5	-	50	6.84			#		
Potassium	mg/L	09/02/2010	0001	40.5	-	50	130		J	#	1.1	
Selenium	mg/L	09/02/2010	0001	40.5	-	50	2.5			#	0.00016	
Sodium	mg/L	09/02/2010	0001	40.5	-	50	2500			#	0.066	
Specific Conductance	umhos/cm	09/02/2010	N001	40.5	-	50	22702			#		
Strontium	mg/L	09/02/2010	0001	40.5	-	50	9.6			#	0.00078	
Sulfate	mg/L	09/02/2010	0001	40.5	-	50	8800			#	100	
Temperature	C	09/02/2010	N001	40.5	-	50	18.36			#		
Turbidity	NTU	09/02/2010	N001	40.5	-	50	17.4			#		
Uranium	mg/L	09/02/2010	0001	40.5	-	50	0.061			#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1074 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	27	-	36.5	1180		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	27	-	36.5	4.6		FQ	#	0.1	
Calcium	mg/L	09/02/2010	N001	27	-	36.5	500		FQ	#	0.12	
Chloride	mg/L	09/02/2010	N001	27	-	36.5	1100		FQ	#	40	
Magnesium	mg/L	09/02/2010	N001	27	-	36.5	2100		FQ	#	0.13	
Manganese	mg/L	09/02/2010	N001	27	-	36.5	1.6		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	27	-	36.5	1300		FQ	#	10	
Oxidation Reduction Potential	mV	09/02/2010	N001	27	-	36.5	-285		FQR	#		
pH	s.u.	09/02/2010	N001	27	-	36.5	6.53		FQ	#		
Potassium	mg/L	09/02/2010	N001	27	-	36.5	54		FQJ	#	1.1	
Selenium	mg/L	09/02/2010	N001	27	-	36.5	0.32		FQ	#	0.0016	
Sodium	mg/L	09/02/2010	N001	27	-	36.5	2000		FQ	#	0.066	
Specific Conductance	umhos/cm	09/02/2010	N001	27	-	36.5	21600		FQ	#		
Strontium	mg/L	09/02/2010	N001	27	-	36.5	9.7		FQ	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	27	-	36.5	8800		FQ	#	100	
Temperature	C	09/02/2010	N001	27	-	36.5	21.15		FQ	#		
Turbidity	NTU	09/02/2010	N001	27	-	36.5	5.24		FQ	#		
Uranium	mg/L	09/02/2010	N001	27	-	36.5	2		FQ	#	0.00015	

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

REPORT DATE: 12/15/2010

Location: 1078 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	35.5 - 45	601		#		
Ammonia Total as N	mg/L	09/01/2010	N001	35.5 - 45	2.4		#	0.1	
Calcium	mg/L	09/01/2010	N001	35.5 - 45	380		#	0.12	
Chloride	mg/L	09/01/2010	N001	35.5 - 45	1100		#	40	
Magnesium	mg/L	09/01/2010	N001	35.5 - 45	990		#	0.13	
Manganese	mg/L	09/01/2010	N001	35.5 - 45	0.065		#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	35.5 - 45	640		#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	35.5 - 45	196		R #		
pH	s.u.	09/01/2010	N001	35.5 - 45	7.43		#		
Potassium	mg/L	09/01/2010	N001	35.5 - 45	70		J #	1.1	
Selenium	mg/L	09/01/2010	N001	35.5 - 45	3.2		#	0.00016	
Sodium	mg/L	09/01/2010	N001	35.5 - 45	4200		#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	35.5 - 45	25187		#		
Strontium	mg/L	09/01/2010	N001	35.5 - 45	8.9		#	0.00078	
Sulfate	mg/L	09/01/2010	N001	35.5 - 45	14000		#	100	
Temperature	C	09/01/2010	N001	35.5 - 45	17.5		#		
Turbidity	NTU	09/01/2010	N001	35.5 - 45	5.34		#		
Uranium	mg/L	09/01/2010	N001	35.5 - 45	0.12		#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1079 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID			Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N001	10.5 - 20	290		F	#		
Ammonia Total as N	mg/L	08/31/2010	N001	10.5 - 20	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	08/31/2010	N002	10.5 - 20	0.1	U	F	#	0.1	
Calcium	mg/L	08/31/2010	N001	10.5 - 20	790		F	#	0.024	
Calcium	mg/L	08/31/2010	N002	10.5 - 20	800		F	#	0.024	
Chloride	mg/L	08/31/2010	N001	10.5 - 20	130		F	#	10	
Chloride	mg/L	08/31/2010	N002	10.5 - 20	140		F	#	10	
Magnesium	mg/L	08/31/2010	N001	10.5 - 20	160		F	#	0.026	
Magnesium	mg/L	08/31/2010	N002	10.5 - 20	160		F	#	0.026	
Manganese	mg/L	08/31/2010	N001	10.5 - 20	0.002	B	F	#	0.00023	
Manganese	mg/L	08/31/2010	N002	10.5 - 20	0.0028	B	F	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	10.5 - 20	89		F	#	0.5	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N002	10.5 - 20	92		F	#	0.5	
Oxidation Reduction Potential	mV	08/31/2010	N001	10.5 - 20	-160		FR	#		
pH	s.u.	08/31/2010	N001	10.5 - 20	6.62		F	#		
Potassium	mg/L	08/31/2010	N001	10.5 - 20	11		FJ	#	0.22	
Potassium	mg/L	08/31/2010	N002	10.5 - 20	11		FJ	#	0.22	
Selenium	mg/L	08/31/2010	N001	10.5 - 20	0.54		F	#	0.000032	

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

REPORT DATE: 12/15/2010

Location: 1079 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Selenium	mg/L	08/31/2010	N002	10.5 - 20	0.46		F #	0.00016	
Sodium	mg/L	08/31/2010	N001	10.5 - 20	330		F #	0.013	
Sodium	mg/L	08/31/2010	N002	10.5 - 20	330		F #	0.013	
Specific Conductance	umhos/cm	08/31/2010	N001	10.5 - 20	4845		F #		
Strontium	mg/L	08/31/2010	N001	10.5 - 20	6.7		F #	0.00016	
Strontium	mg/L	08/31/2010	N002	10.5 - 20	6.7		F #	0.00016	
Sulfate	mg/L	08/31/2010	N001	10.5 - 20	2500		F #	25	
Sulfate	mg/L	08/31/2010	N002	10.5 - 20	2600		F #	25	
Temperature	C	08/31/2010	N001	10.5 - 20	17		F #		
Turbidity	NTU	08/31/2010	N001	10.5 - 20	5.15		F #		
Uranium	mg/L	08/31/2010	N001	10.5 - 20	0.037		F #	0.0000029	
Uranium	mg/L	08/31/2010	N002	10.5 - 20	0.036		F #	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1091 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	33 - 43	1020		#		
Ammonia Total as N	mg/L	09/01/2010	N001	33 - 43	0.1	U	#	0.1	
Calcium	mg/L	09/01/2010	N001	33 - 43	410		#	0.12	
Chloride	mg/L	09/01/2010	N001	33 - 43	1300		#	40	
Magnesium	mg/L	09/01/2010	N001	33 - 43	2200		#	0.13	
Manganese	mg/L	09/01/2010	N001	33 - 43	1		#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	33 - 43	1100		#	10	
Oxidation Reduction Potential	mV	09/01/2010	N001	33 - 43	206		R #		
pH	s.u.	09/01/2010	N001	33 - 43	6.75		#		
Potassium	mg/L	09/01/2010	N001	33 - 43	80		J #	1.1	
Selenium	mg/L	09/01/2010	N001	33 - 43	1		#	0.00016	
Sodium	mg/L	09/01/2010	N001	33 - 43	3400		#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	33 - 43	26490		#		
Strontium	mg/L	09/01/2010	N001	33 - 43	12		#	0.00078	
Sulfate	mg/L	09/01/2010	N001	33 - 43	14000		#	100	
Temperature	C	09/01/2010	N001	33 - 43	22.4		#		
Turbidity	NTU	09/01/2010	N001	33 - 43	2.23		#		
Uranium	mg/L	09/01/2010	N001	33 - 43	0.11		#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1092 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	33 - 43	532		#		
Ammonia Total as N	mg/L	09/01/2010	0001	33 - 43	140		#	10	
Calcium	mg/L	09/01/2010	0001	33 - 43	490		#	0.12	
Chloride	mg/L	09/01/2010	0001	33 - 43	1000		#	40	
Magnesium	mg/L	09/01/2010	0001	33 - 43	1300		#	0.13	
Manganese	mg/L	09/01/2010	0001	33 - 43	11		#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	0001	33 - 43	1300		#	10	
Oxidation Reduction Potential	mV	09/01/2010	N001	33 - 43	110		R #		
pH	s.u.	09/01/2010	N001	33 - 43	6.78		#		
Potassium	mg/L	09/01/2010	0001	33 - 43	100		J #	1.1	
Selenium	mg/L	09/01/2010	0001	33 - 43	0.45		#	0.00016	
Sodium	mg/L	09/01/2010	0001	33 - 43	2600		#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	33 - 43	23205		#		
Strontium	mg/L	09/01/2010	0001	33 - 43	9.2		#	0.00078	
Sulfate	mg/L	09/01/2010	0001	33 - 43	9100		#	100	
Temperature	C	09/01/2010	N001	33 - 43	23.05		#		
Turbidity	NTU	09/01/2010	N001	33 - 43	37.7		#		
Uranium	mg/L	09/01/2010	0001	33 - 43	0.045		#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1093R WELL a replacement extraction well for 1093

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	34 - 38	638		#		
Ammonia Total as N	mg/L	09/01/2010	N001	34 - 38	620		#	50	
Calcium	mg/L	09/01/2010	N001	34 - 38	860		#	0.12	
Chloride	mg/L	09/01/2010	N001	34 - 38	740		#	40	
Magnesium	mg/L	09/01/2010	N001	34 - 38	2300		#	0.13	
Manganese	mg/L	09/01/2010	N001	34 - 38	32		#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	34 - 38	2400		#	20	
Oxidation Reduction Potential	mV	09/01/2010	N001	34 - 38	196		R #		
pH	s.u.	09/01/2010	N001	34 - 38	6.58		#		
Potassium	mg/L	09/01/2010	N001	34 - 38	250		J #	1.1	
Selenium	mg/L	09/01/2010	N001	34 - 38	0.71		#	0.00016	
Sodium	mg/L	09/01/2010	N001	34 - 38	2200		#	0.066	
Specific Conductance	umhos/cm	09/01/2010	N001	34 - 38	26923		#		
Strontium	mg/L	09/01/2010	N001	34 - 38	12		#	0.00078	
Sulfate	mg/L	09/01/2010	N001	34 - 38	7600		#	100	
Temperature	C	09/01/2010	N001	34 - 38	22.3		#		
Turbidity	NTU	09/01/2010	N001	34 - 38	3.54		#		
Uranium	mg/L	09/01/2010	N001	34 - 38	0.12		#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1095 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	39 - 49	376		#		
Ammonia Total as N	mg/L	09/01/2010	N001	39 - 49	710		#	20	
Calcium	mg/L	09/01/2010	N001	39 - 49	800		#	0.12	
Chloride	mg/L	09/01/2010	N001	39 - 49	320		#	40	
Magnesium	mg/L	09/01/2010	N001	39 - 49	1300		#	0.13	
Manganese	mg/L	09/01/2010	N001	39 - 49	31		#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	39 - 49	1600		#	10	
Oxidation Reduction Potential	mV	09/01/2010	N001	39 - 49	160		R #		
pH	s.u.	09/01/2010	N001	39 - 49	6.55		#		
Potassium	mg/L	09/01/2010	N001	39 - 49	160		J #	1.1	
Selenium	mg/L	09/01/2010	N001	39 - 49	0.2		#	0.00016	
Sodium	mg/L	09/01/2010	N001	39 - 49	1000		#	0.066	
Specific Conductance	umhos/cm	09/01/2010	N001	39 - 49	18845		#		
Strontium	mg/L	09/01/2010	N001	39 - 49	7.8		#	0.00078	
Sulfate	mg/L	09/01/2010	N001	39 - 49	5100		#	100	
Temperature	C	09/01/2010	N001	39 - 49	17		#		
Turbidity	NTU	09/01/2010	N001	39 - 49	1.79		#		
Uranium	mg/L	09/01/2010	N001	39 - 49	0.049		#	0.000015	

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

REPORT DATE: 12/15/2010

Location: 1096 WELL

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID			Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	57.5 - 66.5	694		#		
Ammonia Total as N	mg/L	09/01/2010	N001	57.5 - 66.5	7.1		#	0.5	
Calcium	mg/L	09/01/2010	N001	57.5 - 66.5	410		#	0.12	
Chloride	mg/L	09/01/2010	N001	57.5 - 66.5	1100		#	40	
Magnesium	mg/L	09/01/2010	N001	57.5 - 66.5	1100		#	0.13	
Manganese	mg/L	09/01/2010	N001	57.5 - 66.5	0.14		#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	57.5 - 66.5	610		#	5	
Oxidation Reduction Potential	mV	09/01/2010	N001	57.5 - 66.5	-107		R #		
pH	s.u.	09/01/2010	N001	57.5 - 66.5	7.22		#		
Potassium	mg/L	09/01/2010	N001	57.5 - 66.5	84		J #	1.1	
Selenium	mg/L	09/01/2010	N001	57.5 - 66.5	3.1		#	0.00016	
Sodium	mg/L	09/01/2010	N001	57.5 - 66.5	4900		#	0.33	
Specific Conductance	umhos/cm	09/01/2010	N001	57.5 - 66.5	25935		#		
Strontium	mg/L	09/01/2010	N001	57.5 - 66.5	9.4		#	0.00078	
Sulfate	mg/L	09/01/2010	N001	57.5 - 66.5	15000		#	100	
Temperature	C	09/01/2010	N001	57.5 - 66.5	22.2		#		
Turbidity	NTU	09/01/2010	N001	57.5 - 66.5	4.67		#		
Uranium	mg/L	09/01/2010	N001	57.5 - 66.5	0.1		#	0.000015	

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

REPORT DATE: 12/15/2010

Location: DM7 WELL Just SW of Disposal Cell

Parameter	Units	Sample		Depth Range (Ft BLS)	Result	Lab	Qualifiers		Detection Limit	Uncertainty
		Date	ID				Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	38 - 53	324		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	38 - 53	0.49		FQ	#	0.1	
Chloride	mg/L	09/02/2010	N001	38 - 53	1700		FQ	#	40	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	38 - 53	730		FQ	#	5	
Oxidation Reduction Potential	mV	09/02/2010	N001	38 - 53	243.5		FQ	#		
pH	s.u.	09/02/2010	N001	38 - 53	7.19		FQ	#		
Specific Conductance	umhos /cm	09/02/2010	N001	38 - 53	21324		FQ	#		
Sulfate	mg/L	09/02/2010	N001	38 - 53	9600		FQ	#	100	
Temperature	C	09/02/2010	N001	38 - 53	26.16		FQ	#		
Turbidity	NTU	09/02/2010	N001	38 - 53	6.29		FQ	#		

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

REPORT DATE: 12/15/2010

Location: MW1 WELL Just N of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	-	1176		FQ	#		
Ammonia Total as N	mg/L	09/02/2010	N001	-	0.57		FQ	#	0.1	
Calcium	mg/L	09/02/2010	N001	-	66		FQ	#	0.12	
Chloride	mg/L	09/02/2010	N001	-	4500		FQ	#	100	
Magnesium	mg/L	09/02/2010	N001	-	32		FQ	#	0.13	
Manganese	mg/L	09/02/2010	N001	-	0.075		FQ	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	-	0.057		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	-	-145		FQR	#		
pH	s.u.	09/02/2010	N001	-	7.05		FQ	#		
Potassium	mg/L	09/02/2010	N001	-	23		FQJ	#	1.1	
Selenium	mg/L	09/02/2010	N001	-	0.00068		FQ	#	0.00016	
Sodium	mg/L	09/02/2010	N001	-	3600		FQ	#	0.33	
Specific Conductance	umhos /cm	09/02/2010	N001	-	19000		FQ	#		
Strontium	mg/L	09/02/2010	N001	-	7.5		FQ	#	0.00078	
Sulfate	mg/L	09/02/2010	N001	-	2100		FQ	#	100	
Temperature	C	09/02/2010	N001	-	17.39		FQ	#		
Turbidity	NTU	09/02/2010	N001	-	4.56		FQ	#		
Uranium	mg/L	09/02/2010	N001	-	0.00036		FQ	#	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.

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**Surface Water Quality Data
Floodplain Locations**

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers			Detection Limit	Uncertainty
					Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	0001	132			#		
Ammonia Total as N	mg/L	09/01/2010	0001	0.1	U		#	0.1	
Calcium	mg/L	09/01/2010	0001	53			#	0.012	
Chloride	mg/L	09/01/2010	0001	11			#	0.2	
Magnesium	mg/L	09/01/2010	0001	9			#	0.013	
Manganese	mg/L	09/01/2010	0001	0.0029	B	U	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	0001	0.35			#	0.01	
Potassium	mg/L	09/01/2010	0001	2.3			#	0.11	
Selenium	mg/L	09/01/2010	0001	0.0006			#	0.000032	
Sodium	mg/L	09/01/2010	0001	27			#	0.0066	
Strontium	mg/L	09/01/2010	0001	0.68			#	0.000078	
Sulfate	mg/L	09/01/2010	0001	120			#	1	
Uranium	mg/L	09/01/2010	0001	0.0013			#	0.0000029	
Ammonia Total as N	mg/L	09/01/2010	N001	0.1	U		#	0.1	
Calcium	mg/L	09/01/2010	N001	61			#	0.012	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data		
Chloride	mg/L	09/01/2010	N001	11		#	0.2	
Magnesium	mg/L	09/01/2010	N001	11		#	0.013	
Manganese	mg/L	09/01/2010	N001	0.33		#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	0.3		#	0.01	
Potassium	mg/L	09/01/2010	N001	3		#	0.11	
Selenium	mg/L	09/01/2010	N001	0.0008		#	0.000032	
Sodium	mg/L	09/01/2010	N001	28		#	0.0066	
Strontium	mg/L	09/01/2010	N001	0.75		#	0.000078	
Sulfate	mg/L	09/01/2010	N001	110		#	1	
Uranium	mg/L	09/01/2010	N001	0.0017		#	0.0000029	
Oxidation Reduction Potential	mV	09/01/2010	N002	-79.1	R	#		
pH	s.u.	09/01/2010	N002	8.2		#		
Specific Conductance	umhos/cm	09/01/2010	N002	481		#		
Temperature	C	09/01/2010	N002	18.24		#		
Turbidity	NTU	09/01/2010	N002	365		#		

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Calcium	mg/L	09/02/2010	0001	56			#	0.012	
Chloride	mg/L	09/02/2010	0001	12			#	0.4	
Magnesium	mg/L	09/02/2010	0001	9.7			#	0.013	
Manganese	mg/L	09/02/2010	0001	0.0035	B		#	0.00011	
Potassium	mg/L	09/02/2010	0001	2.3			#	0.11	
Selenium	mg/L	09/02/2010	0001	0.00073			#	0.000032	
Sodium	mg/L	09/02/2010	0001	28			#	0.0066	
Strontium	mg/L	09/02/2010	0001	0.69			#	0.000078	
Sulfate	mg/L	09/02/2010	0001	110			#	1	
Uranium	mg/L	09/02/2010	0001	0.0014			#	0.0000029	
Ammonia Total as N	mg/L	09/02/2010	N001	0.1	U	J	#	0.1	
Calcium	mg/L	09/02/2010	N001	57			#	0.012	
Magnesium	mg/L	09/02/2010	N001	10			#	0.013	
Manganese	mg/L	09/02/2010	N001	0.099			#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	0.36		J	#	0.01	
Potassium	mg/L	09/02/2010	N001	2.5			#	0.11	
Selenium	mg/L	09/02/2010	N001	0.00069			#	0.000032	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data		
Sodium	mg/L	09/02/2010	N001	28			#	0.0066
Strontium	mg/L	09/02/2010	N001	0.7			#	0.000078
Uranium	mg/L	09/02/2010	N001	0.0014			#	0.0000029
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N002	115			#	
Oxidation Reduction Potential	mV	09/02/2010	N002	138.5			#	
pH	s.u.	09/02/2010	N002	8.12			#	
Specific Conductance	umhos/cm	09/02/2010	N002	497			#	
Temperature	C	09/02/2010	N002	17.79			#	
Turbidity	NTU	09/02/2010	N002	160			#	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	0001	167			#		
Ammonia Total as N	mg/L	09/01/2010	0001	0.1	U		#	0.1	
Calcium	mg/L	09/01/2010	0001	54			#	0.012	
Chloride	mg/L	09/01/2010	0001	11		J	#	1	
Magnesium	mg/L	09/01/2010	0001	9			#	0.013	
Manganese	mg/L	09/01/2010	0001	0.0032	B	U	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	0001	0.38			#	0.01	
Potassium	mg/L	09/01/2010	0001	2.3			#	0.11	
Selenium	mg/L	09/01/2010	0001	0.00058			#	0.000032	
Sodium	mg/L	09/01/2010	0001	29			#	0.0066	
Strontium	mg/L	09/01/2010	0001	0.69			#	0.000078	
Sulfate	mg/L	09/01/2010	0001	120		J	#	2.5	
Uranium	mg/L	09/01/2010	0001	0.0013			#	0.0000029	
Ammonia Total as N	mg/L	09/01/2010	N001	0.1	U		#	0.1	
Calcium	mg/L	09/01/2010	N001	71			#	0.012	
Chloride	mg/L	09/01/2010	N001	11			#	1	
Magnesium	mg/L	09/01/2010	N001	13			#	0.013	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Manganese	mg/L	09/01/2010	N001	0.68		#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	0.37		#	0.01	
Potassium	mg/L	09/01/2010	N001	3.5		#	0.11	
Selenium	mg/L	09/01/2010	N001	0.0011		#	0.000032	
Sodium	mg/L	09/01/2010	N001	30		#	0.0066	
Strontium	mg/L	09/01/2010	N001	0.84		#	0.000078	
Sulfate	mg/L	09/01/2010	N001	120		#	2.5	
Uranium	mg/L	09/01/2010	N001	0.002		#	0.0000029	
Oxidation Reduction Potential	mV	09/01/2010	N002	106.5		#		
pH	s.u.	09/01/2010	N002	8.03		#		
Specific Conductance	umhos/cm	09/01/2010	N002	531		#		
Temperature	C	09/01/2010	N002	18.35		#		
Turbidity	NTU	09/01/2010	N002	430		#		

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

REPORT DATE: 12/15/2010

Location: 0899 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Ammonia Total as N	mg/L	09/01/2010	0001	0.1	U		#	0.1	
Calcium	mg/L	09/01/2010	0001	54			#	0.012	
Chloride	mg/L	09/01/2010	0001	11			#	1	
Magnesium	mg/L	09/01/2010	0001	9			#	0.013	
Manganese	mg/L	09/01/2010	0001	0.0021	B	U	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	0001	0.34			#	0.01	
Potassium	mg/L	09/01/2010	0001	2.3			#	0.11	
Selenium	mg/L	09/01/2010	0001	0.00055			#	0.000032	
Sodium	mg/L	09/01/2010	0001	28			#	0.0066	
Strontium	mg/L	09/01/2010	0001	0.69			#	0.000078	
Sulfate	mg/L	09/01/2010	0001	110			#	2.5	
Uranium	mg/L	09/01/2010	0001	0.0013			#	0.0000029	
Ammonia Total as N	mg/L	09/01/2010	N001	0.1	U		#	0.1	
Calcium	mg/L	09/01/2010	N001	59			#	0.012	
Chloride	mg/L	09/01/2010	N001	11			#	1	
Magnesium	mg/L	09/01/2010	N001	10			#	0.013	
Manganese	mg/L	09/01/2010	N001	0.21			#	0.00011	

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

REPORT DATE: 12/15/2010

Location: 0899 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data		
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	0.35			#	0.01
Potassium	mg/L	09/01/2010	N001	2.7			#	0.11
Selenium	mg/L	09/01/2010	N001	0.00064			#	0.000032
Sodium	mg/L	09/01/2010	N001	28			#	0.0066
Strontium	mg/L	09/01/2010	N001	0.74			#	0.000078
Sulfate	mg/L	09/01/2010	N001	110			#	2.5
Uranium	mg/L	09/01/2010	N001	0.0015			#	0.0000029
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N002	119			#	
Oxidation Reduction Potential	mV	09/01/2010	N002	43.7		R	#	
pH	s.u.	09/01/2010	N002	8.04			#	
Specific Conductance	umhos/cm	09/01/2010	N002	481			#	
Temperature	C	09/01/2010	N002	18.15			#	
Turbidity	NTU	09/01/2010	N002	334			#	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Ammonia Total as N	mg/L	08/31/2010	0001	0.1	U	#	0.1	
Calcium	mg/L	08/31/2010	0001	55		#	0.012	
Chloride	mg/L	08/31/2010	0001	11		#	1	
Magnesium	mg/L	08/31/2010	0001	8.8		#	0.013	
Manganese	mg/L	08/31/2010	0001	0.0035	B	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	0.34		#	0.01	
Potassium	mg/L	08/31/2010	0001	2.3		#	0.11	
Selenium	mg/L	08/31/2010	0001	0.00056		#	0.000032	
Sodium	mg/L	08/31/2010	0001	26		#	0.0066	
Strontium	mg/L	08/31/2010	0001	0.68		#	0.000078	
Sulfate	mg/L	08/31/2010	0001	110		#	2.5	
Uranium	mg/L	08/31/2010	0001	0.0015		#	0.0000029	
Ammonia Total as N	mg/L	08/31/2010	N001	0.1	U	#	0.1	
Calcium	mg/L	08/31/2010	N001	60		#	0.012	
Chloride	mg/L	08/31/2010	N001	11		#	1	
Magnesium	mg/L	08/31/2010	N001	10		#	0.013	
Manganese	mg/L	08/31/2010	N001	0.19		#	0.00011	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data		
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	N001	0.33			#	0.01
Potassium	mg/L	08/31/2010	N001	2.9			#	0.11
Selenium	mg/L	08/31/2010	N001	0.00062			#	0.000032
Sodium	mg/L	08/31/2010	N001	26			#	0.0066
Strontium	mg/L	08/31/2010	N001	0.74			#	0.000078
Sulfate	mg/L	08/31/2010	N001	110			#	2.5
Uranium	mg/L	08/31/2010	N001	0.0016			#	0.0000029
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	N002	112			#	
Oxidation Reduction Potential	mV	08/31/2010	N002	-126.6		R	#	
pH	s.u.	08/31/2010	N002	8.22			#	
Specific Conductance	umhos/cm	08/31/2010	N002	793			#	
Temperature	C	08/31/2010	N002	19.36			#	
Turbidity	NTU	08/31/2010	N002	487			#	

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

REPORT DATE: 12/15/2010

Location: 0956 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	0001	120		#		
Ammonia Total as N	mg/L	09/02/2010	0001	0.1	U	#	0.1	
Calcium	mg/L	09/02/2010	0001	58		#	0.012	
Chloride	mg/L	09/02/2010	0001	12		#	1	
Magnesium	mg/L	09/02/2010	0001	9.4		#	0.013	
Manganese	mg/L	09/02/2010	0001	0.0038	B	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	0.3		#	0.01	
Potassium	mg/L	09/02/2010	0001	2.4		#	0.11	
Selenium	mg/L	09/02/2010	0001	0.00057		#	0.000032	
Sodium	mg/L	09/02/2010	0001	25		#	0.0066	
Strontium	mg/L	09/02/2010	0001	0.7		#	0.000078	
Sulfate	mg/L	09/02/2010	0001	110		#	2.5	
Uranium	mg/L	09/02/2010	0001	0.0013		#	0.0000029	
Ammonia Total as N	mg/L	09/02/2010	N001	0.1	U	#	0.1	
Calcium	mg/L	09/02/2010	N001	61		#	0.012	
Chloride	mg/L	09/02/2010	N001	12		#	1	
Magnesium	mg/L	09/02/2010	N001	10		#	0.013	

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

REPORT DATE: 12/15/2010

Location: 0956 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Manganese	mg/L	09/02/2010	N001	0.1			#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	0.31			#	0.01	
Potassium	mg/L	09/02/2010	N001	2.6			#	0.11	
Selenium	mg/L	09/02/2010	N001	0.00053			#	0.000032	
Sodium	mg/L	09/02/2010	N001	26			#	0.0066	
Strontium	mg/L	09/02/2010	N001	0.73			#	0.000078	
Sulfate	mg/L	09/02/2010	N001	110			#	2.5	
Uranium	mg/L	09/02/2010	N001	0.0014			#	0.0000029	
Oxidation Reduction Potential	mV	09/02/2010	N002	147.2			#		
pH	s.u.	09/02/2010	N002	8.06			#		
Specific Conductance	umhos/cm	09/02/2010	N002	489			#		
Temperature	C	09/02/2010	N002	16.62			#		
Turbidity	NTU	09/02/2010	N002	155			#		

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

REPORT DATE: 12/15/2010

Location: 0965 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	0001	117		#		
Ammonia Total as N	mg/L	09/02/2010	0001	0.1	U	#	0.1	
Calcium	mg/L	09/02/2010	0001	59		#	0.012	
Chloride	mg/L	09/02/2010	0001	13		#	1	
Magnesium	mg/L	09/02/2010	0001	9.5		#	0.013	
Manganese	mg/L	09/02/2010	0001	0.0048	B	#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	0.3		#	0.01	
Potassium	mg/L	09/02/2010	0001	2.6		#	0.11	
Selenium	mg/L	09/02/2010	0001	0.00052		#	0.000032	
Sodium	mg/L	09/02/2010	0001	26		#	0.0066	
Strontium	mg/L	09/02/2010	0001	0.71		#	0.000078	
Sulfate	mg/L	09/02/2010	0001	110		#	2.5	
Uranium	mg/L	09/02/2010	0001	0.0013		#	0.0000029	
Ammonia Total as N	mg/L	09/02/2010	N001	0.1	U	#	0.1	
Calcium	mg/L	09/02/2010	N001	61		#	0.012	
Chloride	mg/L	09/02/2010	N001	12		#	1	
Magnesium	mg/L	09/02/2010	N001	10		#	0.013	

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

REPORT DATE: 12/15/2010

Location: 0965 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Manganese	mg/L	09/02/2010	N001	0.12			#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	0.3			#	0.01	
Potassium	mg/L	09/02/2010	N001	2.7			#	0.11	
Selenium	mg/L	09/02/2010	N001	0.00053			#	0.000032	
Sodium	mg/L	09/02/2010	N001	26			#	0.0066	
Strontium	mg/L	09/02/2010	N001	0.72			#	0.000078	
Sulfate	mg/L	09/02/2010	N001	110			#	2.5	
Uranium	mg/L	09/02/2010	N001	0.0014			#	0.0000029	
Oxidation Reduction Potential	mV	09/02/2010	N002	139.8			#		
pH	s.u.	09/02/2010	N002	8.05			#		
Specific Conductance	umhos/cm	09/02/2010	N002	498			#		
Temperature	C	09/02/2010	N002	18.2			#		
Turbidity	NTU	09/02/2010	N002	126			#		

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

REPORT DATE: 12/15/2010

Location: 1203 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	0001	124			#	
Ammonia Total as N	mg/L	09/01/2010	0001	0.1	U		#	0.1
Calcium	mg/L	09/01/2010	0001	57			#	0.012
Chloride	mg/L	09/01/2010	0001	11			#	1
Magnesium	mg/L	09/01/2010	0001	8.9			#	0.013
Manganese	mg/L	09/01/2010	0001	0.0021	B		#	0.00011
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	0001	0.34			#	0.01
Potassium	mg/L	09/01/2010	0001	2.3			#	0.11
Selenium	mg/L	09/01/2010	0001	0.00054			#	0.000032
Sodium	mg/L	09/01/2010	0001	26			#	0.0066
Strontium	mg/L	09/01/2010	0001	0.7			#	0.000078
Sulfate	mg/L	09/01/2010	0001	110			#	2.5
Uranium	mg/L	09/01/2010	0001	0.0013			#	0.0000029
Ammonia Total as N	mg/L	09/01/2010	N001	0.1	U		#	0.1
Calcium	mg/L	09/01/2010	N001	63			#	0.012
Chloride	mg/L	09/01/2010	N001	11			#	1
Magnesium	mg/L	09/01/2010	N001	10			#	0.013

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

REPORT DATE: 12/15/2010

Location: 1203 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data		
Manganese	mg/L	09/01/2010	N001	0.28			#	0.00011
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	0.32			#	0.01
Potassium	mg/L	09/01/2010	N001	2.9			#	0.11
Selenium	mg/L	09/01/2010	N001	0.00066			#	0.000032
Sodium	mg/L	09/01/2010	N001	26			#	0.0066
Strontium	mg/L	09/01/2010	N001	0.76			#	0.000078
Sulfate	mg/L	09/01/2010	N001	110			#	2.5
Uranium	mg/L	09/01/2010	N001	0.0015			#	0.0000029
Oxidation Reduction Potential	mV	09/01/2010	N002	-86.1		R	#	
pH	s.u.	09/01/2010	N002	8.26			#	
Specific Conductance	umhos/cm	09/01/2010	N002	472			#	
Temperature	C	09/01/2010	N002	19.03			#	
Turbidity	NTU	09/01/2010	N002	322			#	

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

REPORT DATE: 12/15/2010

Location: 1205 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	0001	103			#		
Ammonia Total as N	mg/L	09/02/2010	0001	0.1			#	0.1	
Calcium	mg/L	09/02/2010	0001	58			#	0.012	
Chloride	mg/L	09/02/2010	0001	11			#	1	
Magnesium	mg/L	09/02/2010	0001	9.3			#	0.013	
Manganese	mg/L	09/02/2010	0001	0.0028	B		#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	0.3			#	0.01	
Potassium	mg/L	09/02/2010	0001	2.3			#	0.11	
Selenium	mg/L	09/02/2010	0001	0.00054			#	0.000032	
Sodium	mg/L	09/02/2010	0001	25			#	0.0066	
Strontium	mg/L	09/02/2010	0001	0.69			#	0.000078	
Sulfate	mg/L	09/02/2010	0001	110			#	2.5	
Uranium	mg/L	09/02/2010	0001	0.0013			#	0.0000029	
Ammonia Total as N	mg/L	09/02/2010	N001	0.1	U		#	0.1	
Calcium	mg/L	09/02/2010	N001	60			#	0.012	
Chloride	mg/L	09/02/2010	N001	12			#	1	
Magnesium	mg/L	09/02/2010	N001	9.8			#	0.013	
Manganese	mg/L	09/02/2010	N001	0.12			#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	0.3			#	0.01	
Potassium	mg/L	09/02/2010	N001	2.5			#	0.11	
Selenium	mg/L	09/02/2010	N001	0.00062			#	0.000032	
Sodium	mg/L	09/02/2010	N001	25			#	0.0066	
Strontium	mg/L	09/02/2010	N001	0.72			#	0.000078	
Sulfate	mg/L	09/02/2010	N001	110			#	2.5	
Uranium	mg/L	09/02/2010	N001	0.0014			#	0.0000029	

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

REPORT DATE: 12/15/2010

Location: 1205 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID		Lab	Data	QA		
Oxidation Reduction Potential	mV	09/02/2010	N002	-154.6		R	#		
pH	s.u.	09/02/2010	N002	8.33			#		
Specific Conductance	umhos/cm	09/02/2010	N002	487			#		
Temperature	C	09/02/2010	N002	23.12			#		
Turbidity	NTU	09/02/2010	N002	131			#		

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

- # Validated according to quality assurance guidelines.

Surface Water Quality Data Terrace Locations

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	N001	60		#		
Ammonia Total as N	mg/L	09/02/2010	N001	0.1	U	#	0.1	
Calcium	mg/L	09/02/2010	N001	110		#	0.024	
Chloride	mg/L	09/02/2010	N001	60		#	10	
Magnesium	mg/L	09/02/2010	N001	13		#	0.026	
Manganese	mg/L	09/02/2010	N001	0.0076	B	#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	N001	0.26		#	0.01	
Oxidation Reduction Potential	mV	09/02/2010	N001	-170		R #		
pH	s.u.	09/02/2010	N001	8.25		#		
Potassium	mg/L	09/02/2010	N001	12		J #	0.22	
Selenium	mg/L	09/02/2010	N001	0.000086	B	#	0.000032	
Sodium	mg/L	09/02/2010	N001	680		#	0.066	
Specific Conductance	umhos/cm	09/02/2010	N001	4334		#		
Strontium	mg/L	09/02/2010	N001	11		#	0.00016	
Sulfate	mg/L	09/02/2010	N001	2100		#	25	
Temperature	C	09/02/2010	N001	26.49		#		
Turbidity	NTU	09/02/2010	N001	9.58		#		
Uranium	mg/L	09/02/2010	N001	0.000075		#	0.000029	

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

REPORT DATE: 12/15/2010

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

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	0001	682		#		
Ammonia Total as N	mg/L	08/31/2010	0001	0.1	U	#	0.1	
Calcium	mg/L	08/31/2010	0001	400		#	0.12	
Chloride	mg/L	08/31/2010	0001	1900		#	40	
Magnesium	mg/L	08/31/2010	0001	1400		#	0.13	
Manganese	mg/L	08/31/2010	0001	0.03	B	#	0.0011	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	690		#	5	
Potassium	mg/L	08/31/2010	0001	77		J #	1.1	
Selenium	mg/L	08/31/2010	0001	1.7		#	0.00016	
Sodium	mg/L	08/31/2010	0001	6900		#	0.33	
Strontium	mg/L	08/31/2010	0001	9.3		#	0.00078	
Sulfate	mg/L	08/31/2010	0001	21000		#	250	
Uranium	mg/L	08/31/2010	0001	0.17		#	0.000015	
Oxidation Reduction Potential	mV	08/31/2010	N001	199.9		#		
pH	s.u.	08/31/2010	N001	7.88		#		
Specific Conductance	umhos/cm	08/31/2010	N001	33991		#		
Temperature	C	08/31/2010	N001	27.38		#		
Turbidity	NTU	08/31/2010	N001	1000	>	#		

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

REPORT DATE: 12/15/2010

Location: 0949 SURFACE LOCATION

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	08/31/2010	0001	389		#		
Ammonia Total as N	mg/L	08/31/2010	0001	0.1	U	#	0.1	
Calcium	mg/L	08/31/2010	0001	630		#	0.024	
Chloride	mg/L	08/31/2010	0001	160		#	10	
Magnesium	mg/L	08/31/2010	0001	200		#	0.026	
Manganese	mg/L	08/31/2010	0001	0.023		#	0.00023	
Nitrate + Nitrite as Nitrogen	mg/L	08/31/2010	0001	60		#	0.5	
Potassium	mg/L	08/31/2010	0001	12		J #	0.22	
Selenium	mg/L	08/31/2010	0001	0.49		#	0.00016	
Sodium	mg/L	08/31/2010	0001	510		#	0.066	
Strontium	mg/L	08/31/2010	0001	6.3		#	0.00016	
Sulfate	mg/L	08/31/2010	0001	2900		#	25	
Uranium	mg/L	08/31/2010	0001	0.025		#	0.000015	
Oxidation Reduction Potential	mV	08/31/2010	N001	-35		R #		
pH	s.u.	08/31/2010	N001	7.59		#		
Specific Conductance	umhos/cm	08/31/2010	N001	5496		#		
Temperature	C	08/31/2010	N001	19.8		#		
Turbidity	NTU	08/31/2010	N001	42.2		#		

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

REPORT DATE: 12/15/2010

Location: 1215 SURFACE LOCATION Evaporation Pond

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/01/2010	N001	730		#		
Ammonia Total as N	mg/L	09/01/2010	N001	25		#	1	
Calcium	mg/L	09/01/2010	N001	540		#	0.24	
Chloride	mg/L	09/01/2010	N001	2400		#	100	
Magnesium	mg/L	09/01/2010	N001	6700		#	0.26	
Manganese	mg/L	09/01/2010	N001	0.33		#	0.0023	
Nitrate + Nitrite as Nitrogen	mg/L	09/01/2010	N001	1600		#	10	
Oxidation Reduction Potential	mV	09/01/2010	N001	186		R #		
pH	s.u.	09/01/2010	N001	8.03		#		
Potassium	mg/L	09/01/2010	N001	660		J #	2.2	
Selenium	mg/L	09/01/2010	N001	2.2		#	0.0032	
Sodium	mg/L	09/01/2010	N001	11000		#	0.66	
Specific Conductance	umhos/cm	09/01/2010	N001	58420		#		
Strontium	mg/L	09/01/2010	N001	14		#	0.0016	
Sulfate	mg/L	09/01/2010	N001	45000		#	250	
Temperature	C	09/01/2010	N001	21.8		#		
Turbidity	NTU	09/01/2010	N001	1.92		#		
Uranium	mg/L	09/01/2010	N001	3.6		#	0.00029	

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

REPORT DATE: 12/15/2010

Location: 1220 SURFACE LOCATION Seep at the Eagles Nest Arroyo east of town

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	0001	432		#		
Ammonia Total as N	mg/L	09/02/2010	0001	0.1	U	#	0.1	
Calcium	mg/L	09/02/2010	0001	460		#	0.012	
Chloride	mg/L	09/02/2010	0001	38		#	4	
Magnesium	mg/L	09/02/2010	0001	120		#	0.013	
Manganese	mg/L	09/02/2010	0001	0.37		#	0.00011	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	0.01	U	#	0.01	
Potassium	mg/L	09/02/2010	0001	3.5		J #	0.11	
Selenium	mg/L	09/02/2010	0001	0.0017		#	0.00016	
Sodium	mg/L	09/02/2010	0001	120		#	0.0066	
Strontium	mg/L	09/02/2010	0001	4.4		#	0.000078	
Sulfate	mg/L	09/02/2010	0001	1400		#	10	
Uranium	mg/L	09/02/2010	0001	0.028		#	0.000015	
Oxidation Reduction Potential	mV	09/02/2010	N001	122.6		#		
pH	s.u.	09/02/2010	N001	7.07		#		
Specific Conductance	umhos/cm	09/02/2010	N001	2782		#		
Temperature	C	09/02/2010	N001	15.02		#		
Turbidity	NTU	09/02/2010	N001	33.2		#		

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

REPORT DATE: 12/15/2010

Location: 1221 SURFACE LOCATION Many Devils Wash, 10 feet up from the river.

Parameter	Units	Sample		Result	Qualifiers		Detection Limit	Uncertainty
		Date	ID		Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	09/02/2010	0001	577		#		
Ammonia Total as N	mg/L	09/02/2010	0001	0.29		#	0.1	
Calcium	mg/L	09/02/2010	0001	440		#	0.24	
Chloride	mg/L	09/02/2010	0001	2900		#	100	
Magnesium	mg/L	09/02/2010	0001	2400		#	0.26	
Manganese	mg/L	09/02/2010	0001	0.13		#	0.0023	
Nitrate + Nitrite as Nitrogen	mg/L	09/02/2010	0001	930		#	5	
Potassium	mg/L	09/02/2010	0001	130	J	#	2.2	
Selenium	mg/L	09/02/2010	0001	2.8		#	0.00016	
Sodium	mg/L	09/02/2010	0001	12000		#	0.66	
Strontium	mg/L	09/02/2010	0001	9.4		#	0.0016	
Sulfate	mg/L	09/02/2010	0001	35000		#	250	
Uranium	mg/L	09/02/2010	0001	0.26		#	0.000015	
Oxidation Reduction Potential	mV	09/02/2010	N001	284.7		#		
pH	s.u.	09/02/2010	N001	8.17		#		
Specific Conductance	umhos/cm	09/02/2010	N001	48935		#		
Temperature	C	09/02/2010	N001	23.37		#		
Turbidity	NTU	09/02/2010	N001	51.6		#		

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/ALS LABORATORY GROUP (Fort Collins, CO)

RIN: 10083299

Report Date: 12/7/2010

Parameter	Site Code	Location ID	Sample Date	Sample ID	Units	Result	Qualifiers Lab Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	SHP02	0999	09/02/2010	N001	mg/L	0.1	U	0.1		E
Calcium	SHP02	0999	09/02/2010	N001	mg/L	0.066	B	0.012		E
Chloride	SHP02	0999	09/02/2010	N001	mg/L	0.2	U	0.2		E
Magnesium	SHP02	0999	09/02/2010	N001	mg/L	0.013	U	0.013		E
Manganese	SHP02	0999	09/02/2010	N001	mg/L	0.00011	U	0.00011		E
Nitrate + Nitrite as Nitrogen	SHP02	0999	09/02/2010	N001	mg/L	0.01	U	0.01		E
Potassium	SHP02	0999	09/02/2010	N001	mg/L	0.11	U	0.11		E
Selenium	SHP02	0999	09/02/2010	N001	mg/L	0.000032	U	0.000032		E
Sodium	SHP02	0999	09/02/2010	N001	mg/L	0.012	B U	0.0066		E
Strontium	SHP02	0999	09/02/2010	N001	mg/L	0.000078	U	0.000078		E
Sulfate	SHP02	0999	09/02/2010	N001	mg/L	0.5	U	0.5		E
Uranium	SHP02	0999	09/02/2010	N001	mg/L	0.000012		0.000029		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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STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 12/7/2010

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0608		4893.35	09/01/2010	14:46:05	6.86	4886.49	
0610		4895.7	09/01/2010	15:34:08	10.84	4884.86	
0611		4895.62	09/01/2010	15:50:57	10.73	4884.89	
0612		4893.35	09/02/2010	12:38:43	8.11	4885.24	
0614		4892.79	09/01/2010	16:15:07	8.99	4883.8	
0615		4892.23	09/02/2010	10:18:00	9.59	4882.64	
0618		4891.51	08/31/2010	16:56:49	8.29	4883.22	
0619		4892.19	08/31/2010	14:55:49	8.95	4883.24	
0622		4890.06	08/31/2010	14:03:26	6.31	4883.75	
0623		4891.19	08/31/2010	15:22:16	7.88	4883.31	
0625		4891.23	08/31/2010	15:36:35	7.82	4883.41	
0626		4891.4	08/31/2010	12:16:02	7.49	4883.91	
0628		4889.87	08/31/2010	11:48:06	5.96	4883.91	
0630		4887.62	09/02/2010	16:20:05	3.37	4884.25	
0734		4886.55	09/02/2010	14:52:22	6.66	4879.89	
0735		4895.85	09/01/2010	09:17:31	6.81	4889.04	
0736		4887.99	09/02/2010	14:36:20	6.6	4881.39	
0766		4892.55	08/31/2010	10:29:19	11.74	4880.81	
0768		4892.33	08/31/2010	14:32:35	8.89	4883.44	
0779		4893.86	08/31/2010	17:24:02	10.63	4883.23	
0782R			09/01/2010	15:20:52	7.7		*
0783R			09/01/2010	15:00:45	8.05		*
0792		4891.52	08/31/2010	16:34:21	8.37	4883.15	
0793		4891.05	09/02/2010	13:11:26	7.94	4883.11	
0797		4908.04	09/01/2010	11:20:44	10.2	4897.84	
0798		4891.55	08/31/2010	15:58:02	8.64	4882.91	
0850	B	4907.51	09/01/2010	11:05:08	9.75	4897.76	
0851	B	4906.45	09/01/2010	11:00:00	8.77	4897.68	
0852	B	4907.37	09/01/2010	11:10:00	9.64	4897.73	
0853		4891.41	09/02/2010	11:05:08	8.11	4883.3	
0854		4890.09	08/30/2010	18:27:15	8.76	4881.33	
0855		4888.18	09/02/2010	15:51:34	6.54	4881.64	
0856		4887.57	09/02/2010	15:21:20	7.24	4880.33	
0857		4894.02	09/01/2010	17:45:50	10.6	4883.42	
0862		4893.83	09/01/2010	14:56:00	91.98	4801.85	
0863		4893	09/01/2010	14:58:00	82.81	4810.19	
1000		4892.17	09/01/2010	16:29:00	8.7	4883.47	
1001		4892.44	09/01/2010	16:28:00	20.87	4871.57	
1008		4890.8	08/30/2010	17:41:15	9.16	4881.64	

STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)

REPORT DATE: 12/7/2010

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
1009		4892.1	09/02/2010	10:41:50	9.03	4883.07	
1062		4892.51	09/01/2010	14:54:00	9.04	4883.47	
1105	O	4892.18	09/02/2010	09:54:38	9.51	4882.67	
1111		4889.85	09/02/2010	09:14:00	8.33	4881.52	
1112		4890.01	09/01/2010	16:53:05	7.62	4882.39	
1113		4892	09/01/2010	14:10:08	6.25	4885.75	
1114		4892.86	09/01/2010	12:15:12	5.82	4887.04	
1115		4895.59	09/01/2010	11:37:07	8.7	4886.89	
1117		4896.7	09/01/2010	09:48:27	9.26	4887.44	
1128		4897.63	09/01/2010	10:52:27	10.28	4887.35	
1132		4894.5	09/01/2010	11:18:57	7.33	4887.17	
1135			08/31/2010	11:15:24	9.03		*
1136			08/31/2010	17:58:07	9.54		*
1137		4891.12	08/31/2010	09:44:13	9.52	4881.6	
1138		4891.32	08/31/2010	09:22:29	9.82	4881.5	
1139		4890.26	08/31/2010	08:58:07	9.09	4881.17	
1140		4891.36	09/02/2010	08:50:04	9.45	4881.91	
1141		4892.26	09/01/2010	17:20:13	9.69	4882.57	
1142			09/02/2010	11:31:08	9.89		*
1143			09/02/2010	16:52:21	7.11		*

FLOW CODES:

B BACKGROUND C CROSS GRADIENT D DOWN GRADIENT F OFF SITE
 N UNKNOWN O ON SITE U UPGRADIENT

WATER LEVEL FLAGS:

* Top of casing elevation not available because the lack of survey data.v

Static Water Level Data Terrace Locations

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STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 12/7/2010

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0600		4955.87	09/02/2010	11:05:06	33.73	4922.14	
0602		4956.89	09/01/2010	15:55:55	22.51	4934.38	
0603		4978.62	08/31/2010	11:35:49	31.66	4946.96	
0604		4995.87	08/31/2010	15:50:26	56.35	4939.52	
0648		4943.8	09/01/2010	13:00:00			D
0725		4908.58	09/02/2010	15:40:07	14.14	4894.44	
0726		4939.95	08/30/2010	17:50:09	26.1	4913.85	
0727		4940.65	09/01/2010	17:30:34	6.96	4933.69	
0728		4964.46	09/01/2010	14:30:24	25.09	4939.37	
0731		4972.15	08/31/2010	12:05:50	24.67	4947.48	
0800		4995.76	09/01/2010	09:30:00			D
0801		4995.29	09/01/2010	09:40:00			D
0802		4996.01	09/01/2010	09:45:00			D
0803		4994.4	09/01/2010	09:30:00			D
0812		5004.98	08/31/2010	15:05:41	61.05	4943.93	
0813		4984.37	08/31/2010	13:50:49	44.19	4940.18	
0814		4968.12	08/31/2010	14:25:28	32.8	4935.32	
0815		4953.67	09/01/2010	14:50:06	26.56	4927.11	
0816		4937.92	09/01/2010	17:00:40			D
0817		4957.34	09/01/2010	15:40:34	19.33	4938.01	
0819		4955.76	09/01/2010	16:20:40	20.54	4935.22	
0820		4954.95	09/02/2010	10:00:57	148.09	4806.86	
0821		4955.46	09/02/2010	09:17:00			D
0822		4954.42	09/02/2010	10:15:00	146.71	4807.71	
0823		4957.65	09/02/2010	11:46:00			D
0824		4958.21	09/02/2010	11:55:47	164.29	4793.92	
0825		4958.68	09/02/2010	12:10:59	132.79	4825.89	
0826		4950.73	09/01/2010	16:30:40	17.72	4933.01	
0827		4946.92	09/02/2010	08:45:49	26.59	4920.33	
0828		4957.36	09/01/2010	15:20:01	20.98	4936.38	
0829		4941.94	09/02/2010	14:51:00			D
0830		4960.77	09/02/2010	13:55:58	16.52	4944.25	
0832		4964.65	08/31/2010	16:22:00			D
0833		4940.52	08/31/2010	15:50:23	31.82	4908.7	
0835		4930.48	08/31/2010	18:00:57	22.28	4908.2	
0836		4901.74	08/31/2010	12:10:21	29.72	4872.02	
0837		4889.54	08/31/2010	10:35:11	21.56	4867.98	
0838		4937.7	08/31/2010	15:25:30	30	4907.7	
0841		4984.05	08/31/2010	17:15:46	45.93	4938.12	

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)

REPORT DATE: 12/7/2010

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0843		4883.56	08/31/2010	09:40:08	14.8	4868.76	
0844		4948.46	08/31/2010	16:15:04	32.17	4916.29	
0846		4934.57	08/31/2010	12:40:51	29.57	4905	
0848		4949.91	08/31/2010	14:20:58	43.25	4906.66	
1002		4957.63	09/02/2010	11:41:00			D
1003		4957.84	09/02/2010	11:41:00			D
1004		4957.61	09/02/2010	11:42:00			D
1007		4962.01	09/02/2010	13:00:03	44.42	4917.59	
1011		4945.96	09/02/2010	09:00:54	27.73	4918.23	
1049		4923.89	08/31/2010	18:00:57	6.68	4917.21	
1058		4973.58	08/31/2010	10:45:59	29.9	4943.68	
1059		4970.52	08/31/2010	09:24:20	23.65	4946.87	
1060		4970.62	08/31/2010	16:44:00			D
1067		4930.77	09/01/2010	17:00:00			D
1068		4927.97	09/02/2010	14:35:39	7.6	4920.37	
1069		4922.62	09/02/2010	14:36:00			D
1073		4991.43	09/02/2010	14:13:20	50.26	4941.17	
1074		4959.52	09/02/2010	13:25:23	34.6	4924.92	
1079		4925.22	08/31/2010	14:50:58	19.6	4905.62	
1120			08/31/2010	12:26:00			D
1122			08/31/2010	12:28:00			D
DM7		4974.44	09/02/2010	12:00:56	52.83	4921.61	
MW1		4955.64	09/02/2010	11:25:47	52.92	4902.72	

FLOW CODES:

B BACKGROUND C CROSS GRADIENT D DOWN GRADIENT F OFF SITE
 N UNKNOWN O ON SITE U UPGRADIENT

WATER LEVEL FLAGS:

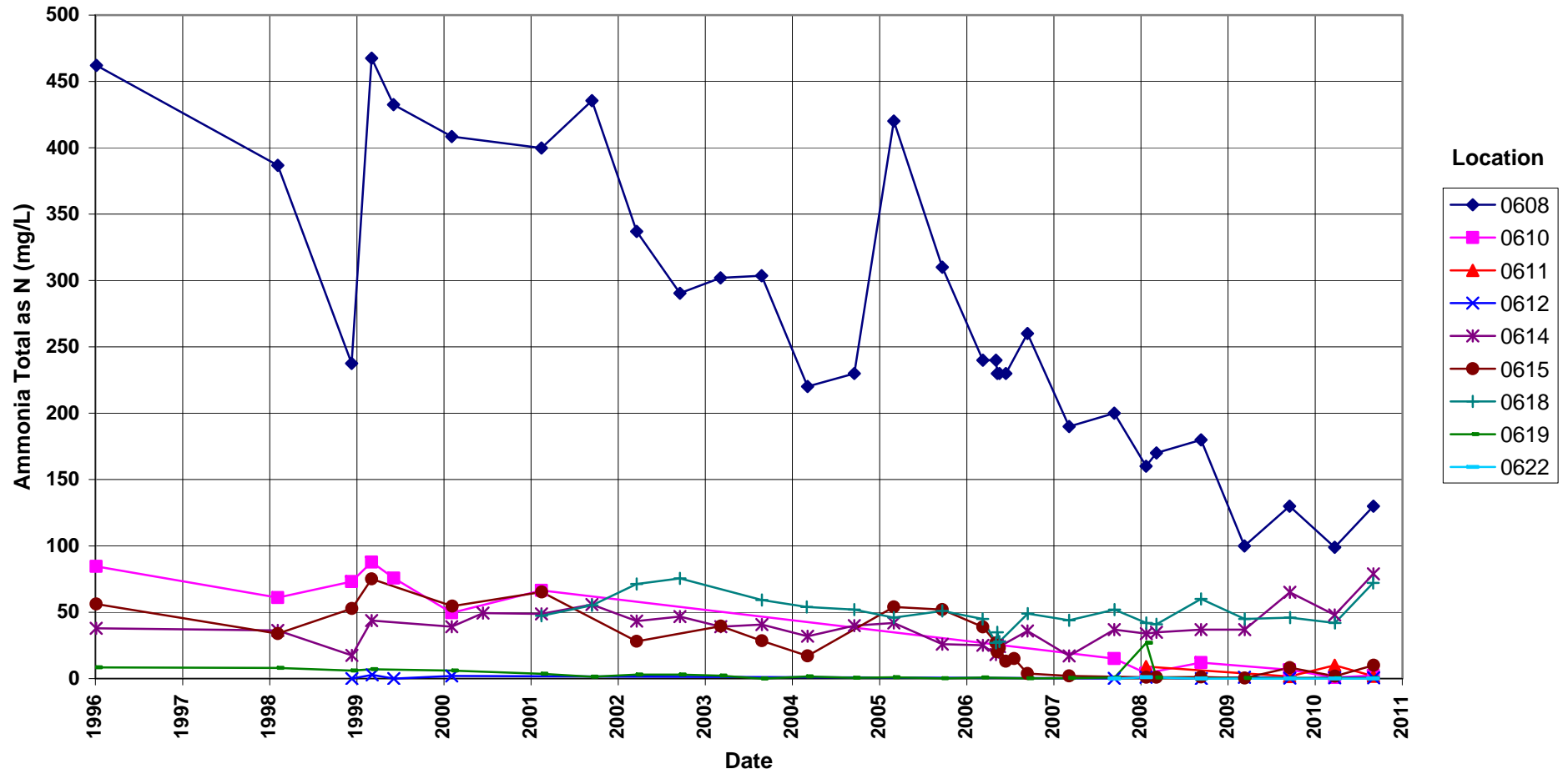
D Dry

Time-Concentration Graphs Floodplain Groundwater Locations

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Shiprock Disposal Site (Floodplain) Ammonia Total as N Concentration

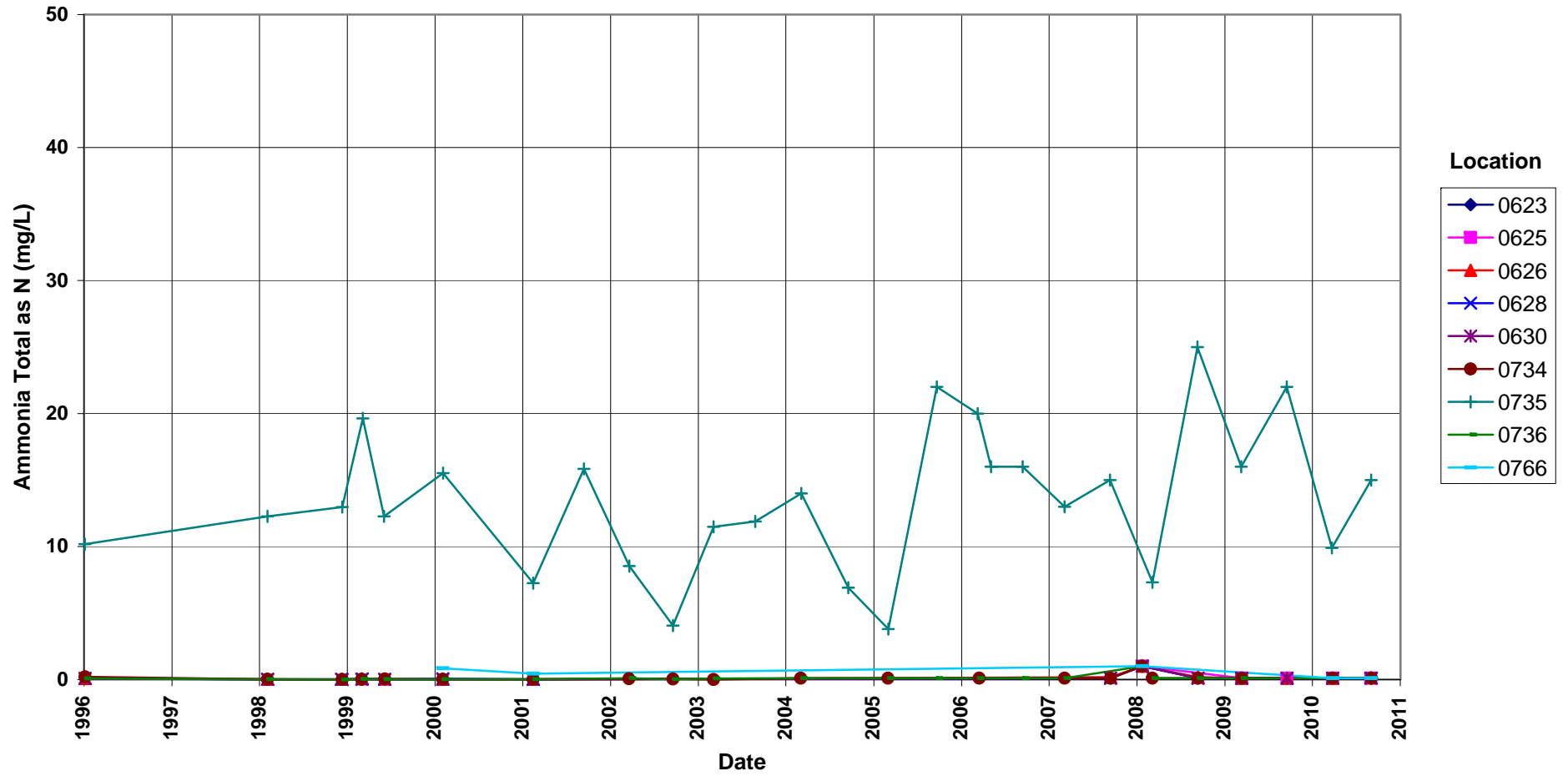
No established groundwater standard



Shiprock Disposal Site (Floodplain)

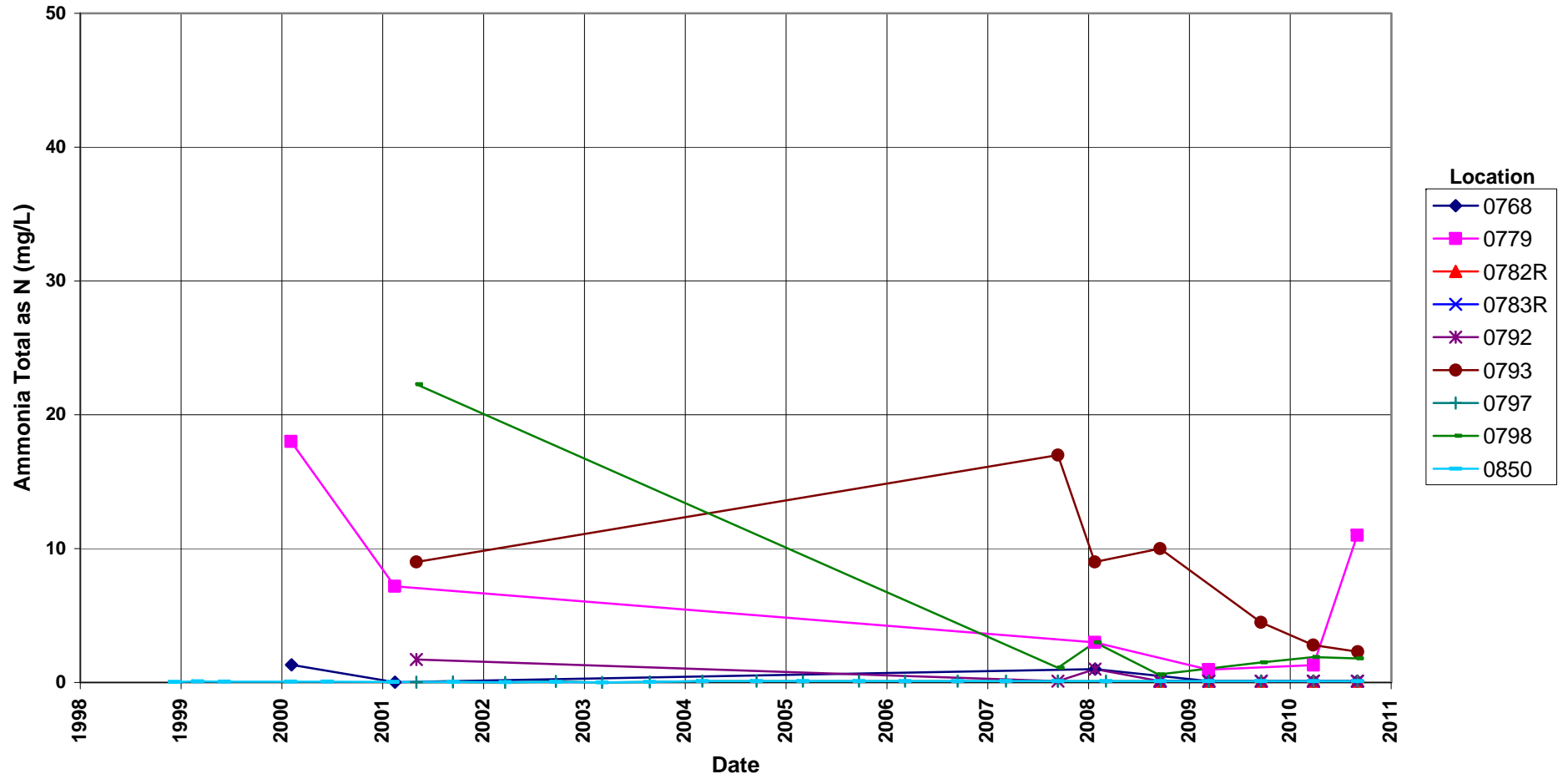
Ammonia Total as N Concentration

No established groundwater standard



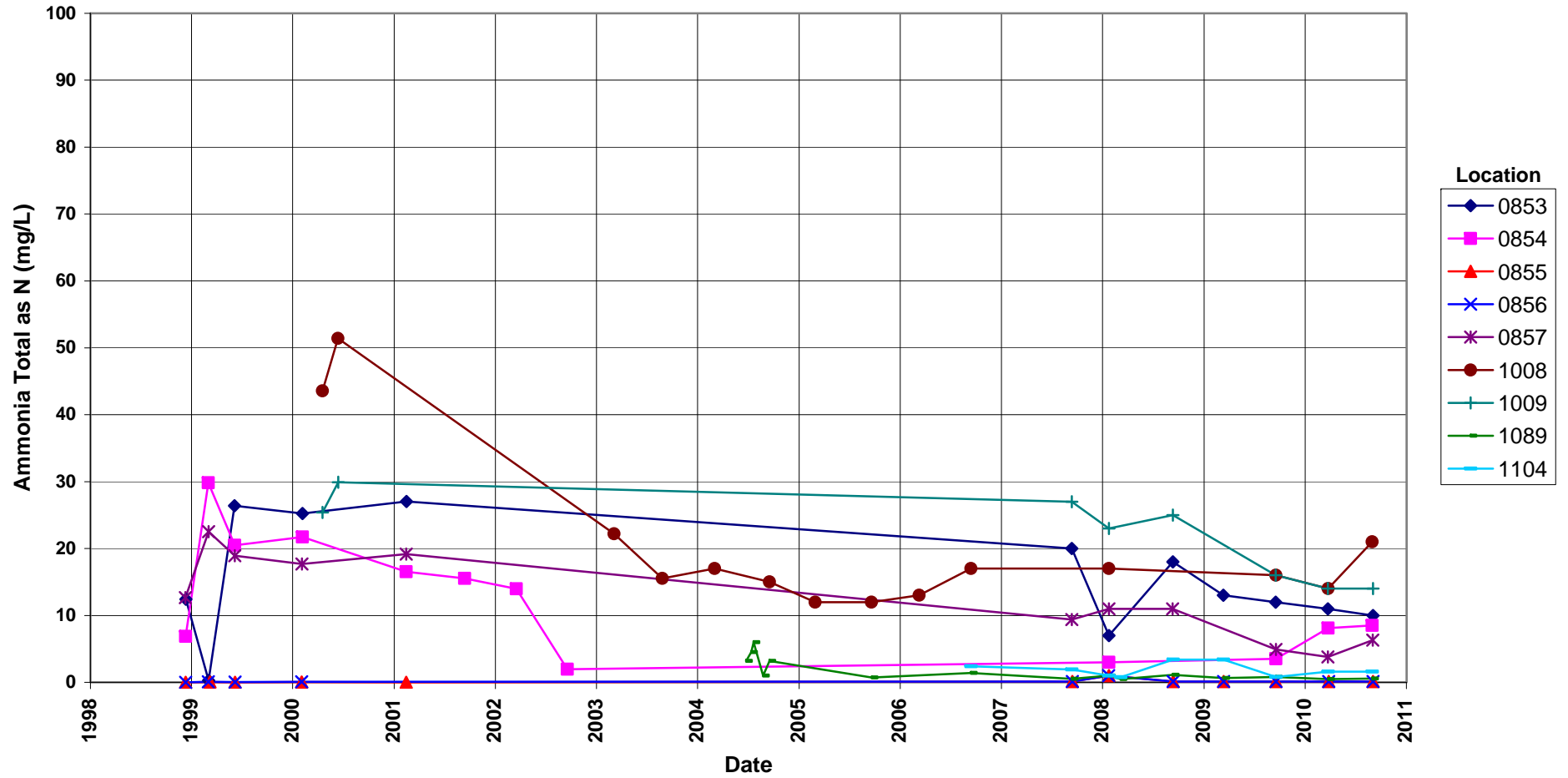
Shiprock Disposal Site (Floodplain) Ammonia Total as N Concentration

No established groundwater standard

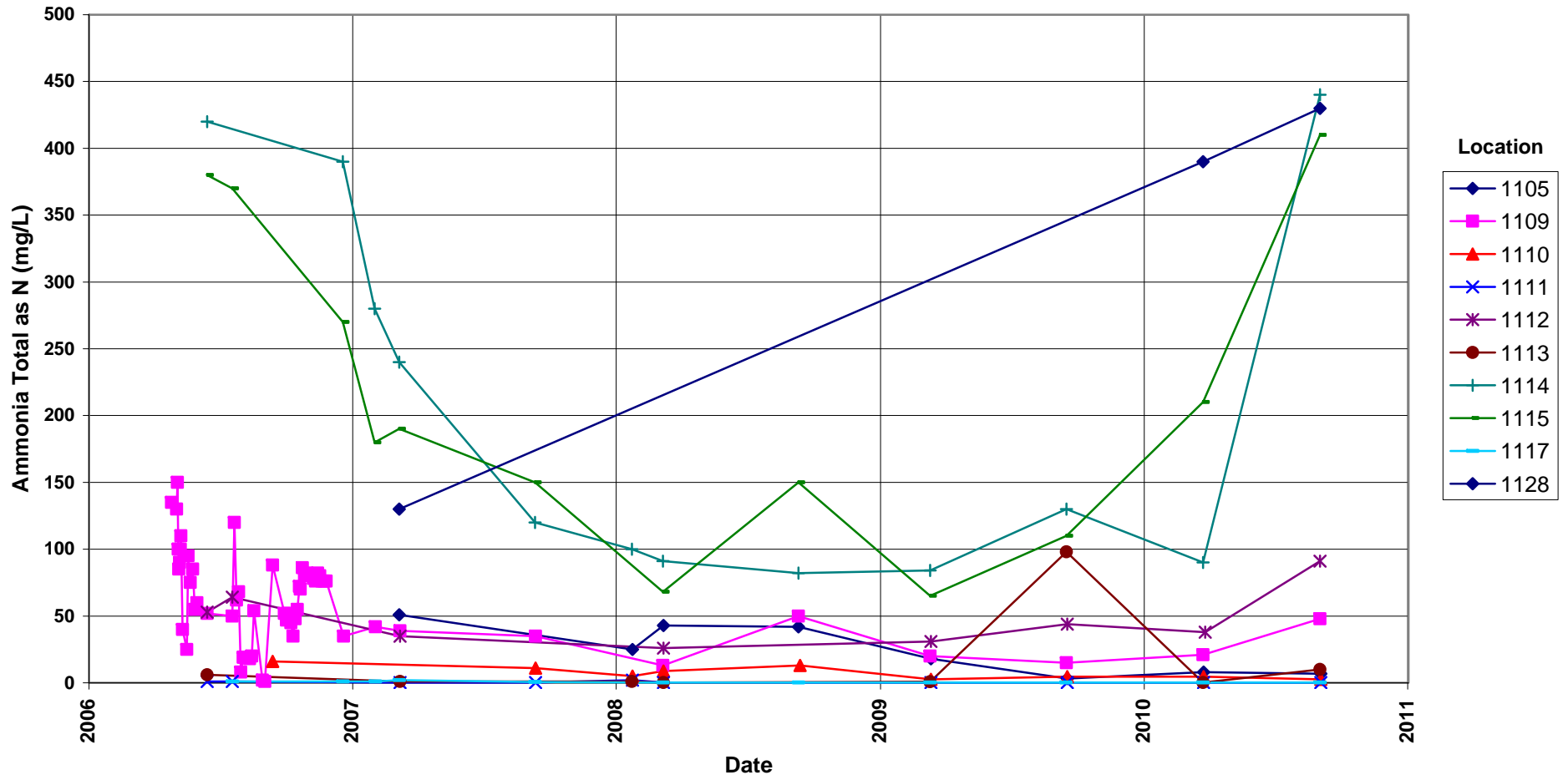


Shiprock Disposal Site (Floodplain) Ammonia Total as N Concentration

No established groundwater standard



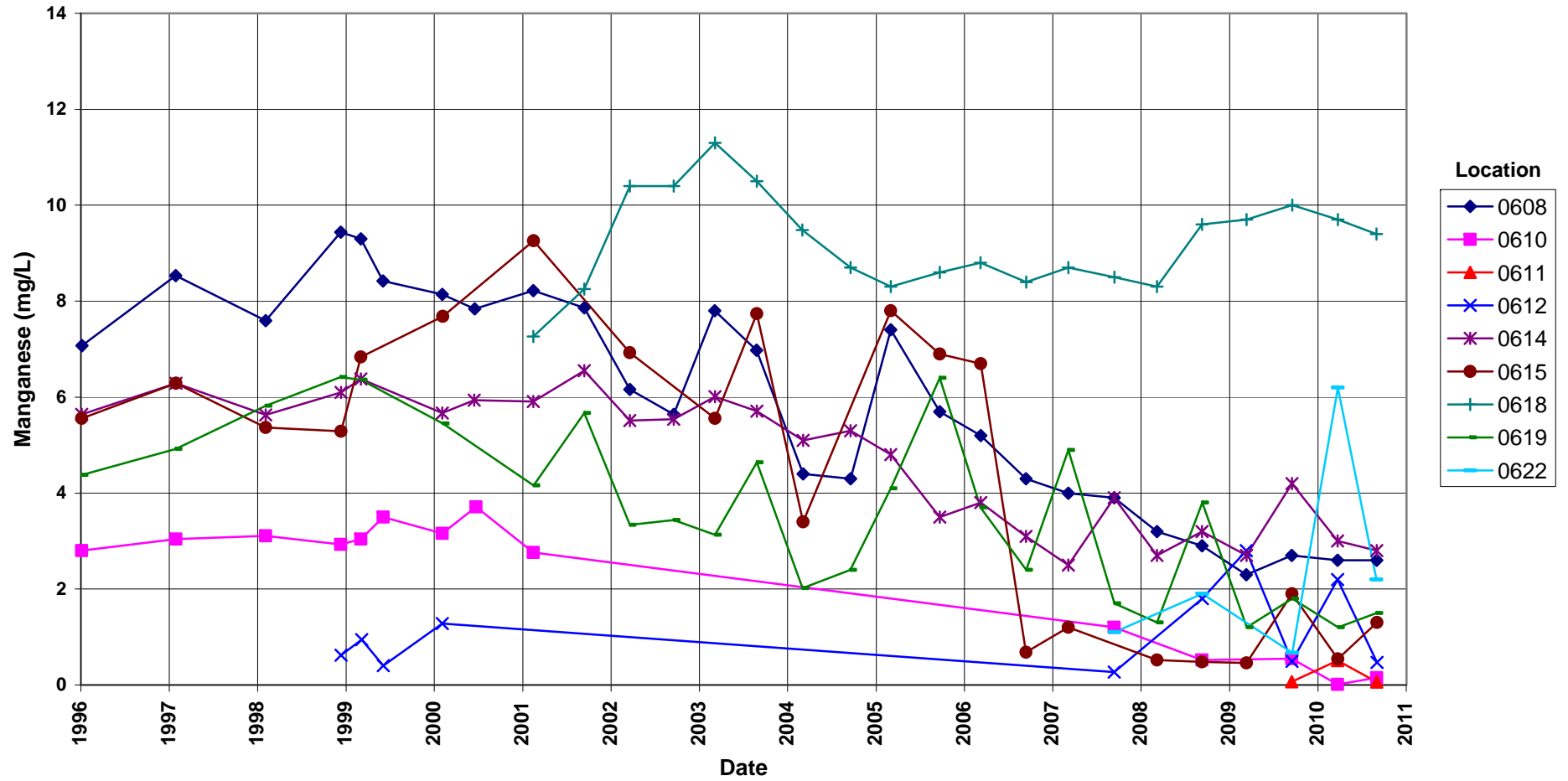
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration
 No established groundwater standard



Shiprock Disposal Site (Floodplain)

Manganese Concentration

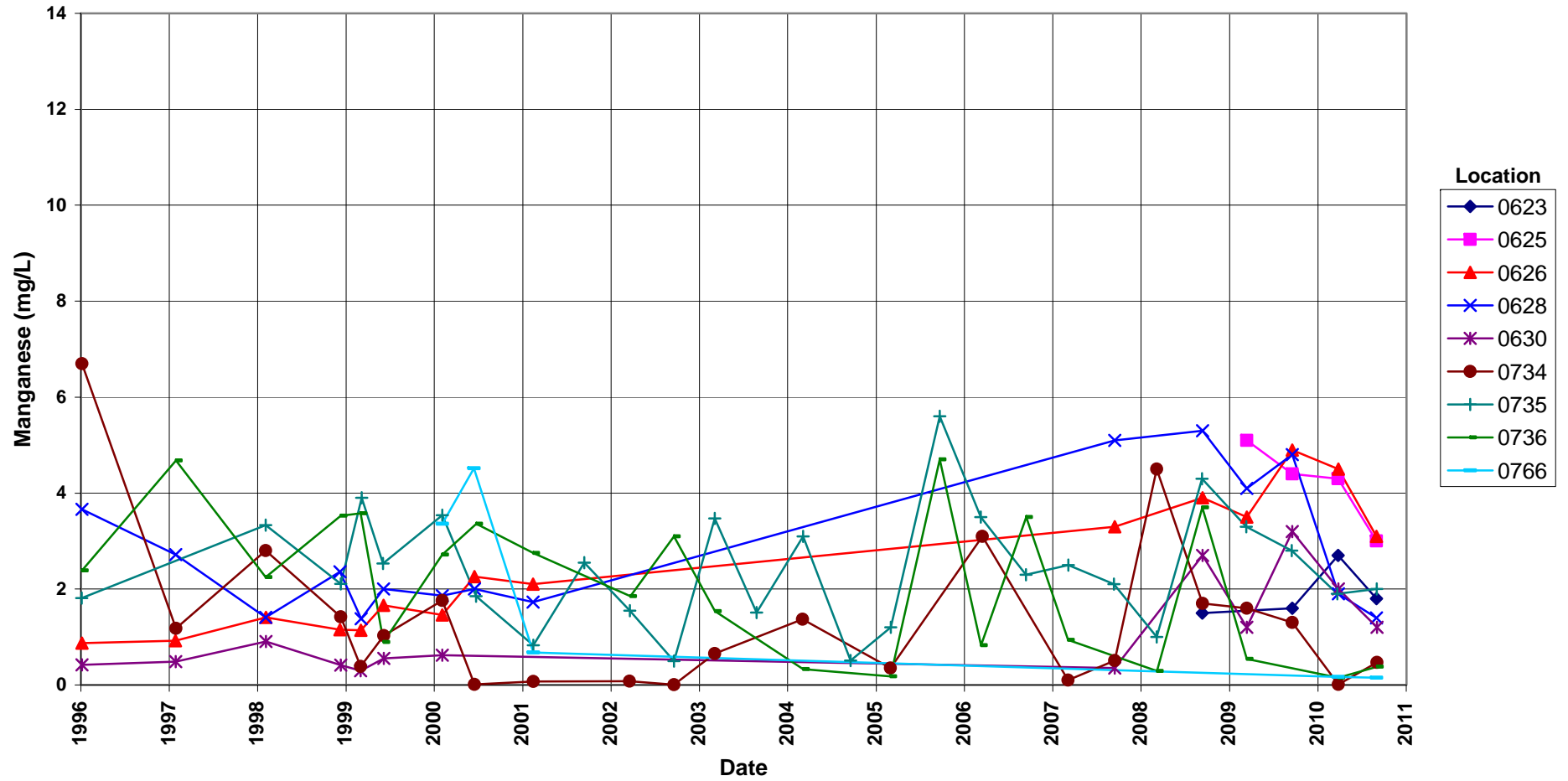
No established groundwater standard



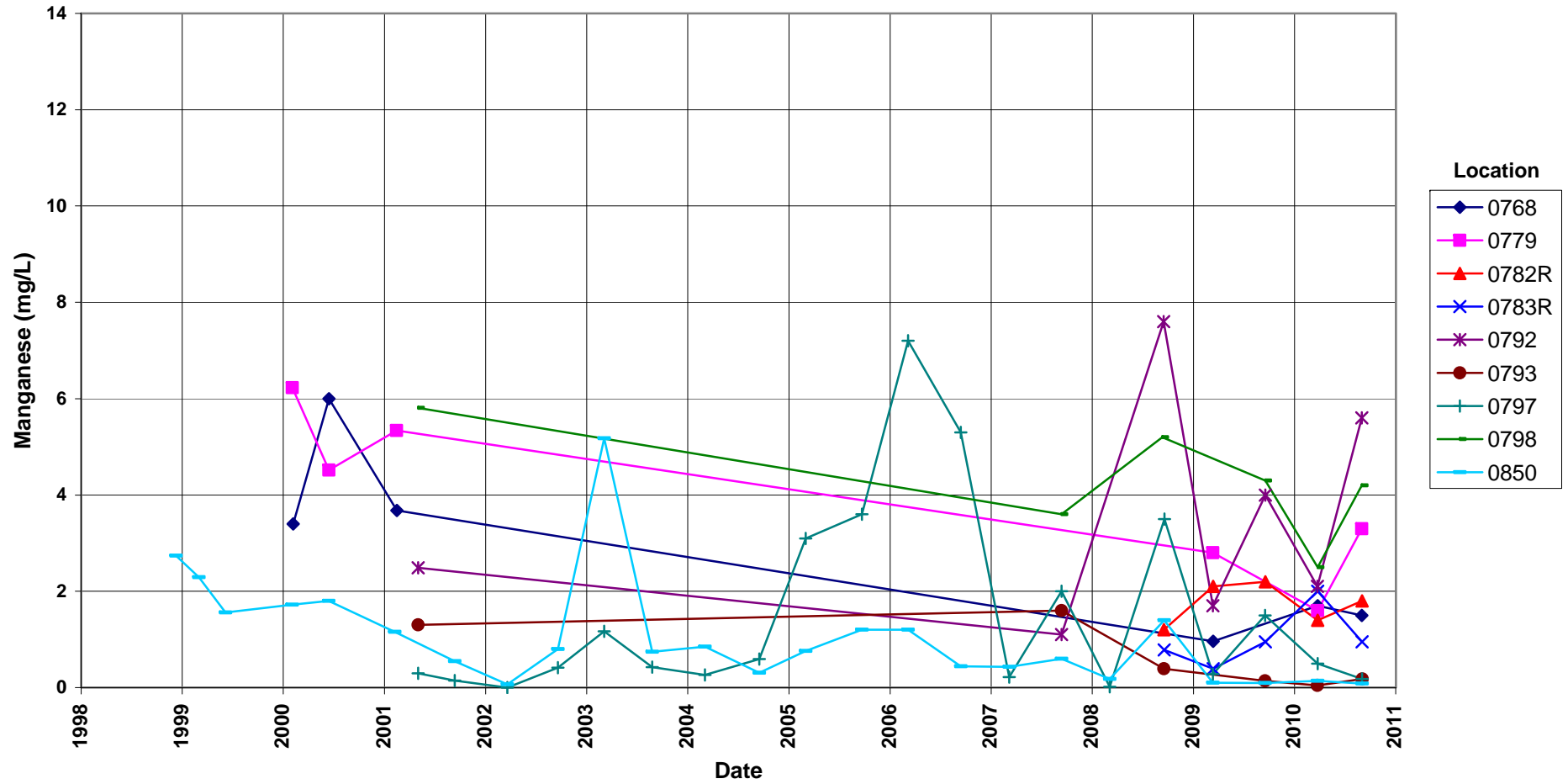
Shiprock Disposal Site (Floodplain)

Manganese Concentration

No established groundwater standard



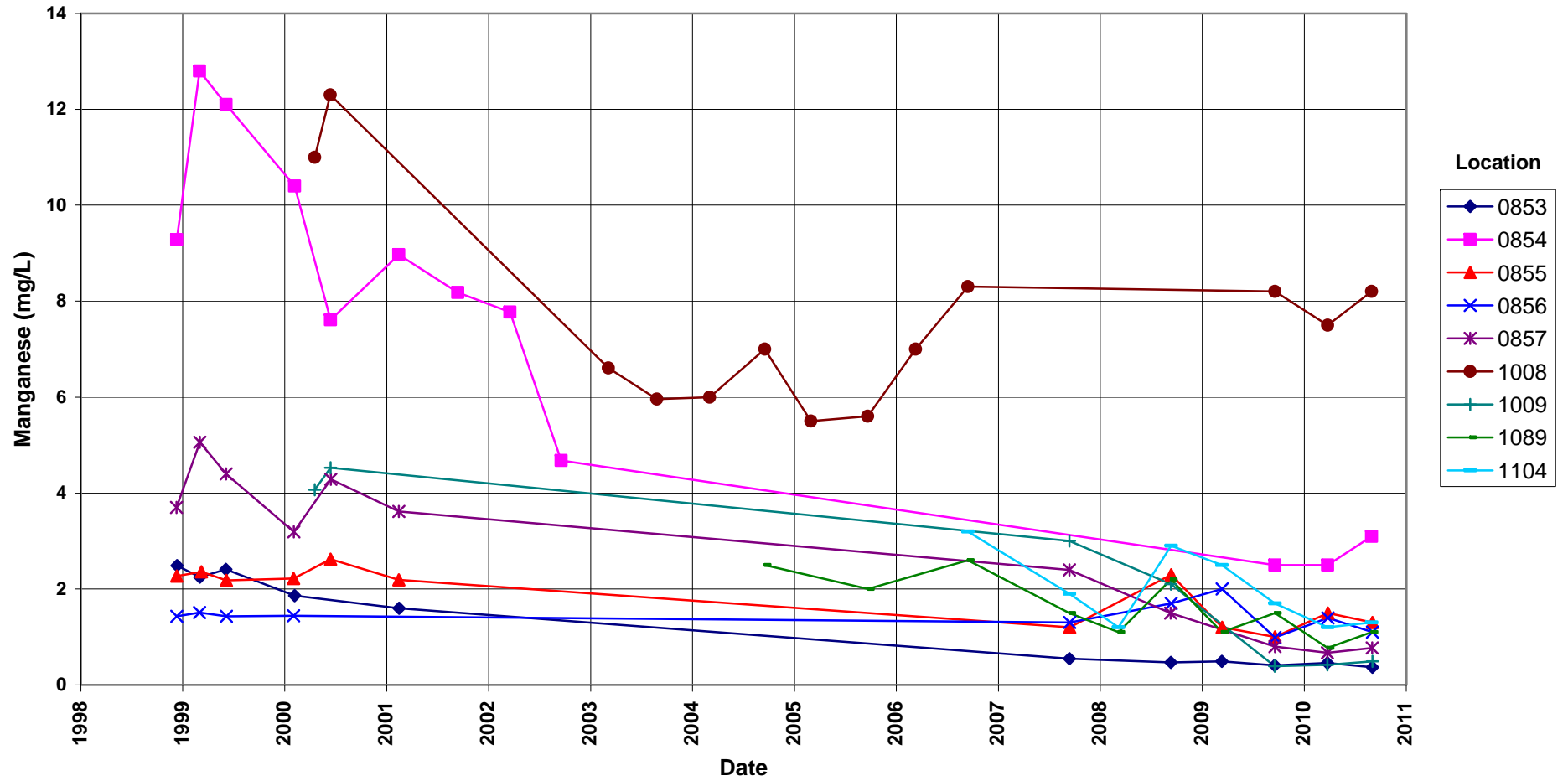
Shiprock Disposal Site (Floodplain)
Manganese Concentration
No established groundwater standard



Shiprock Disposal Site (Floodplain)

Manganese Concentration

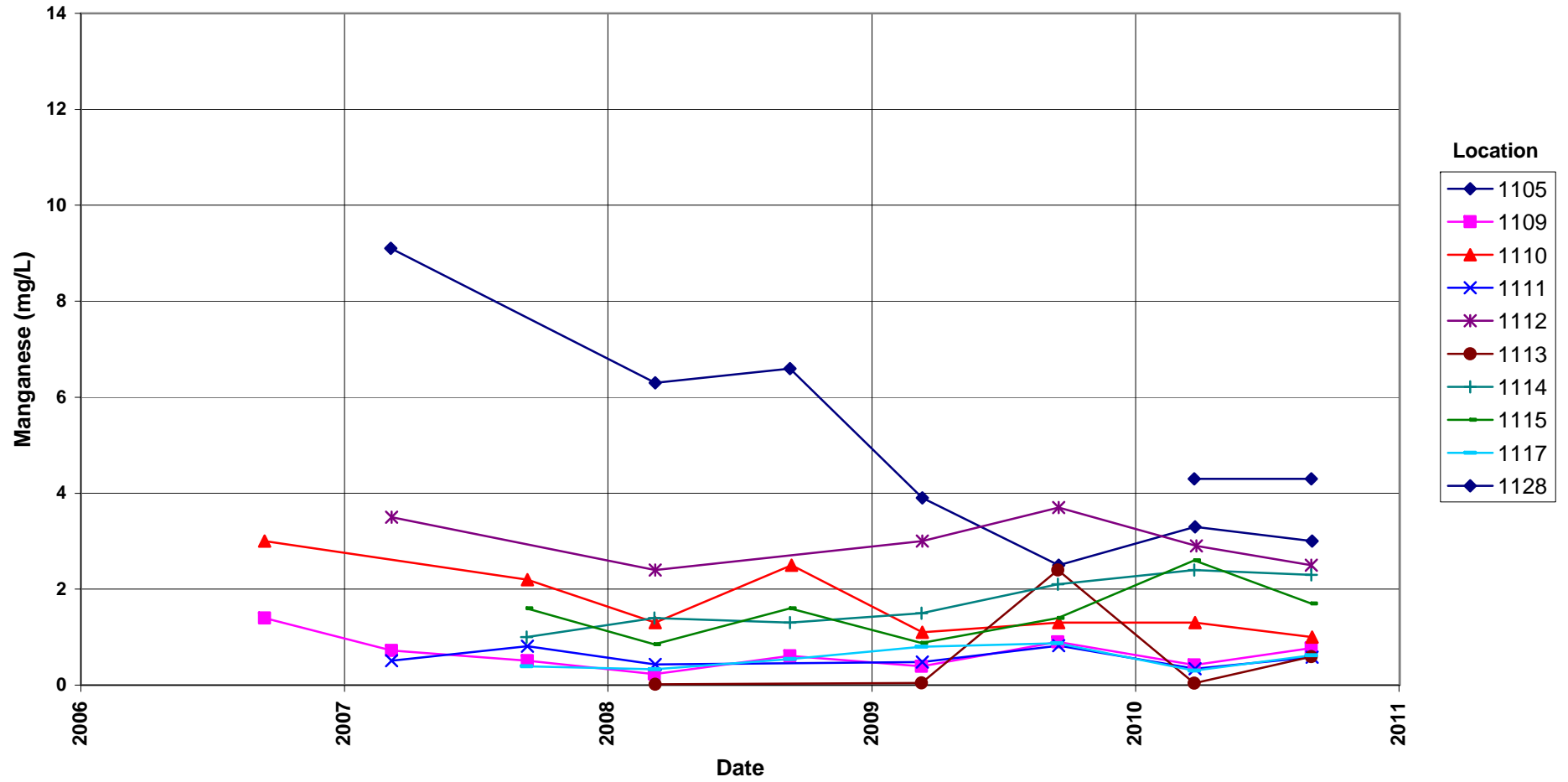
No established groundwater standard



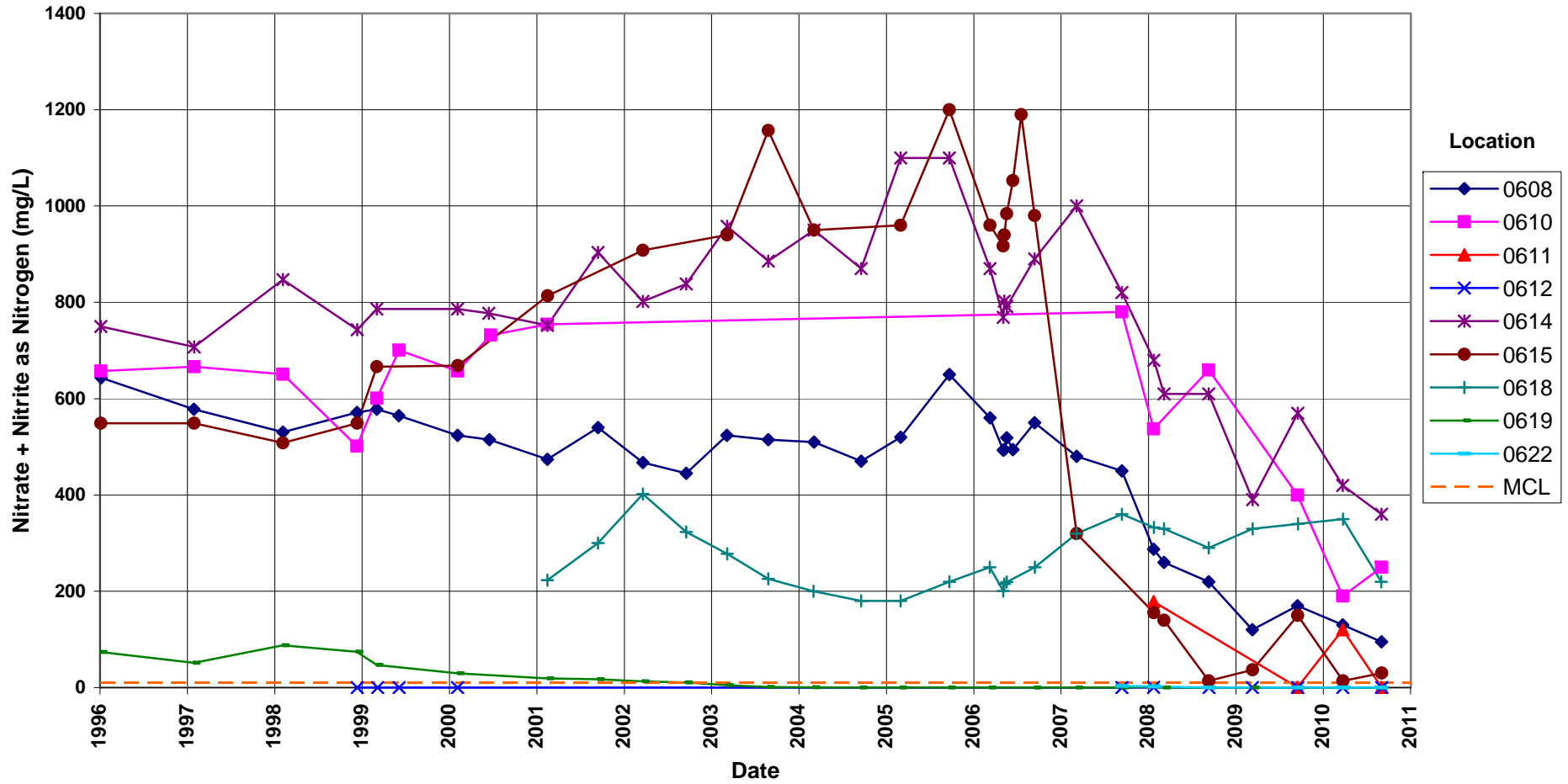
Shiprock Disposal Site (Floodplain)

Manganese Concentration

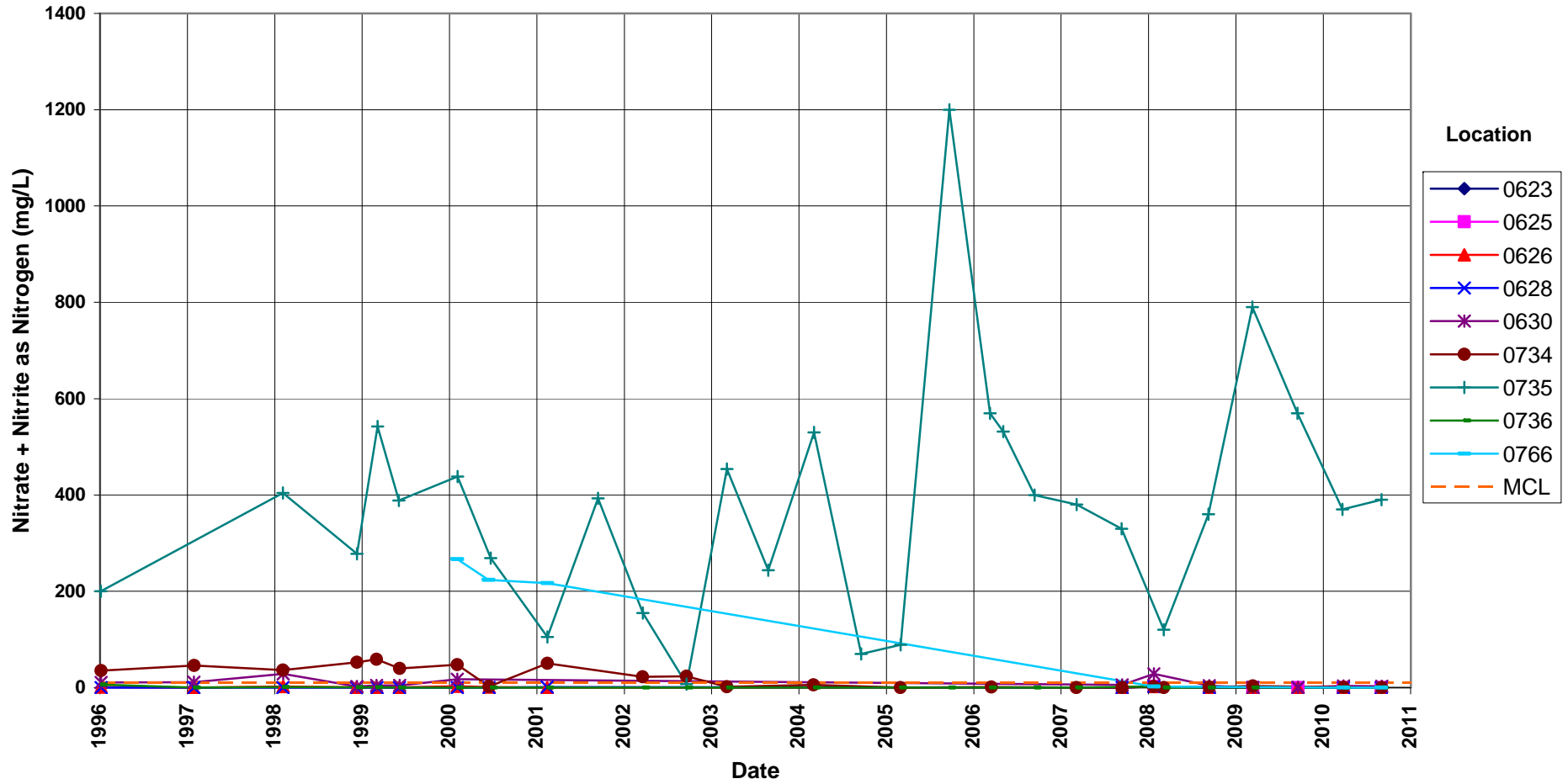
No established groundwater standard



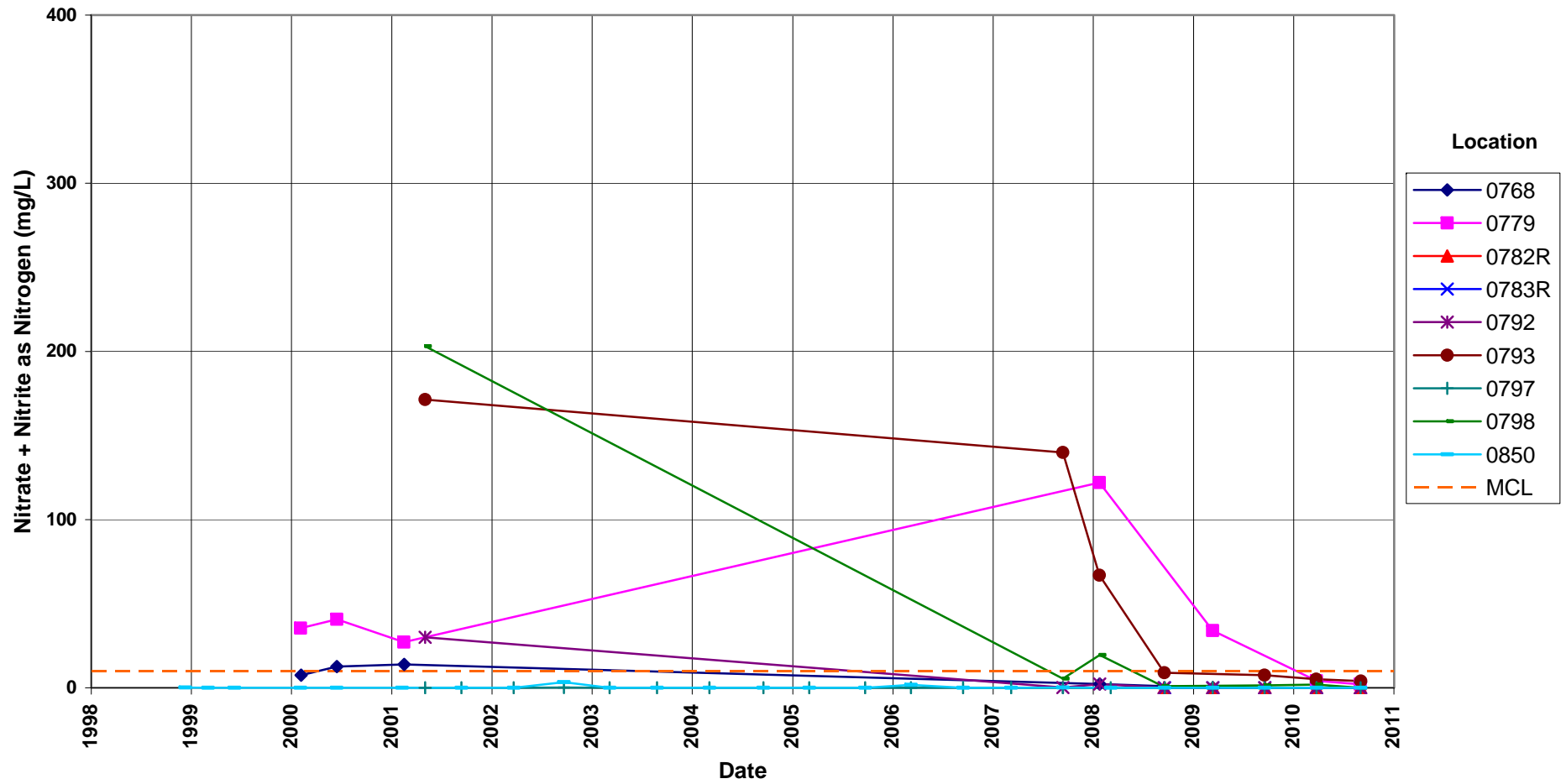
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



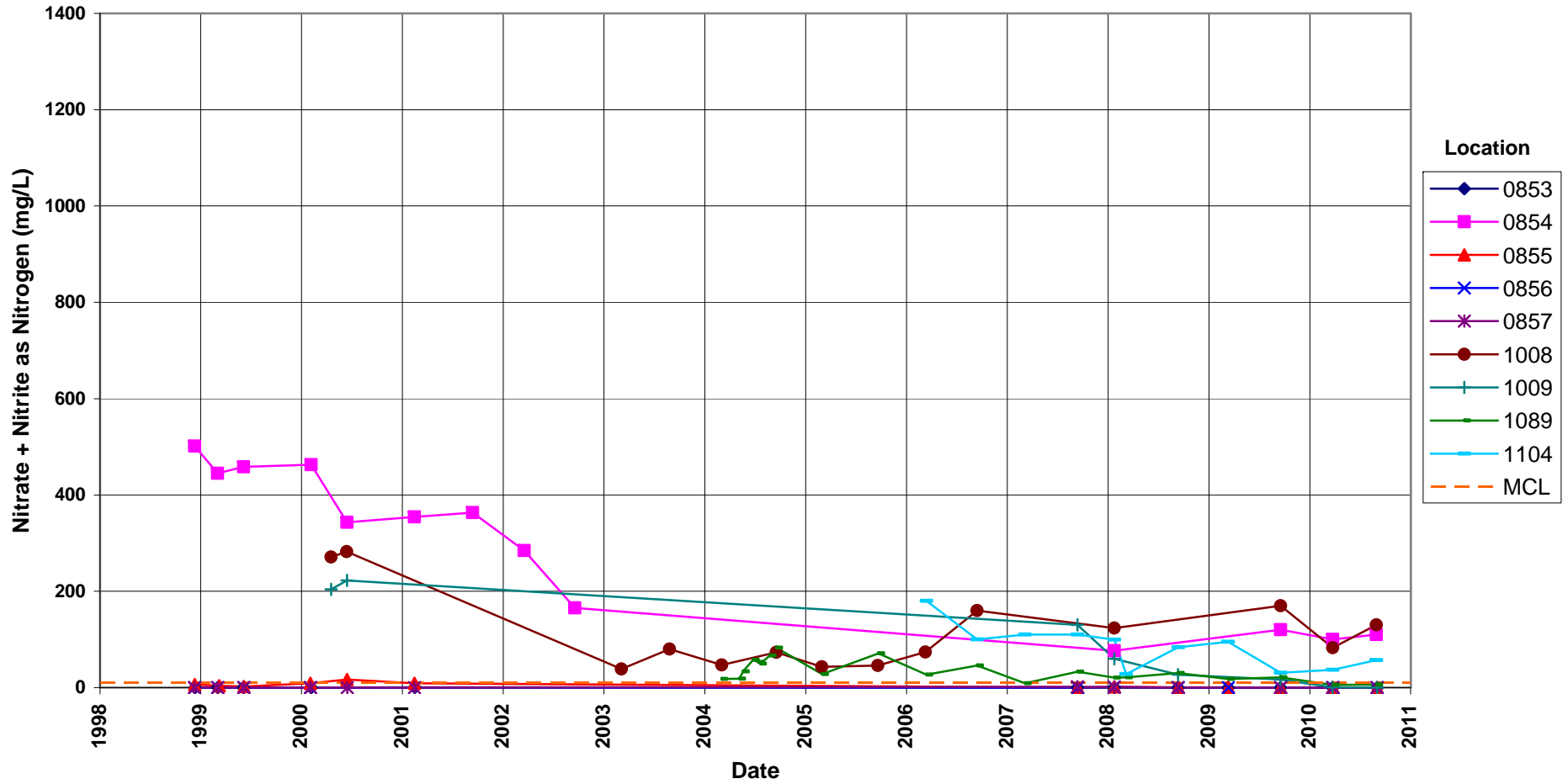
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



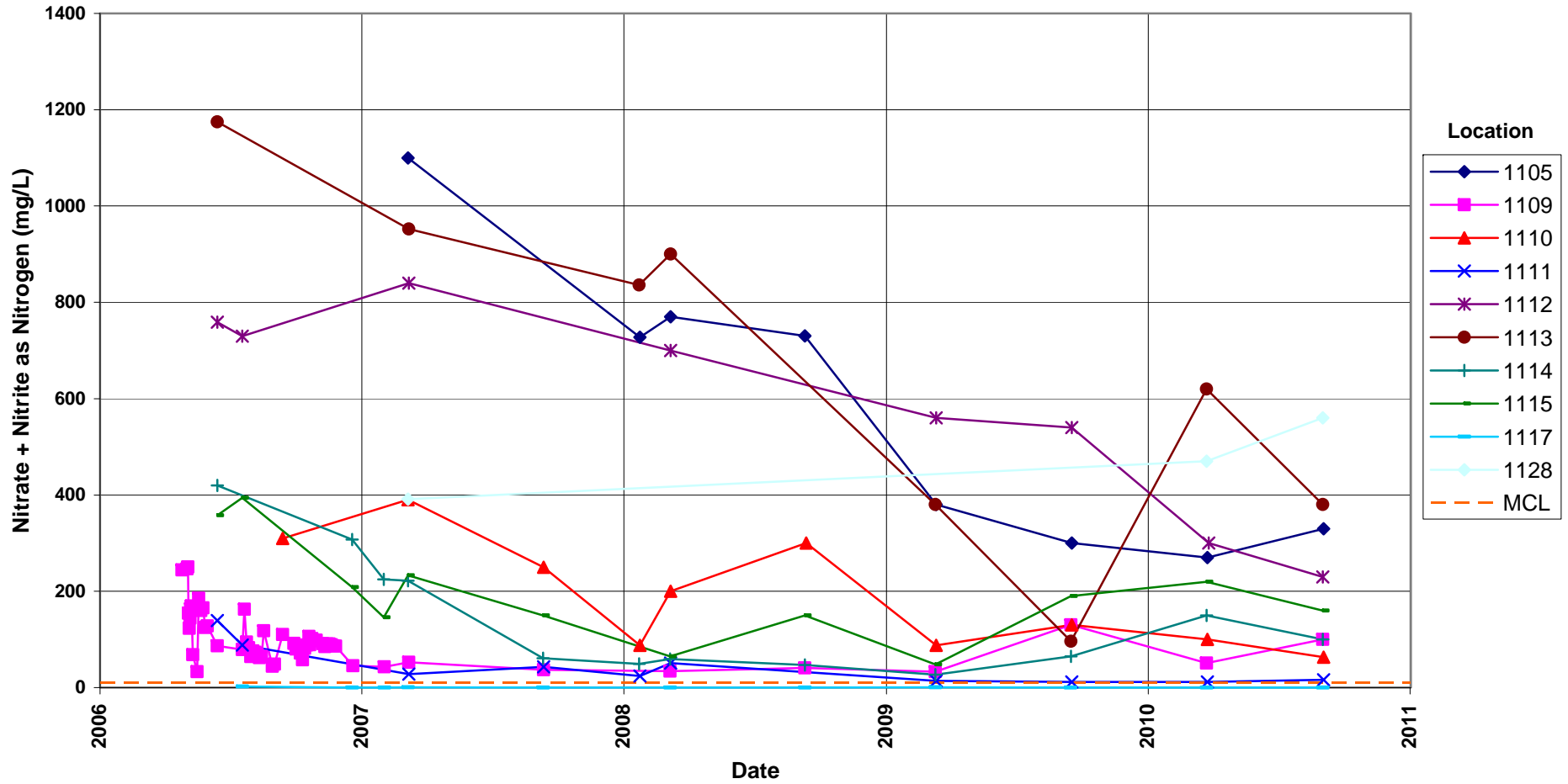
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



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



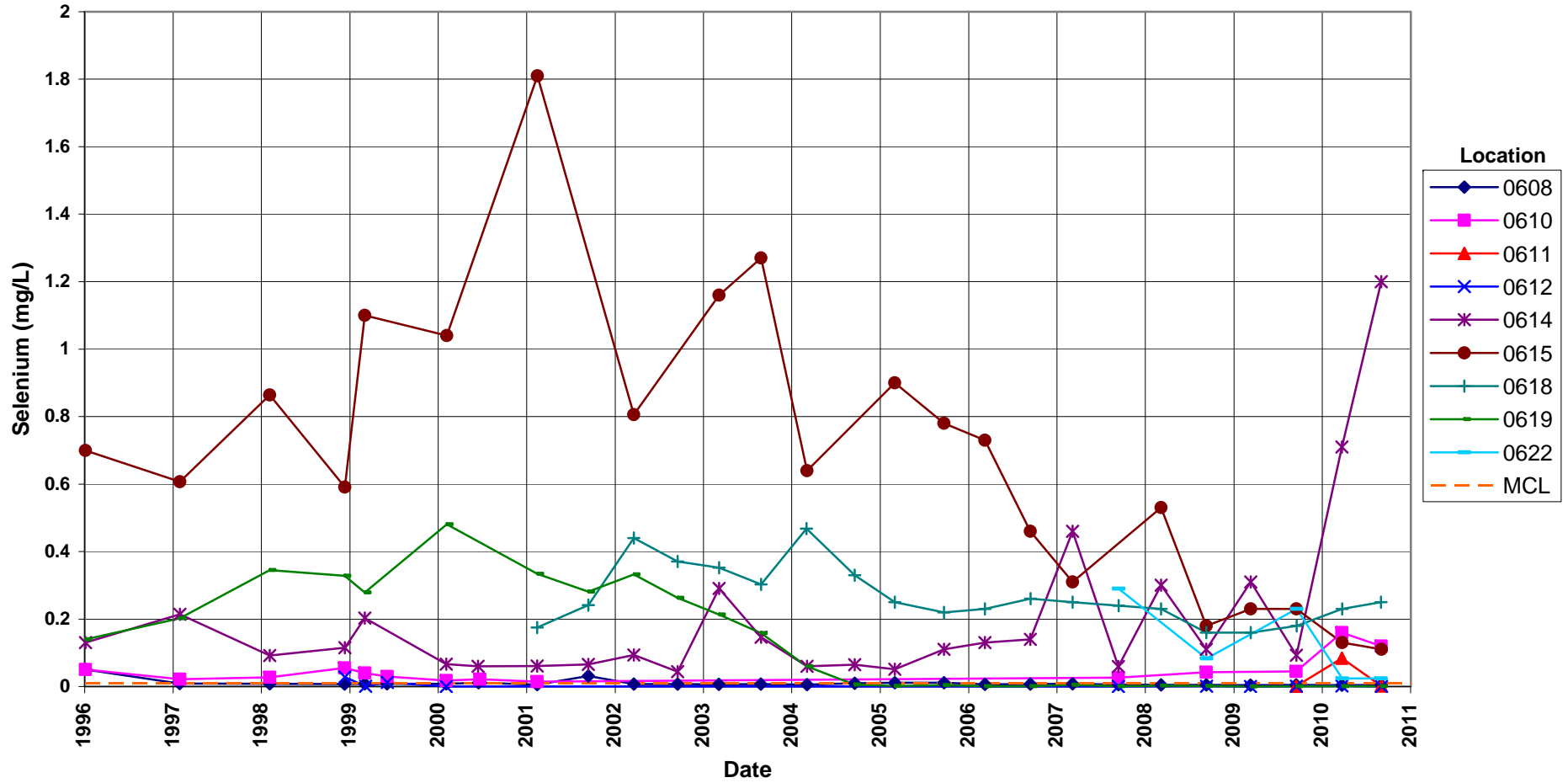
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



Shiprock Disposal Site (Floodplain)

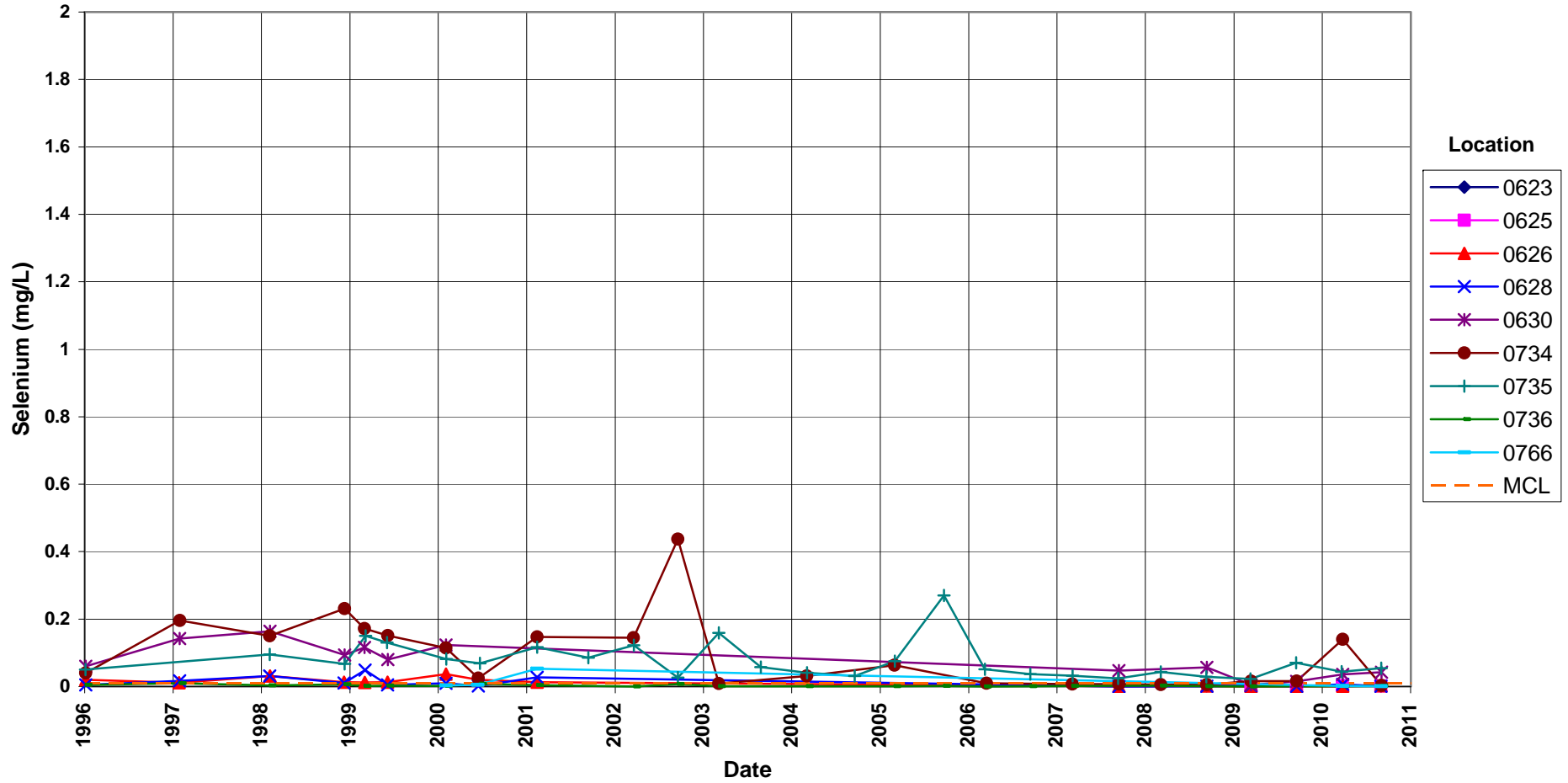
Selenium Concentration

40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



Shiprock Disposal Site (Floodplain) Selenium Concentration

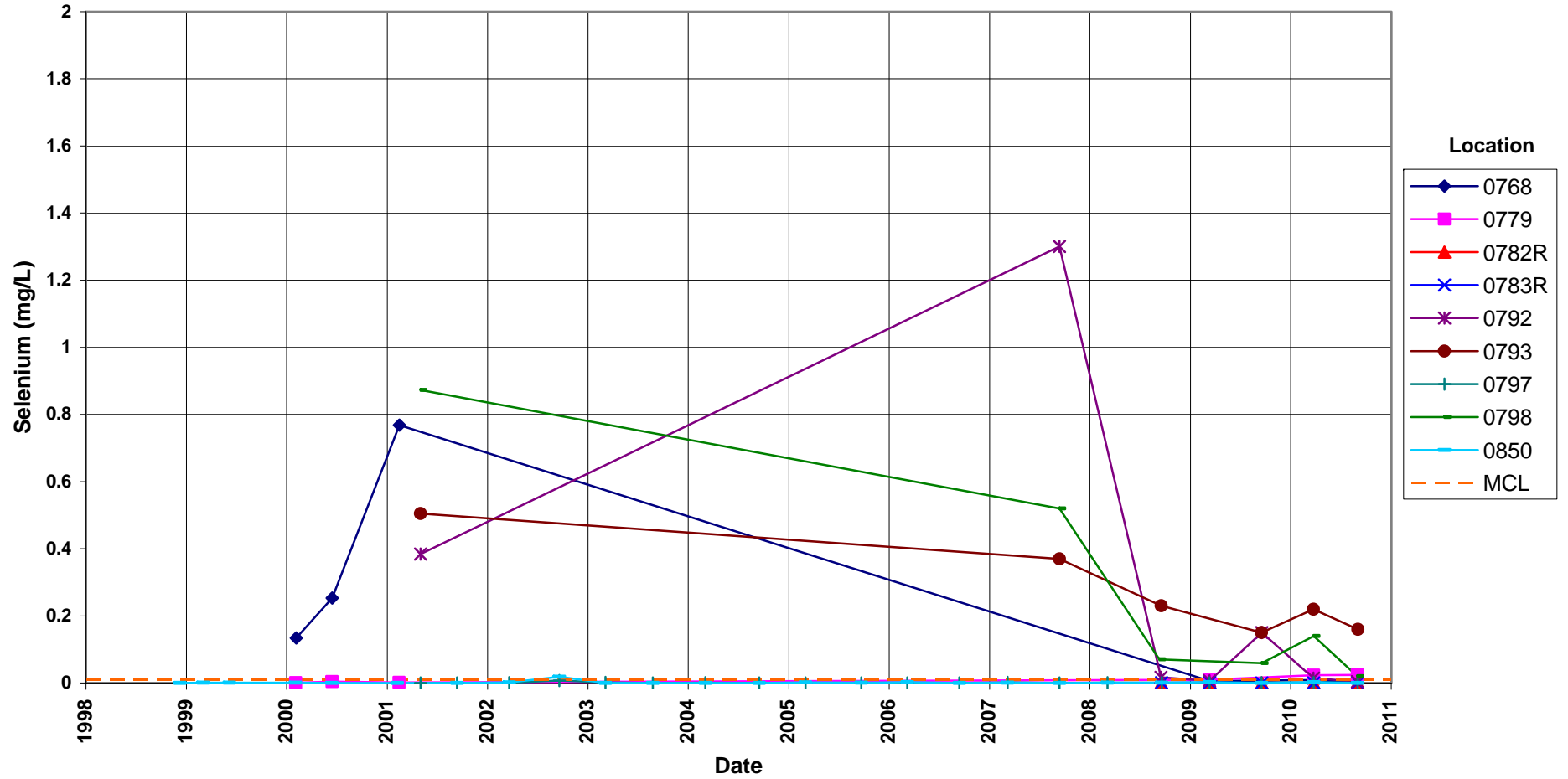
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



Shiprock Disposal Site (Floodplain)

Selenium Concentration

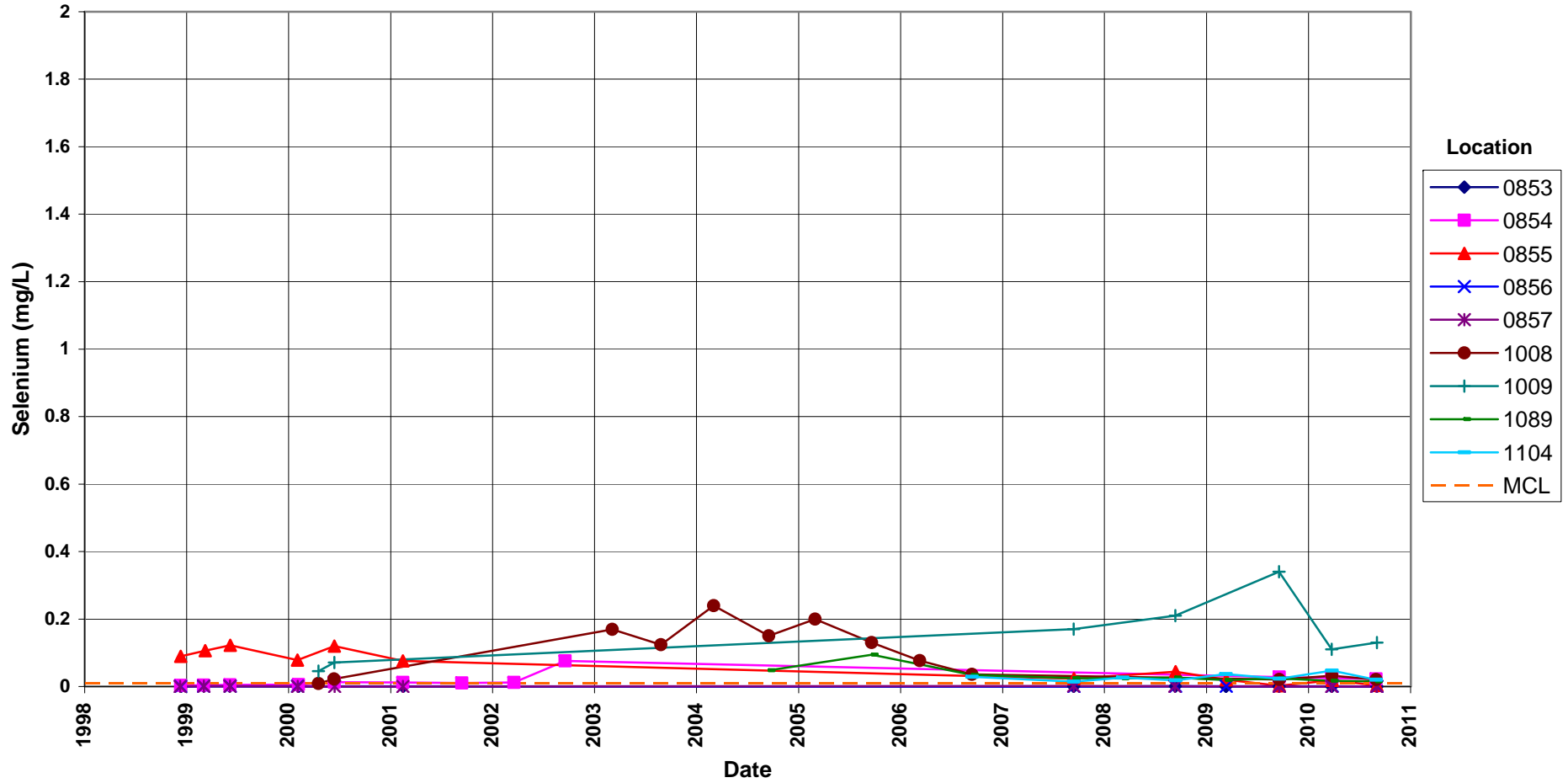
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



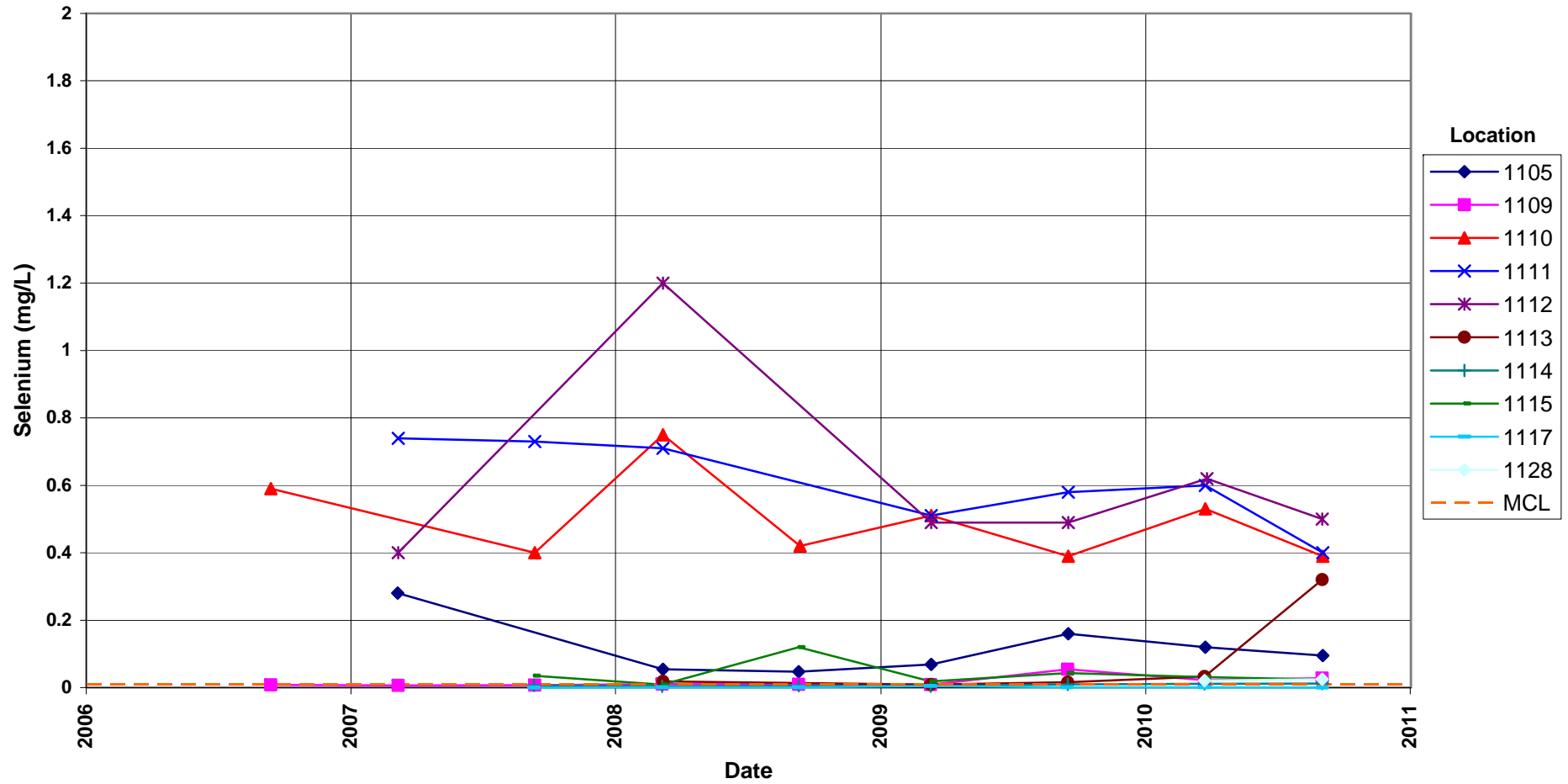
Shiprock Disposal Site (Floodplain)

Selenium Concentration

40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



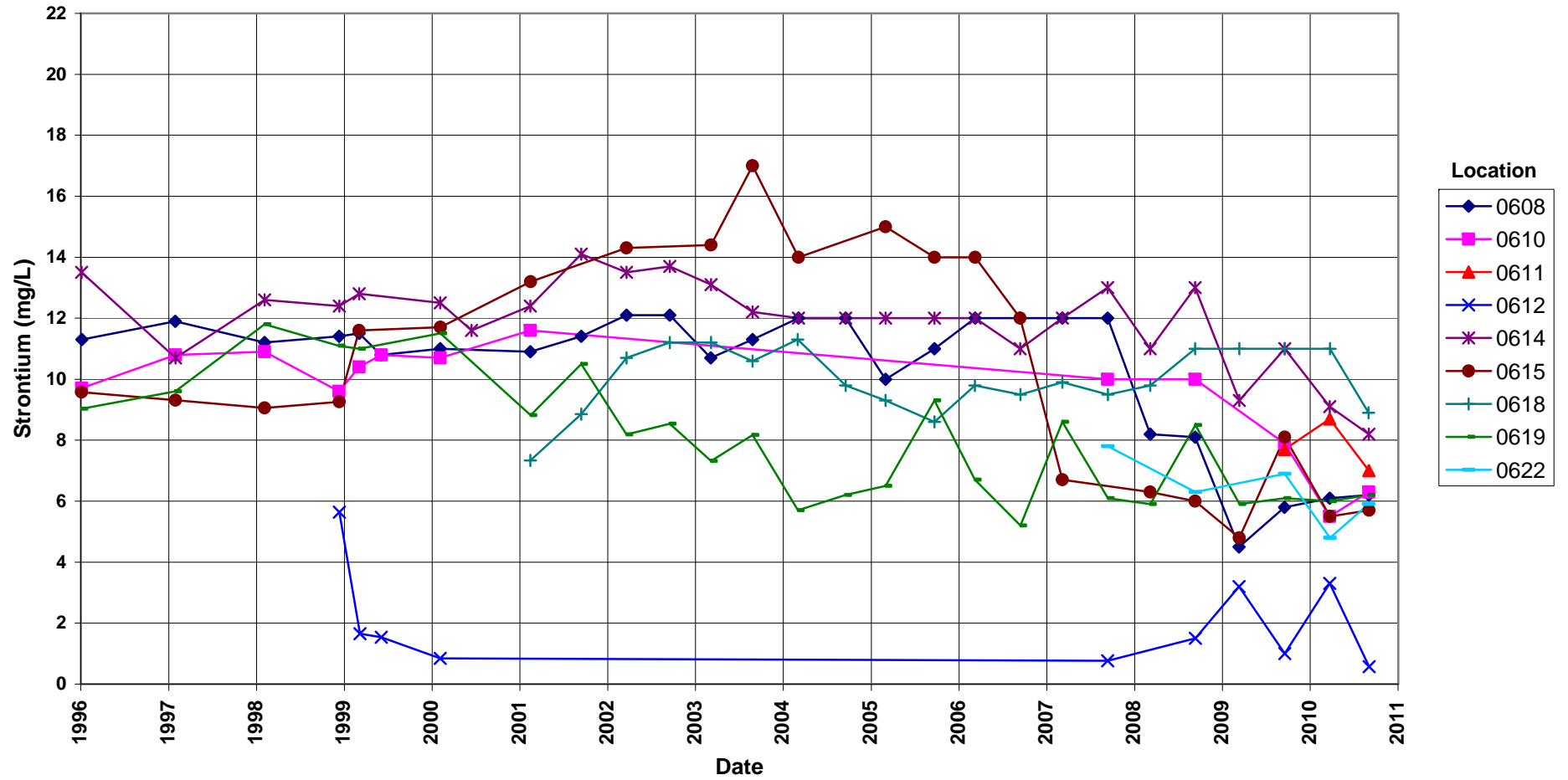
Shiprock Disposal Site (Floodplain)
Selenium Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



Shiprock Disposal Site (Floodplain)

Strontium Concentration

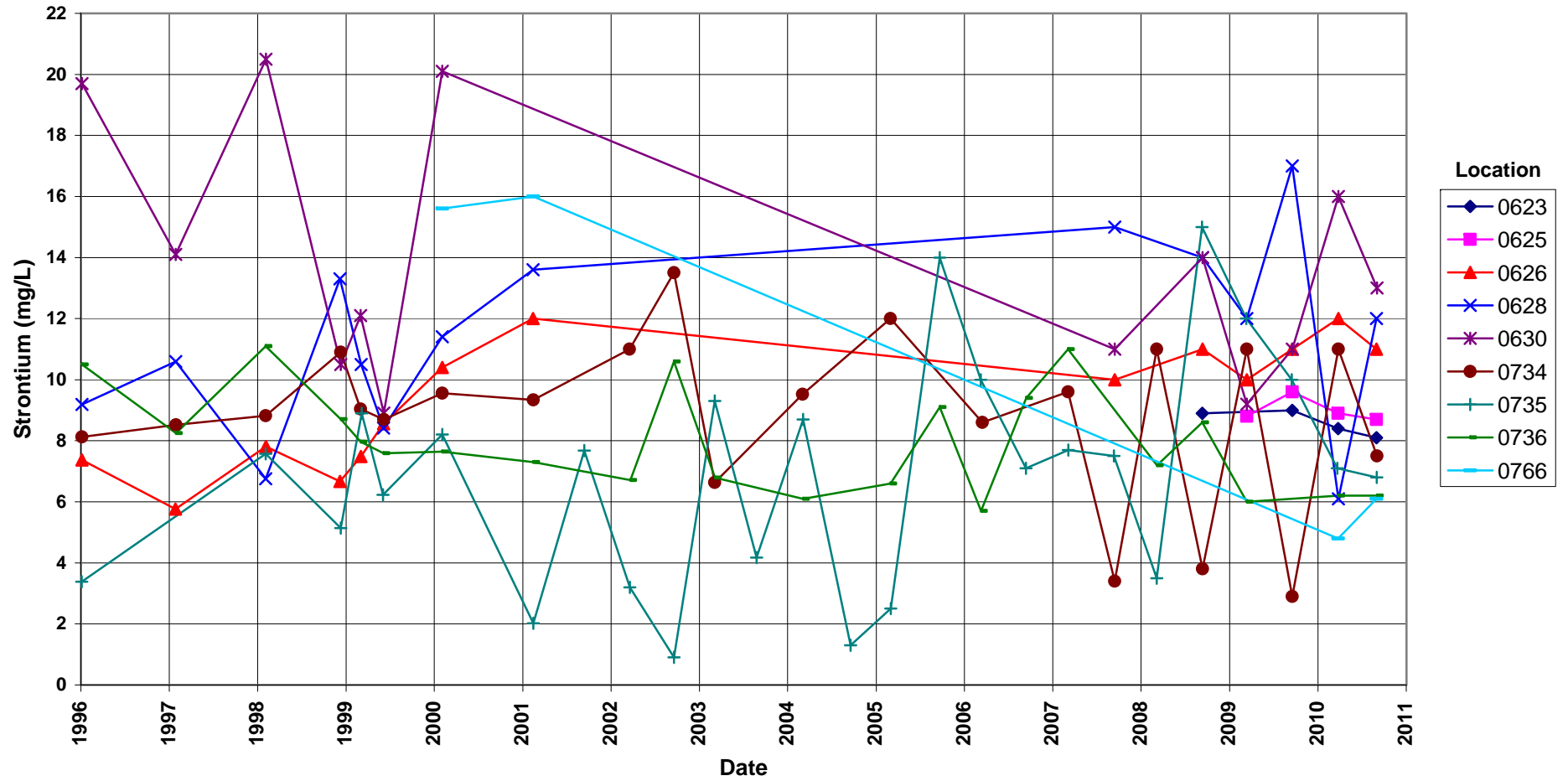
No established groundwater standard



Shiprock Disposal Site (Floodplain)

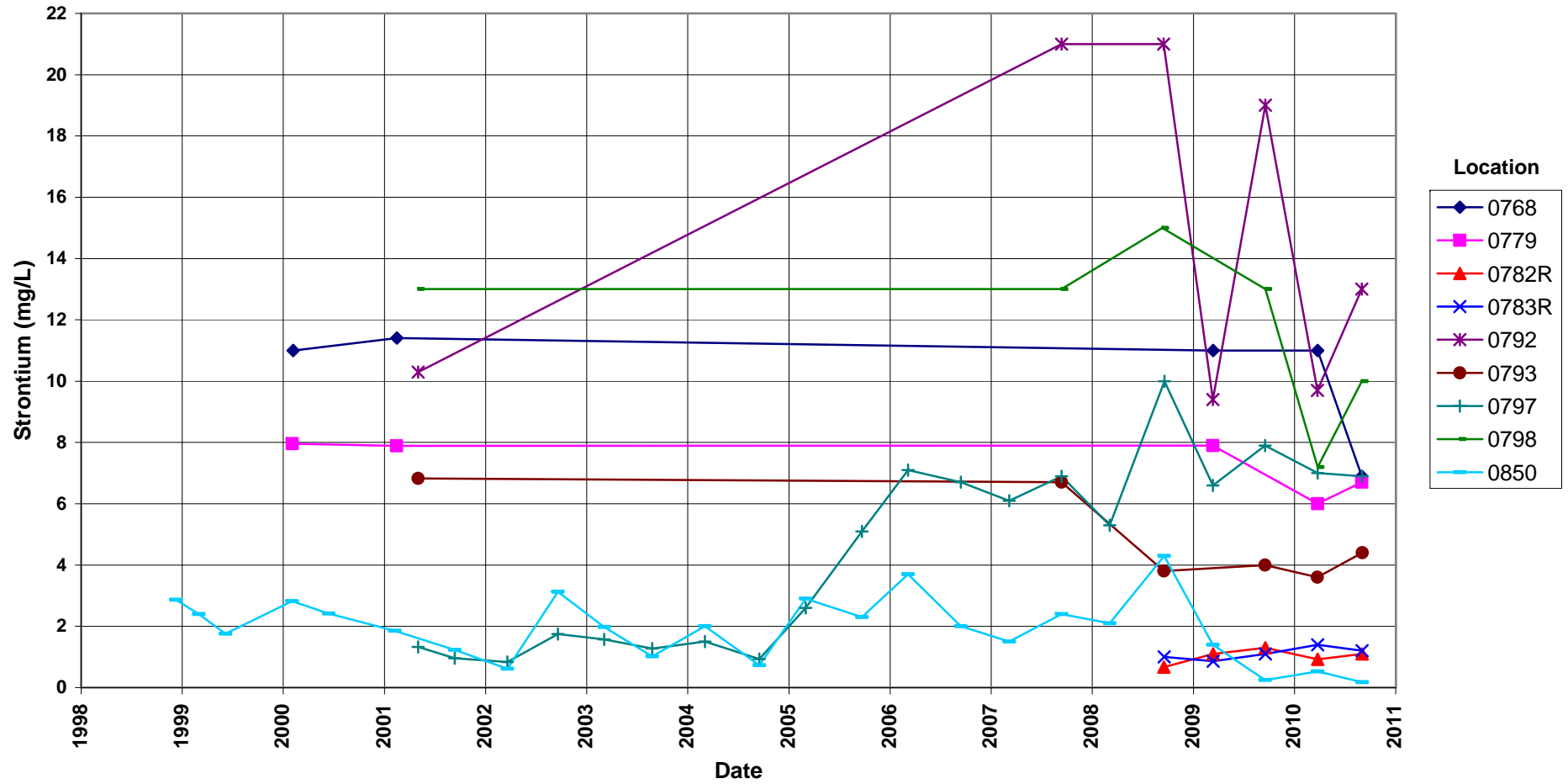
Strontium Concentration

No established groundwater standard



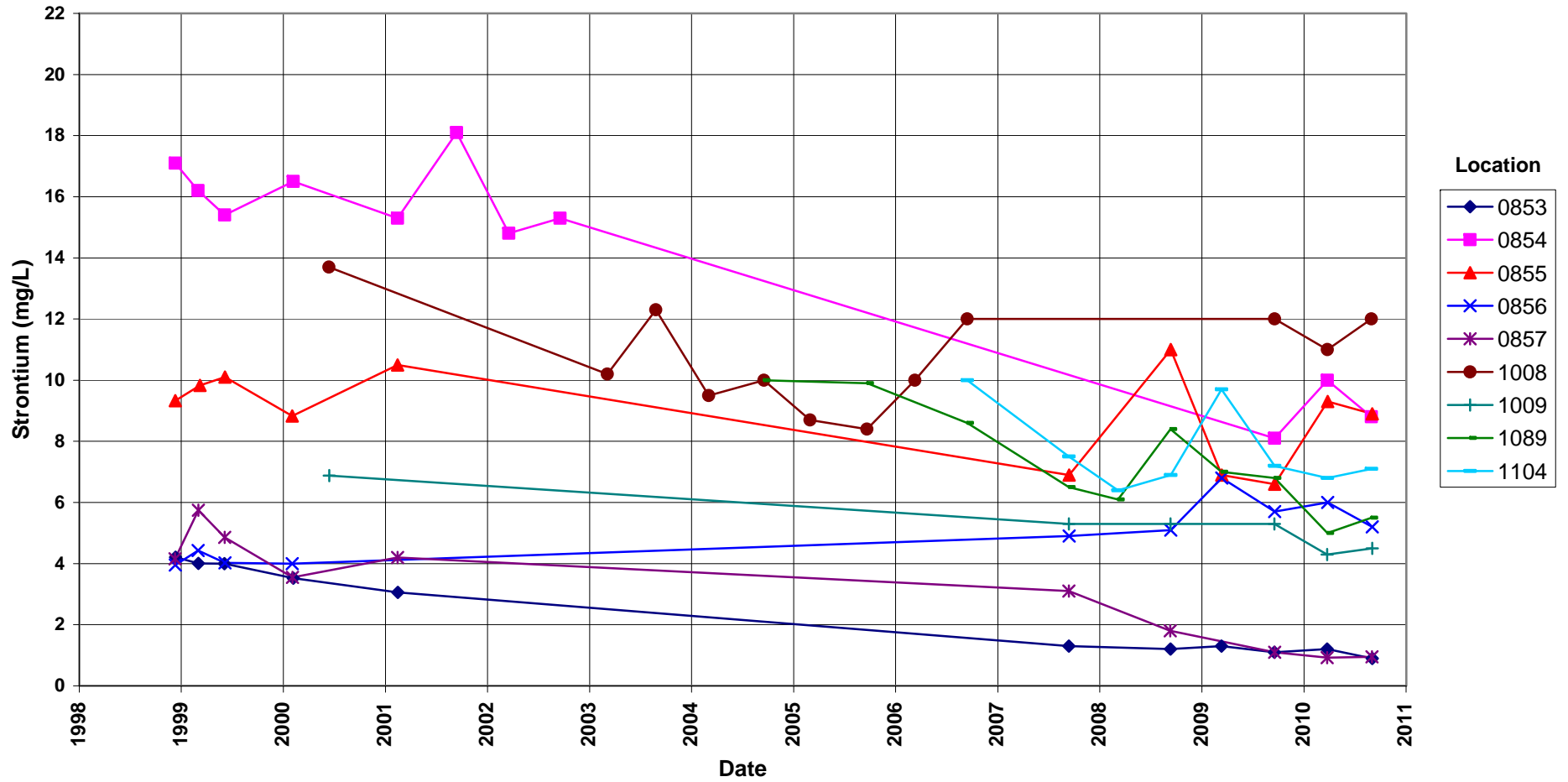
Shiprock Disposal Site (Floodplain) Strontium Concentration

No established groundwater standard



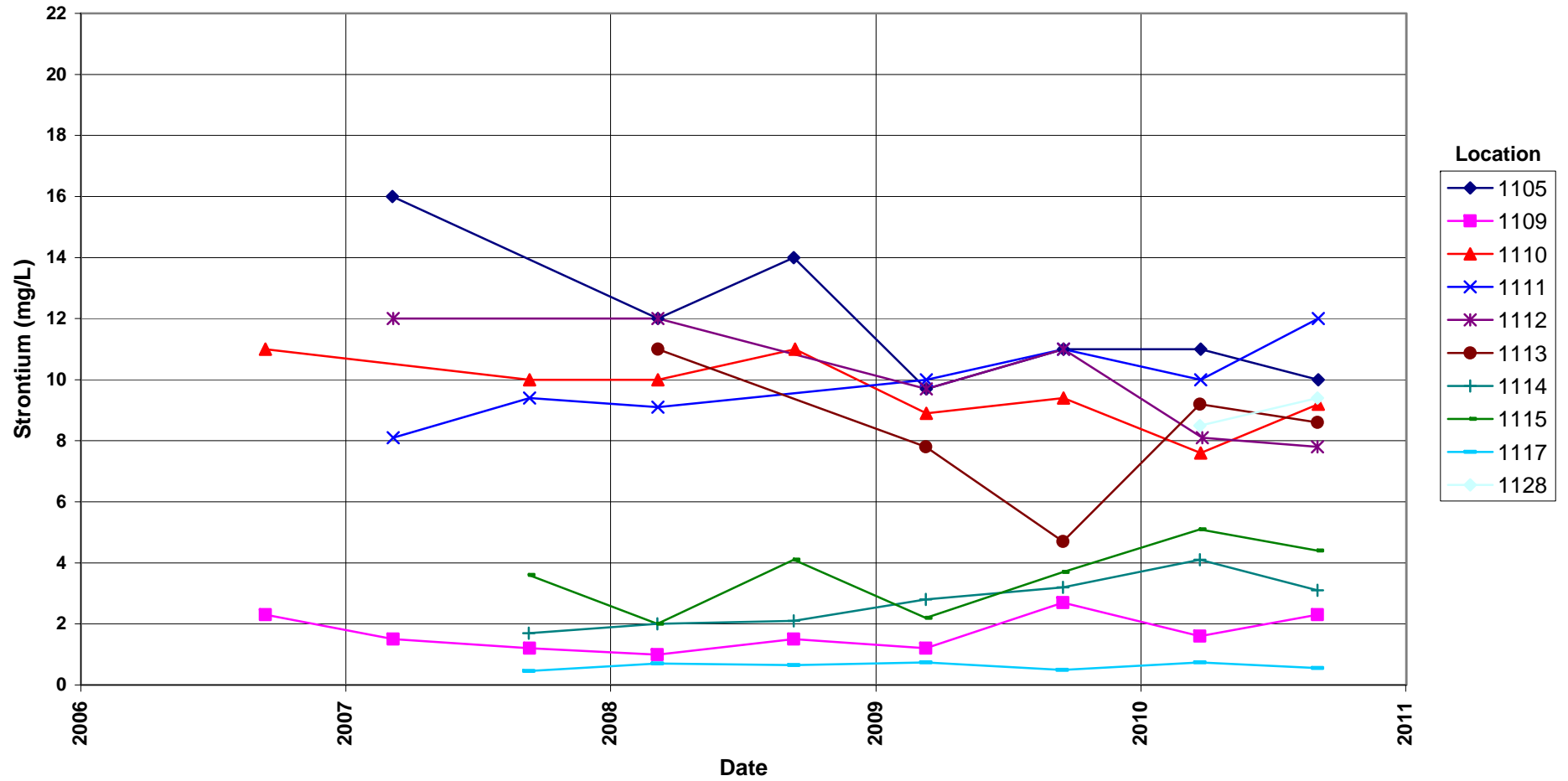
Shiprock Disposal Site (Floodplain) Strontium Concentration

No established groundwater standard



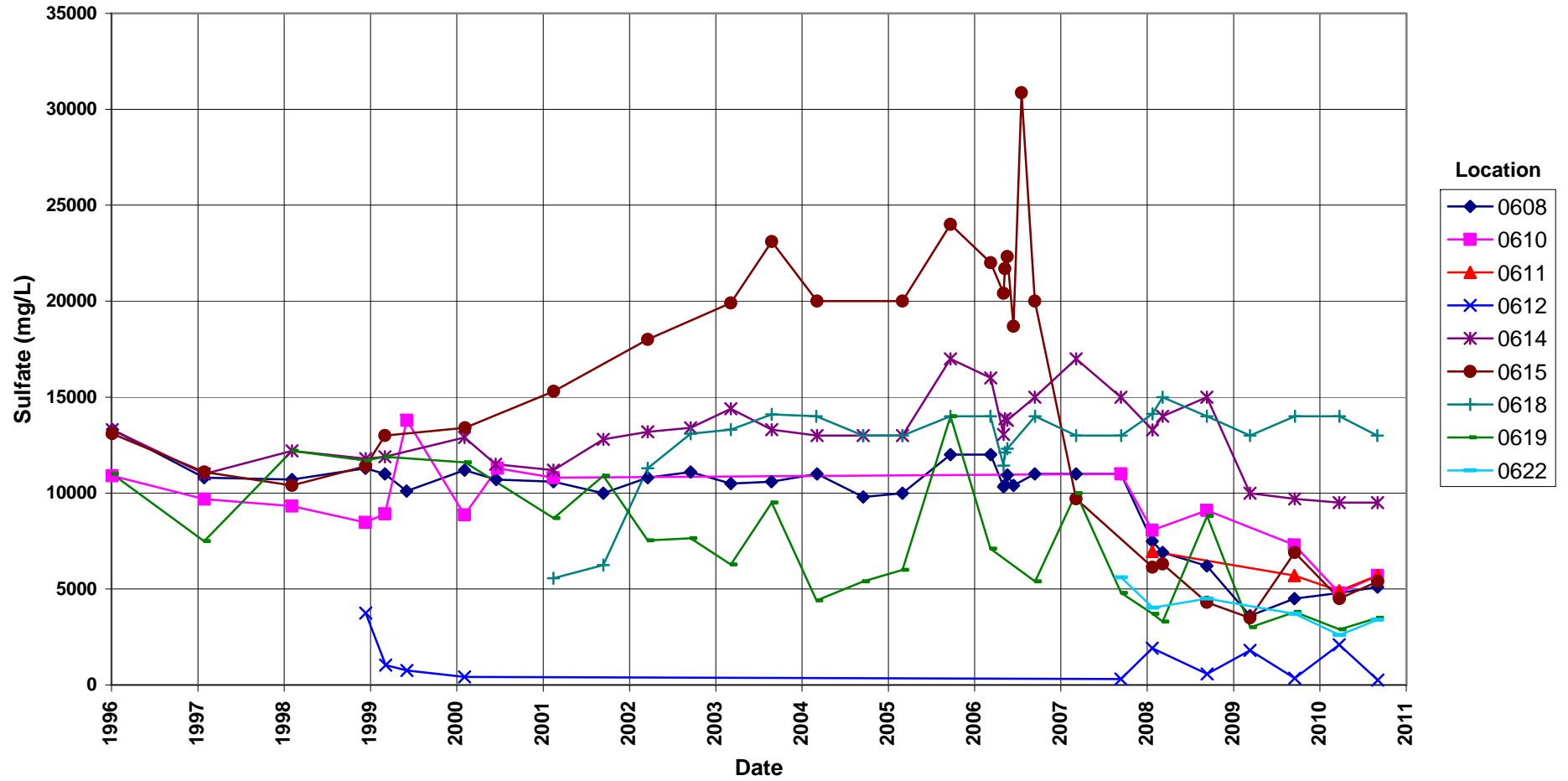
Shiprock Disposal Site (Floodplain) Strontium Concentration

No established groundwater standard



Shiprock Disposal Site (Floodplain) Sulfate Concentration

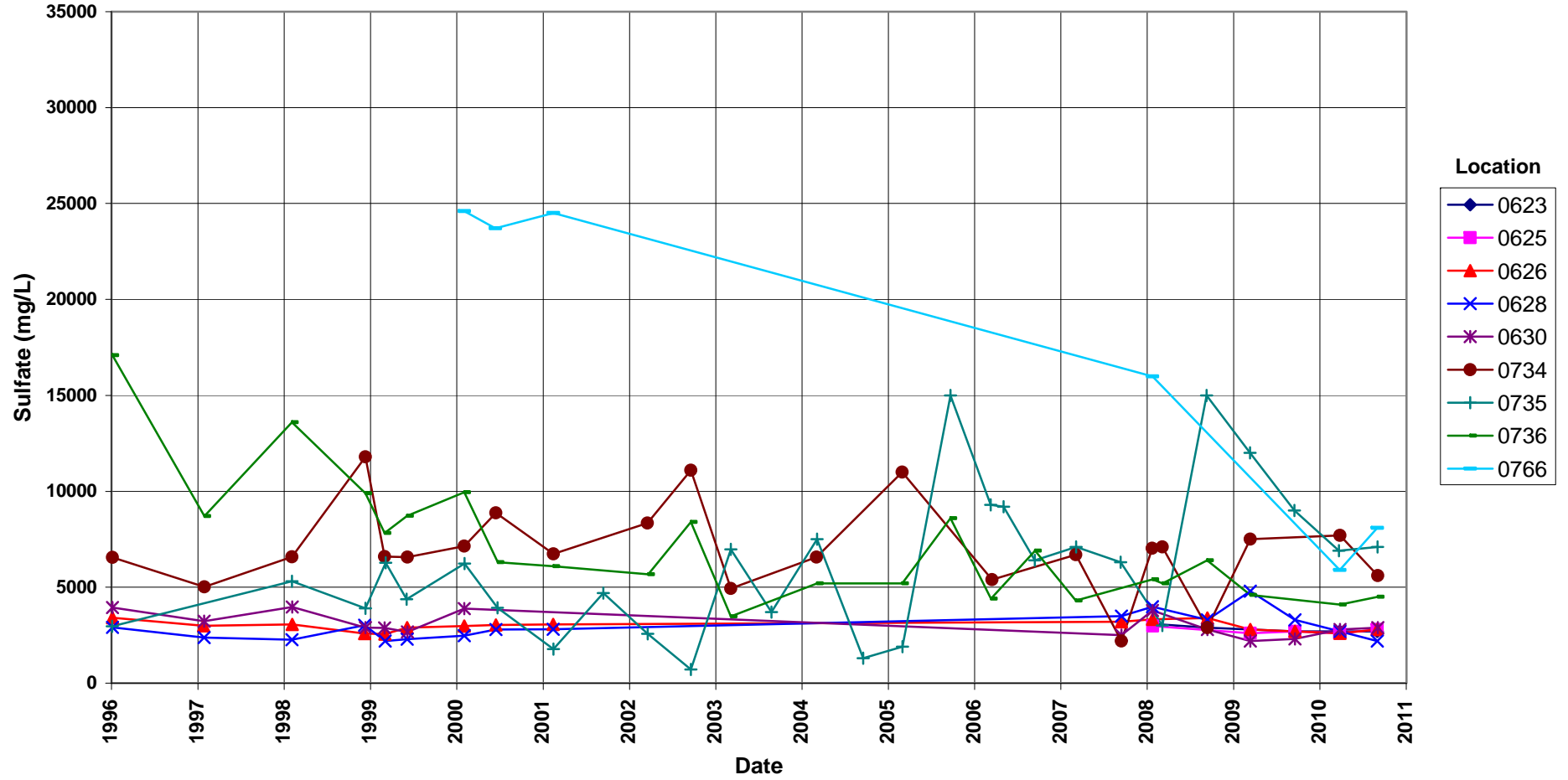
No established groundwater standard



Shiprock Disposal Site (Floodplain)

Sulfate Concentration

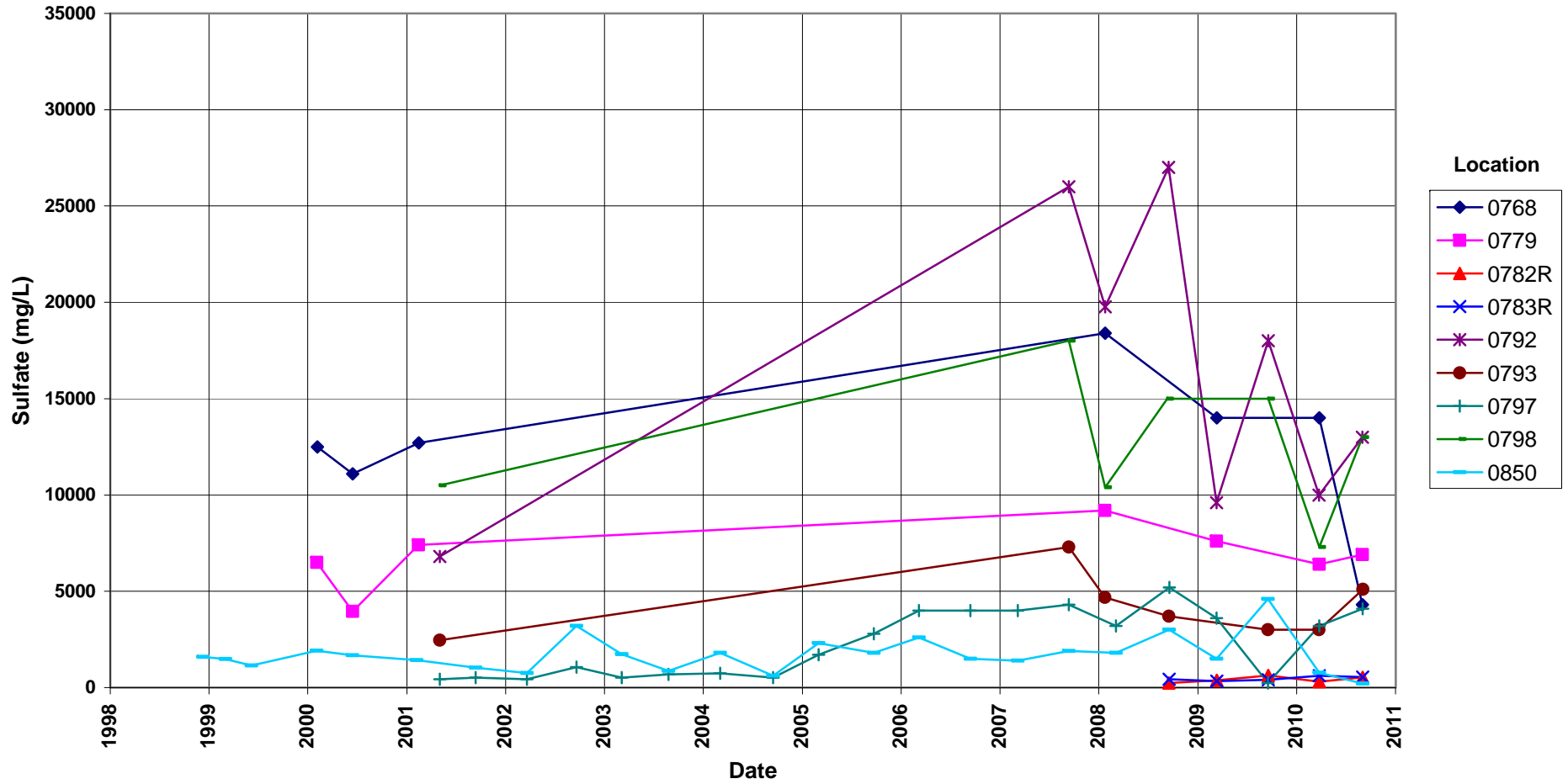
No established groundwater standard



Shiprock Disposal Site (Floodplain)

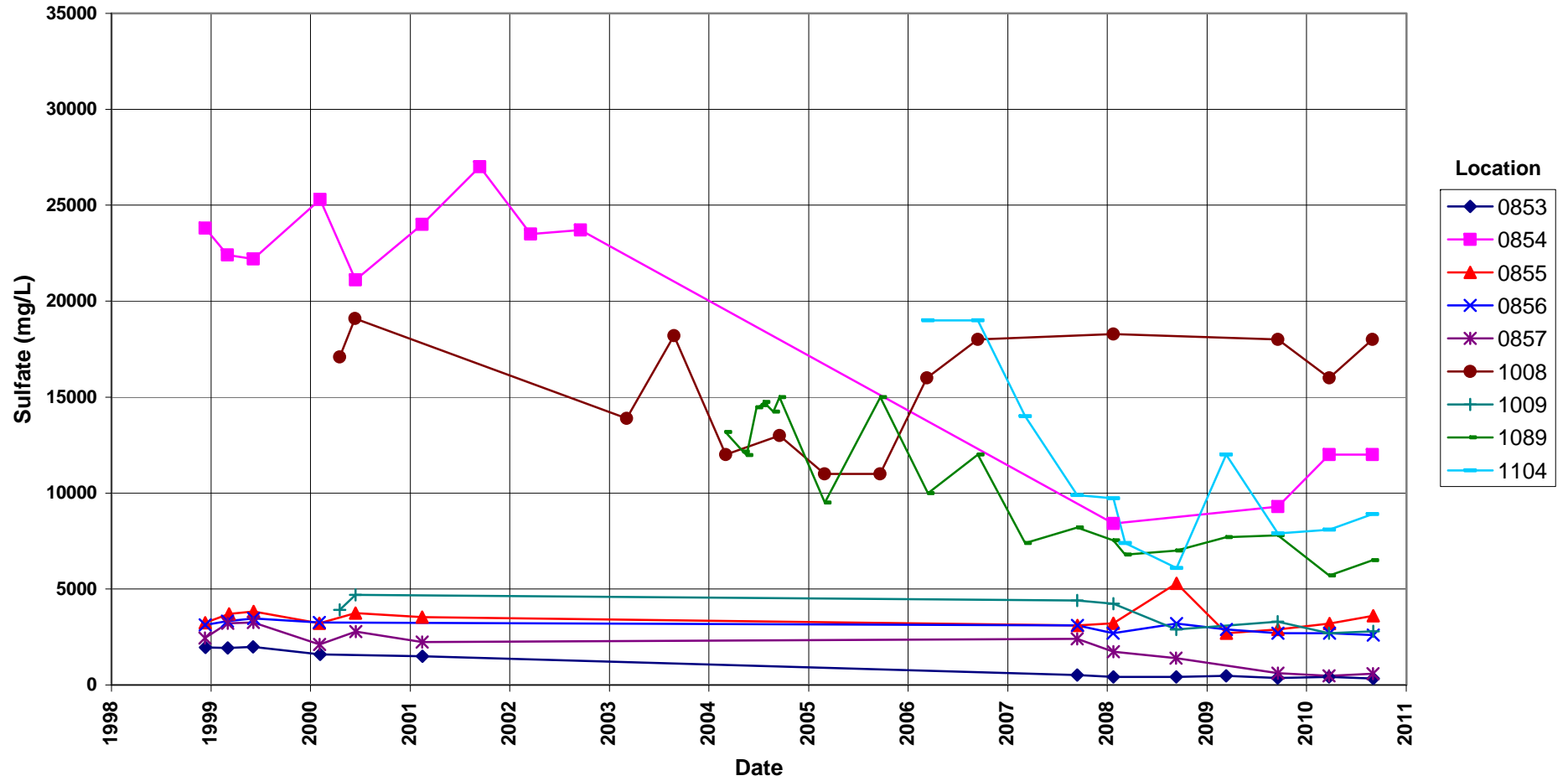
Sulfate Concentration

No established groundwater standard



Shiprock Disposal Site (Floodplain) Sulfate Concentration

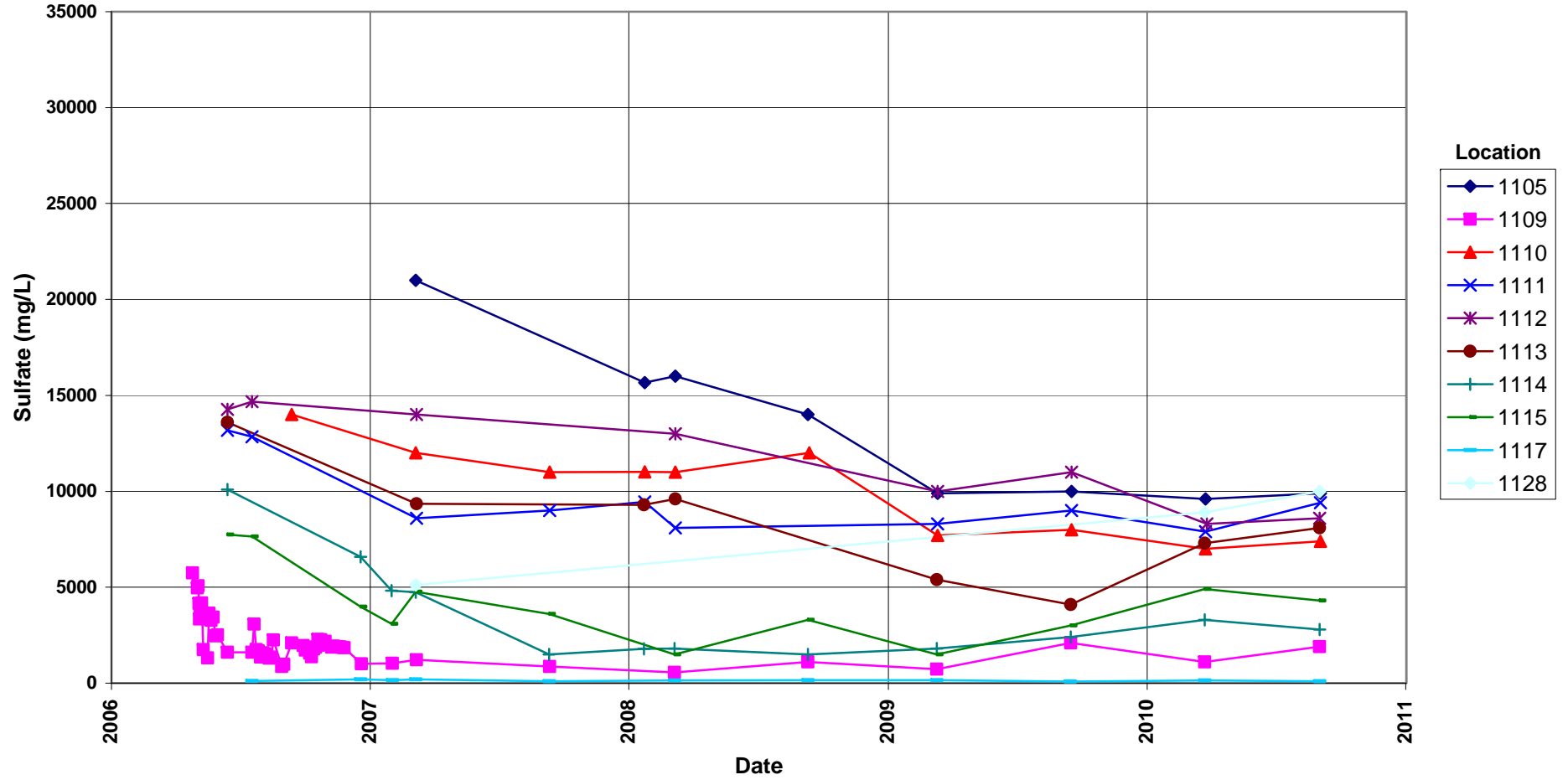
No established groundwater standard



Shiprock Disposal Site (Floodplain)

Sulfate Concentration

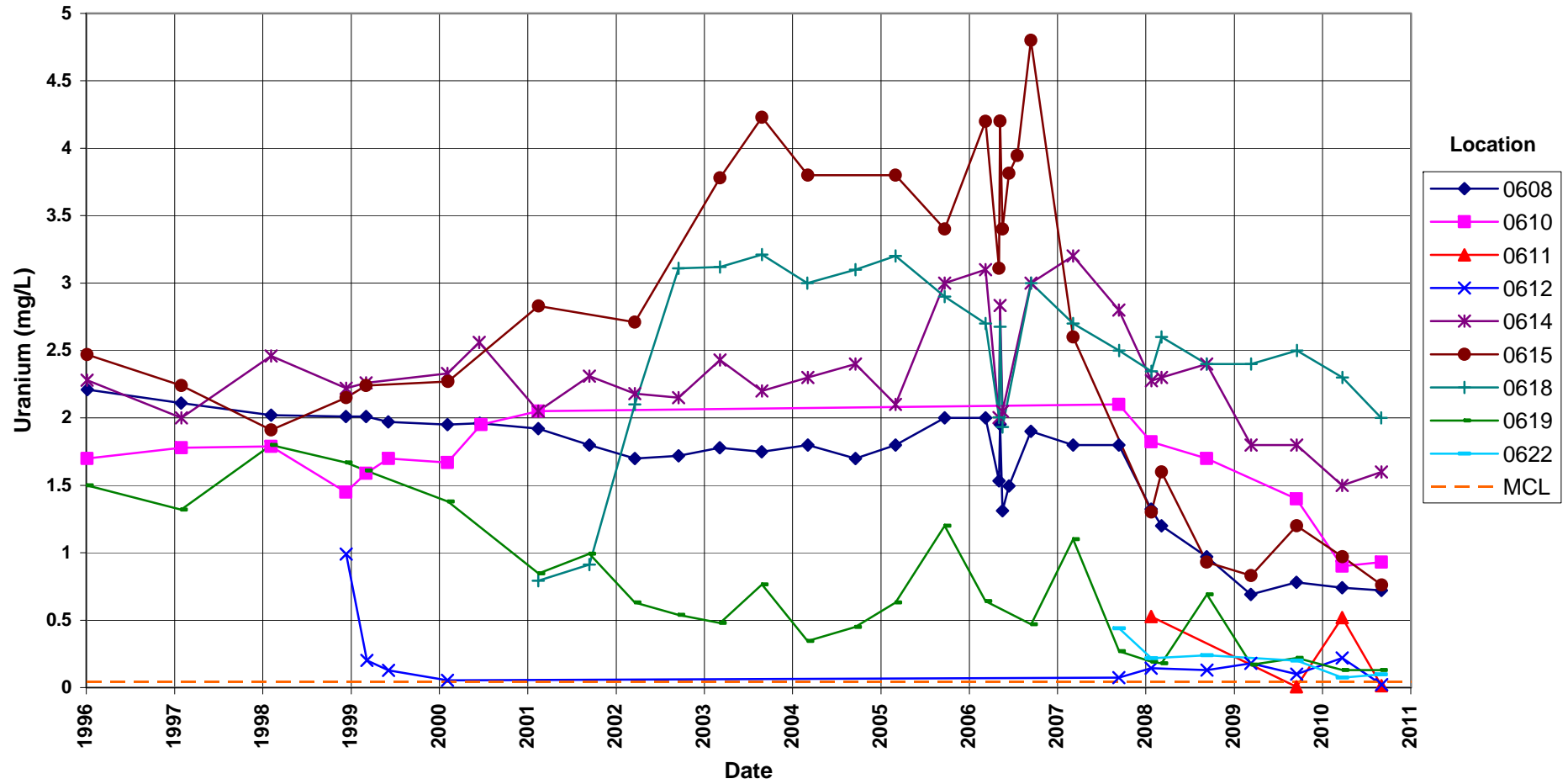
No established groundwater standard



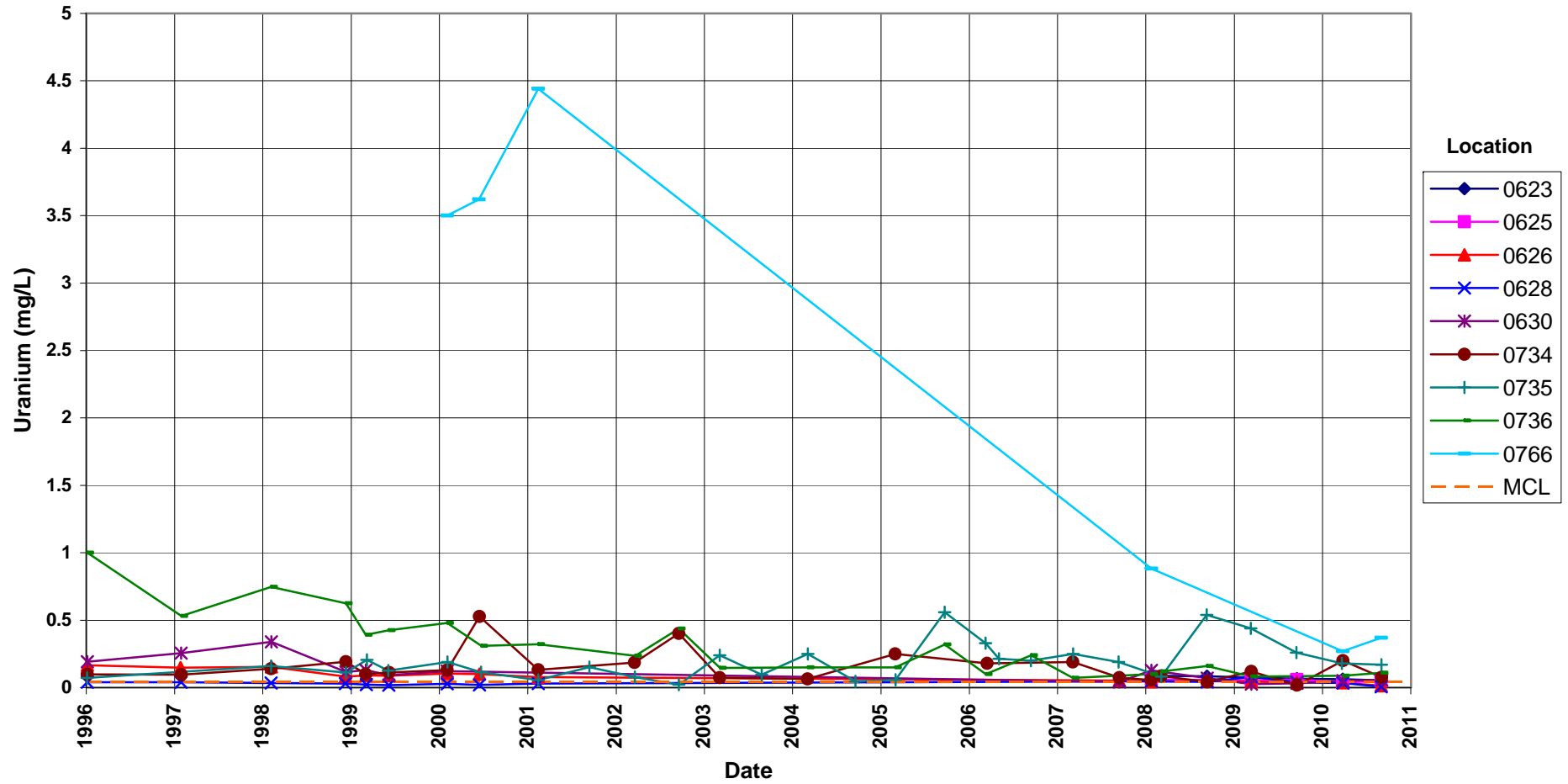
Shiprock Disposal Site (Floodplain)

Uranium Concentration

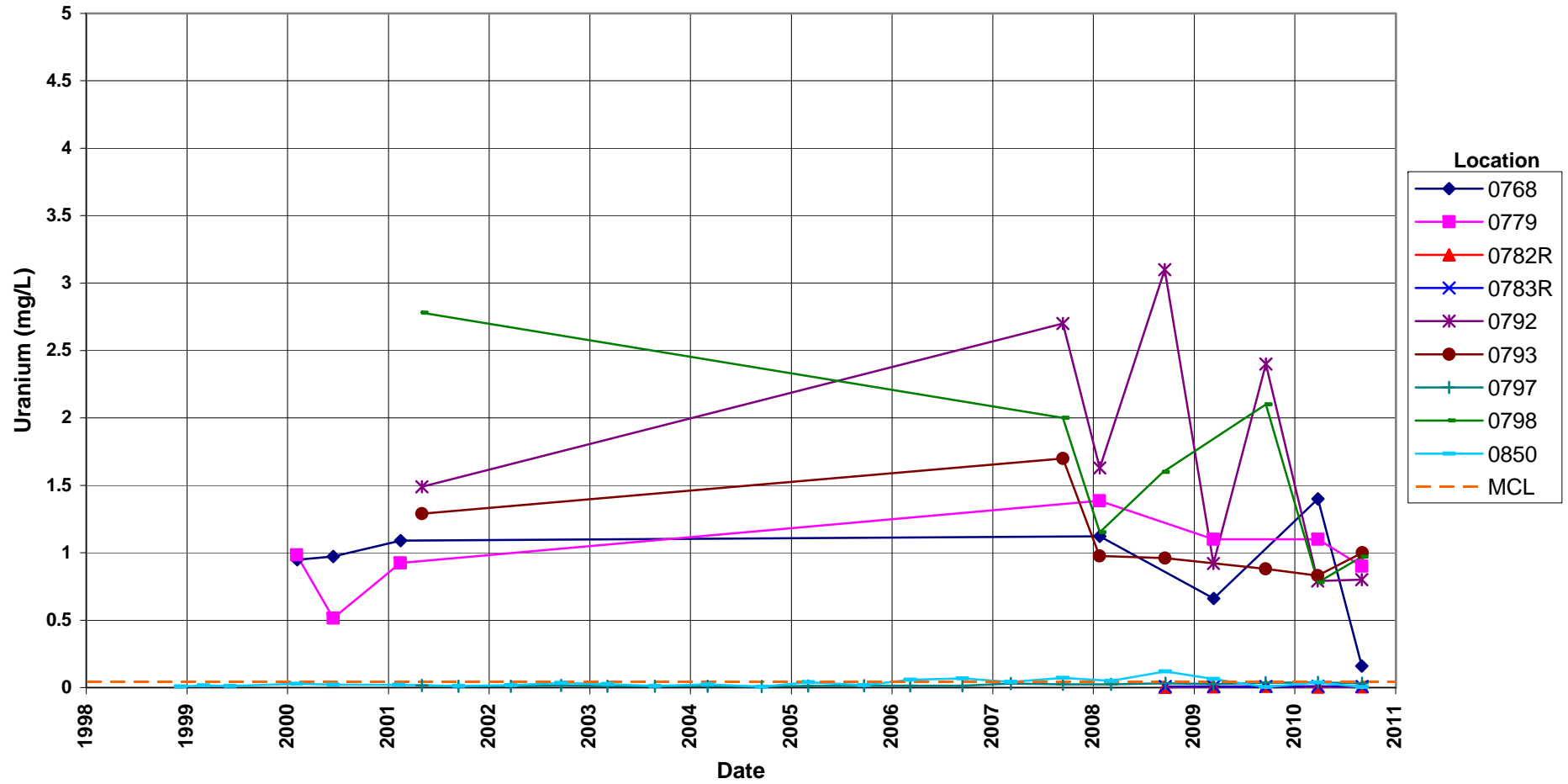
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



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



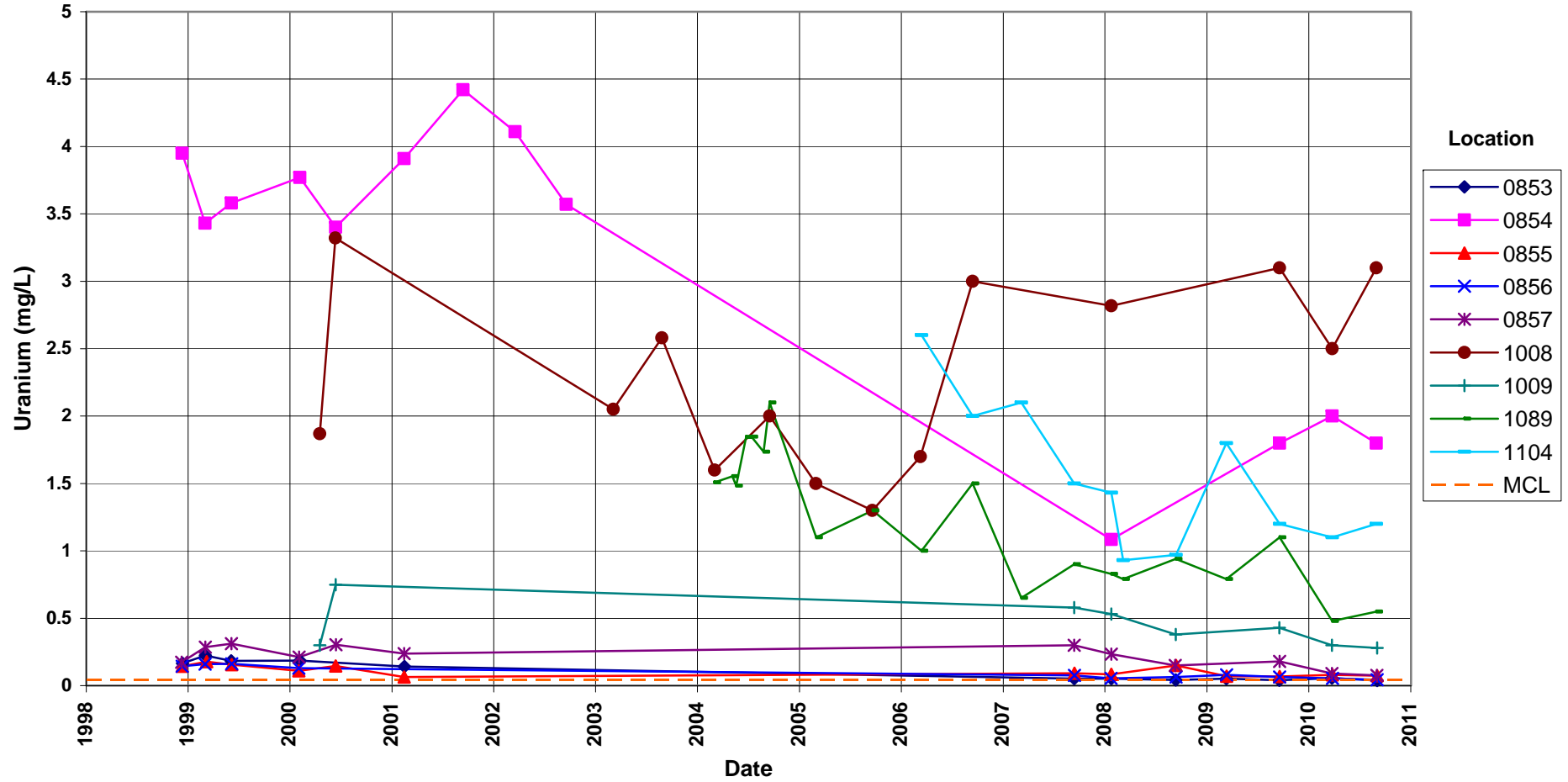
Shiprock Disposal Site (Floodplain)
Uranium Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



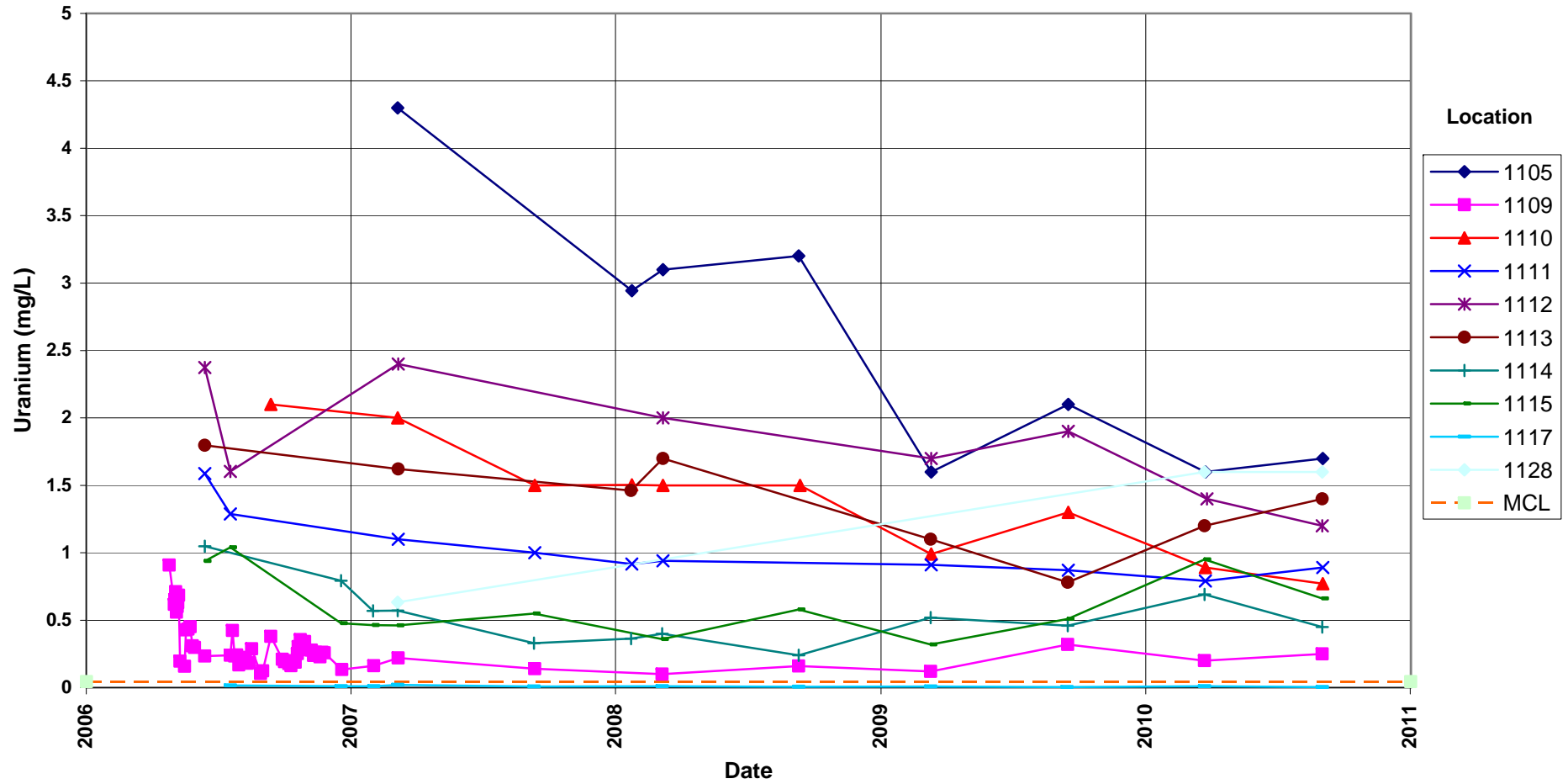
Shiprock Disposal Site (Floodplain)

Uranium Concentration

40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



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



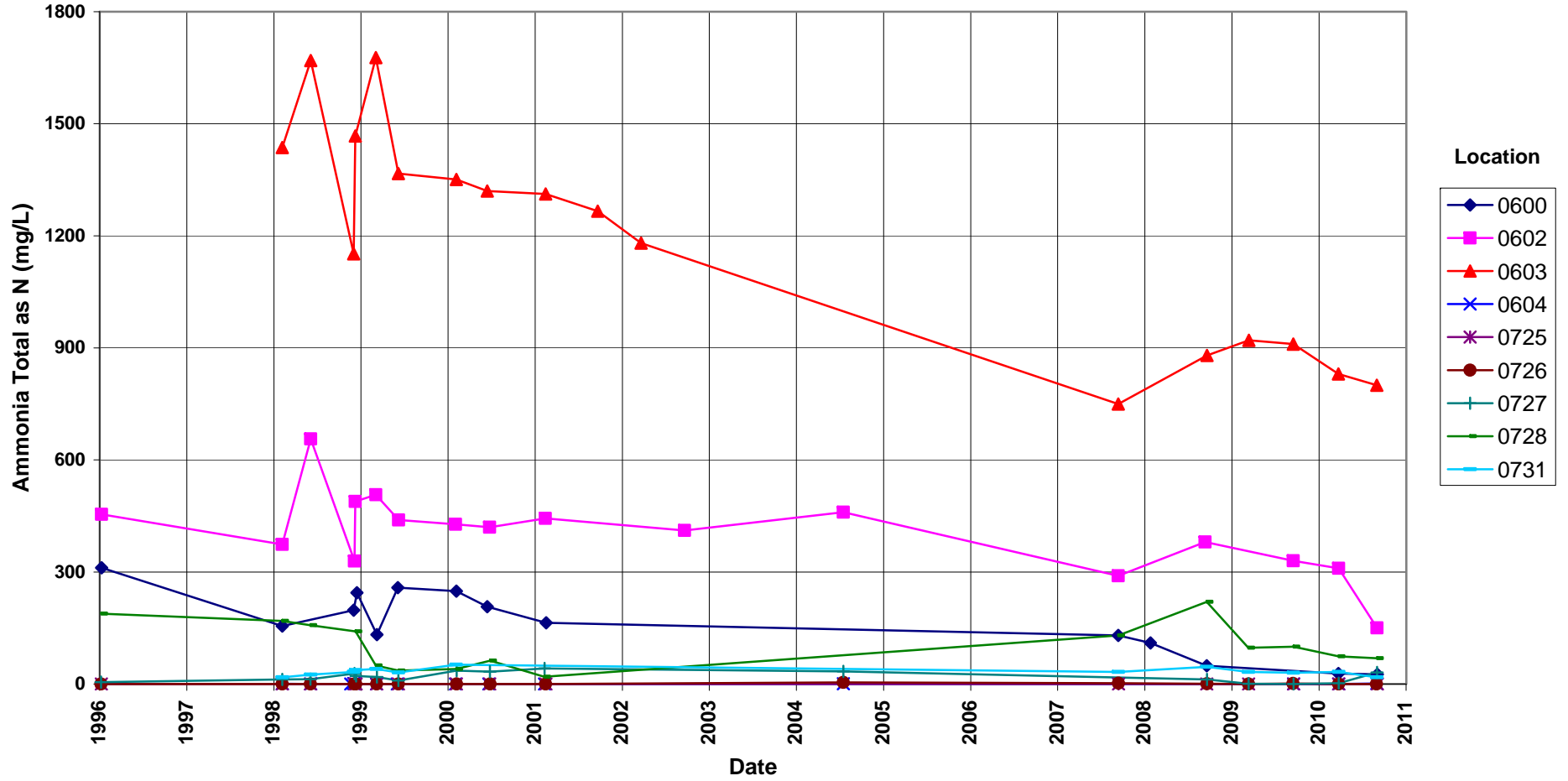
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Time-Concentration Graphs Terrace Groundwater Locations

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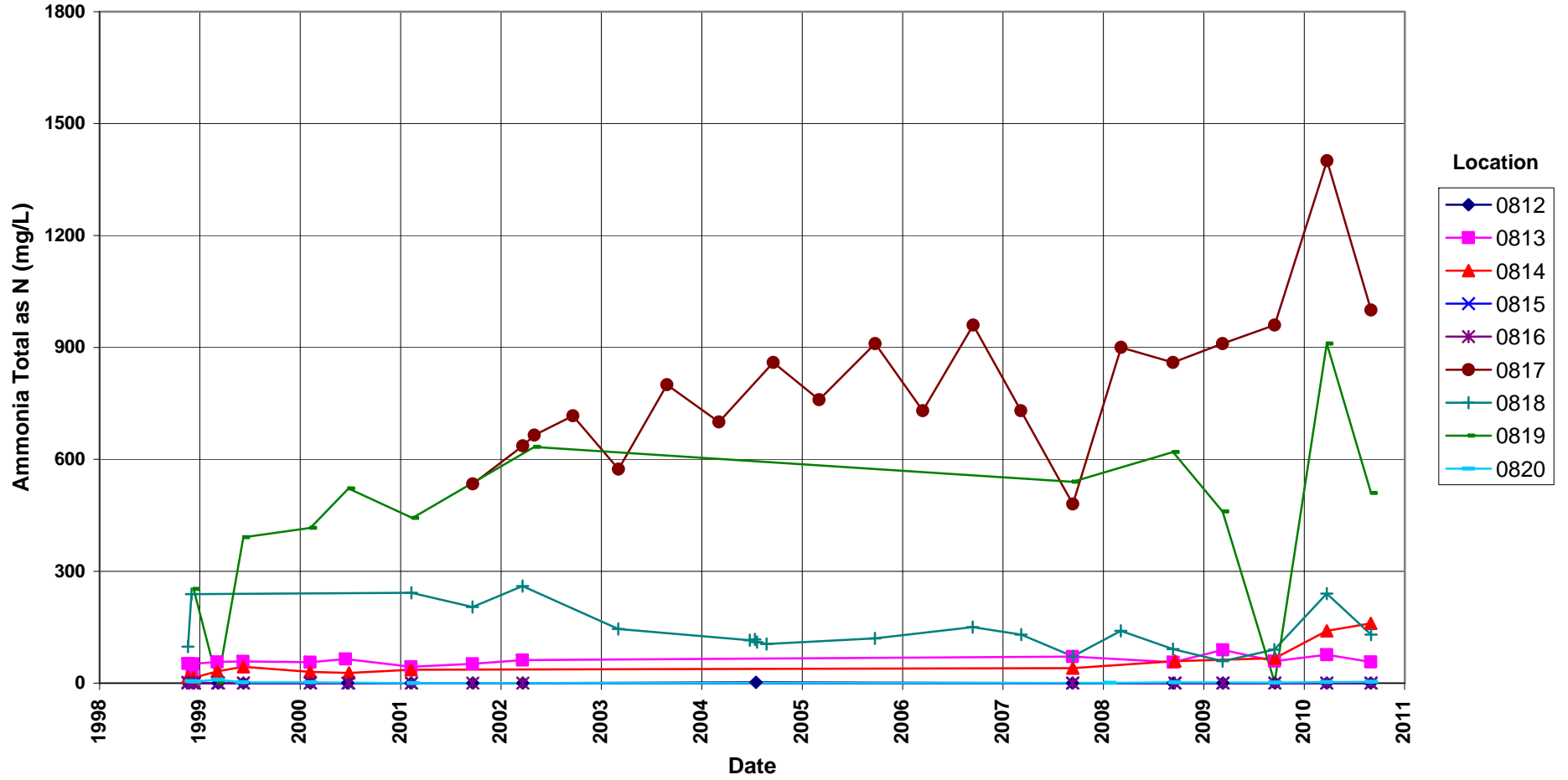
Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration

No established groundwater standard



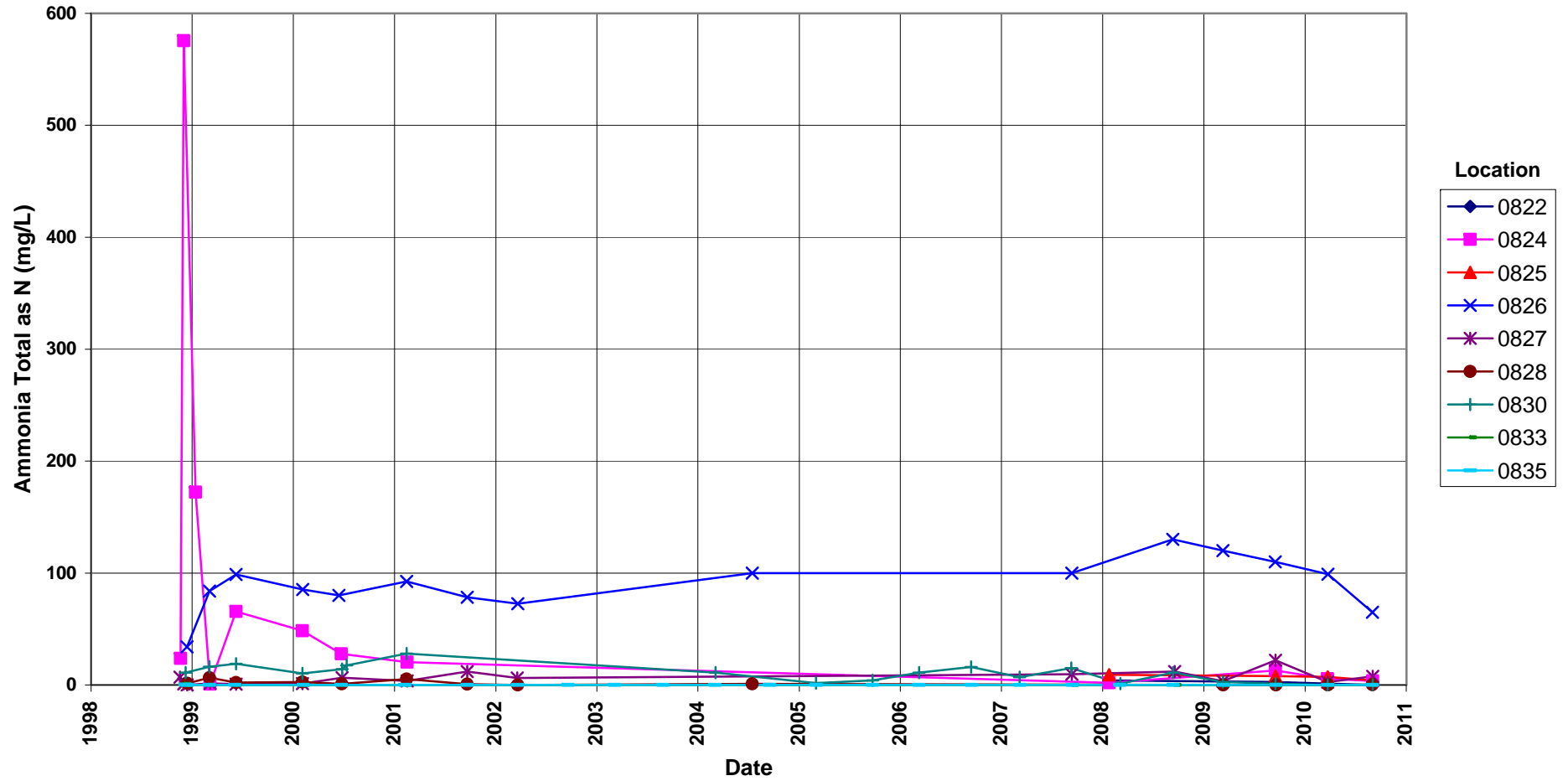
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration

No established groundwater standard



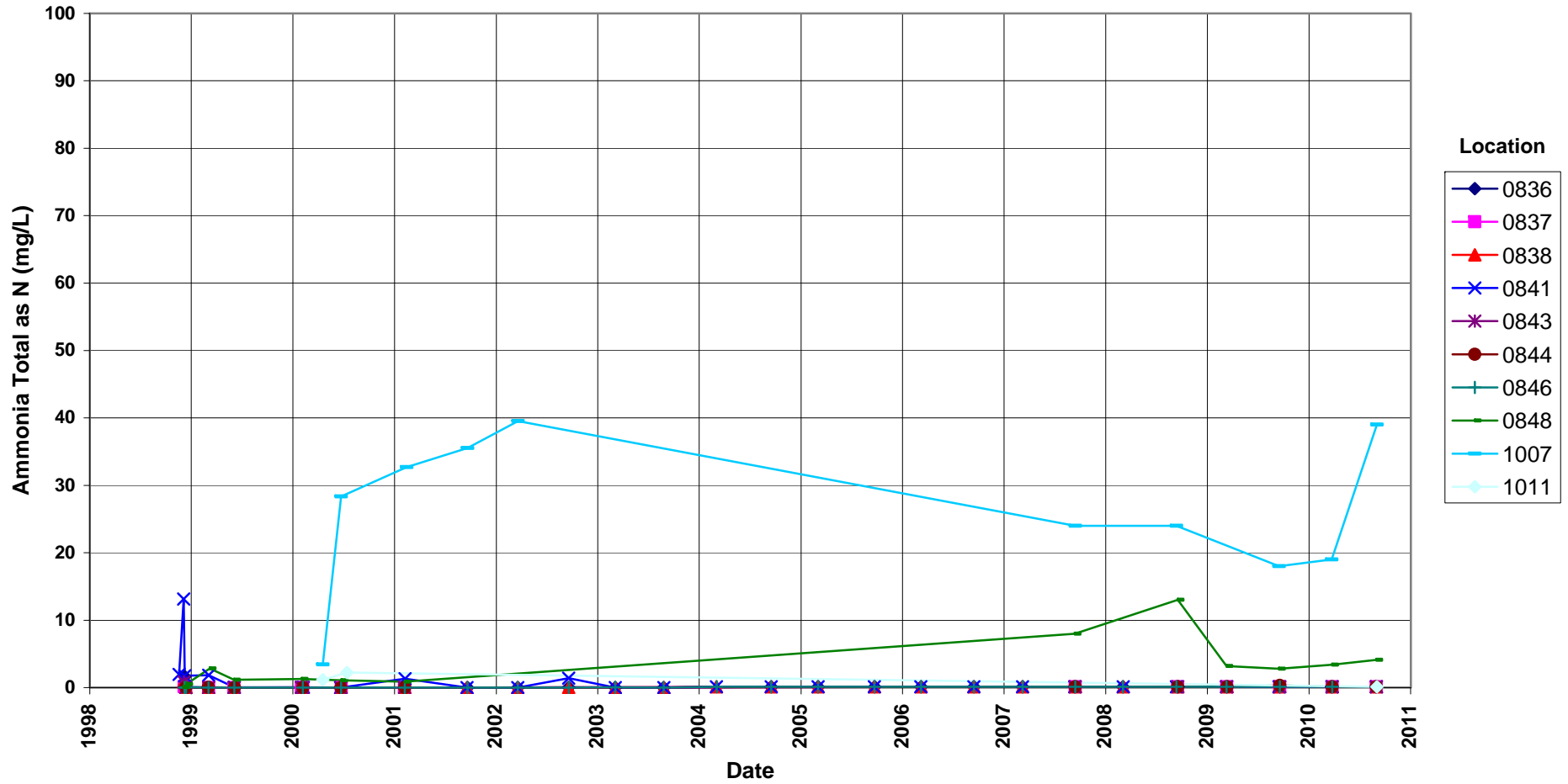
Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration

No established groundwater standard



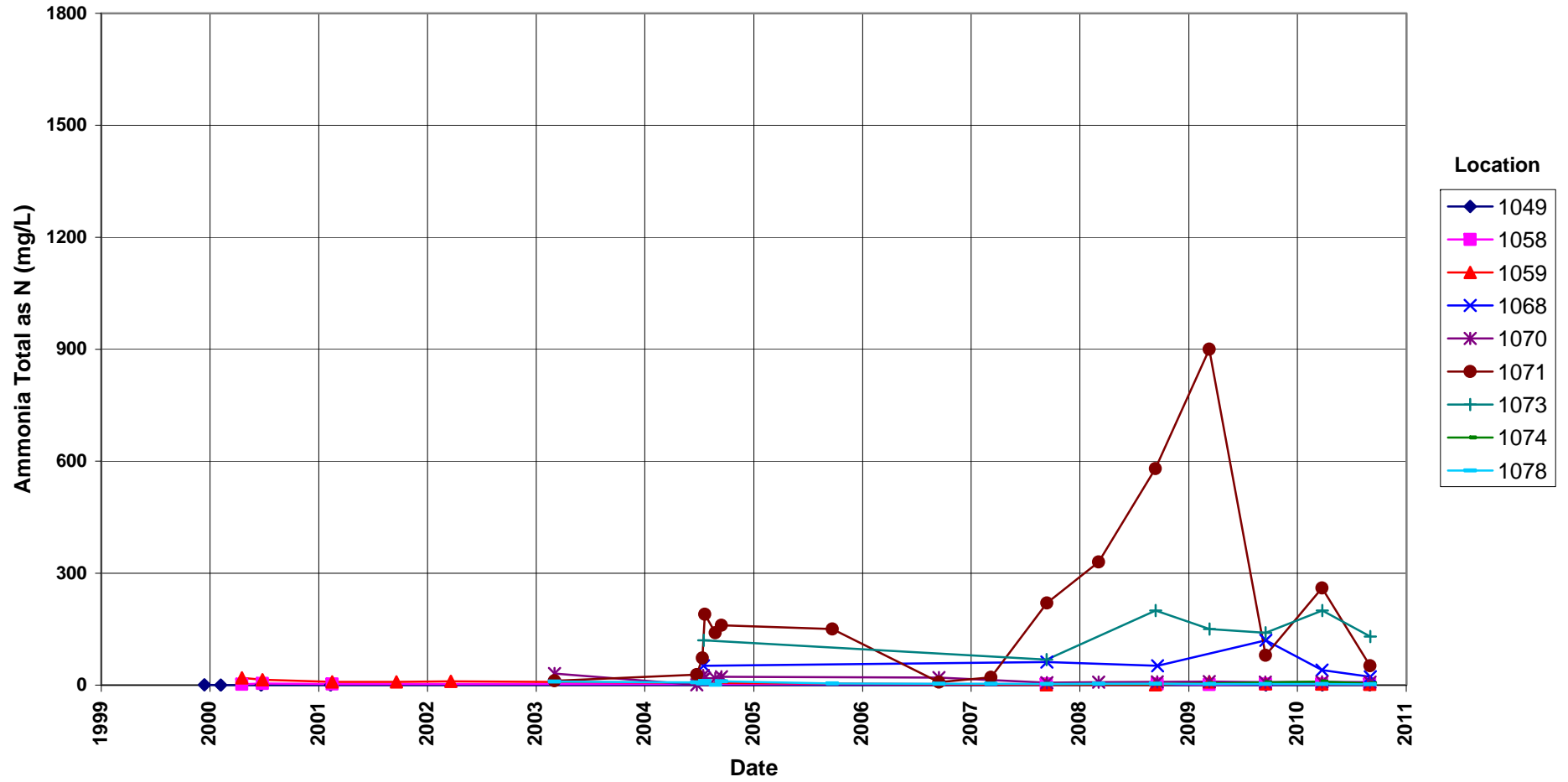
Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration

No established groundwater standard



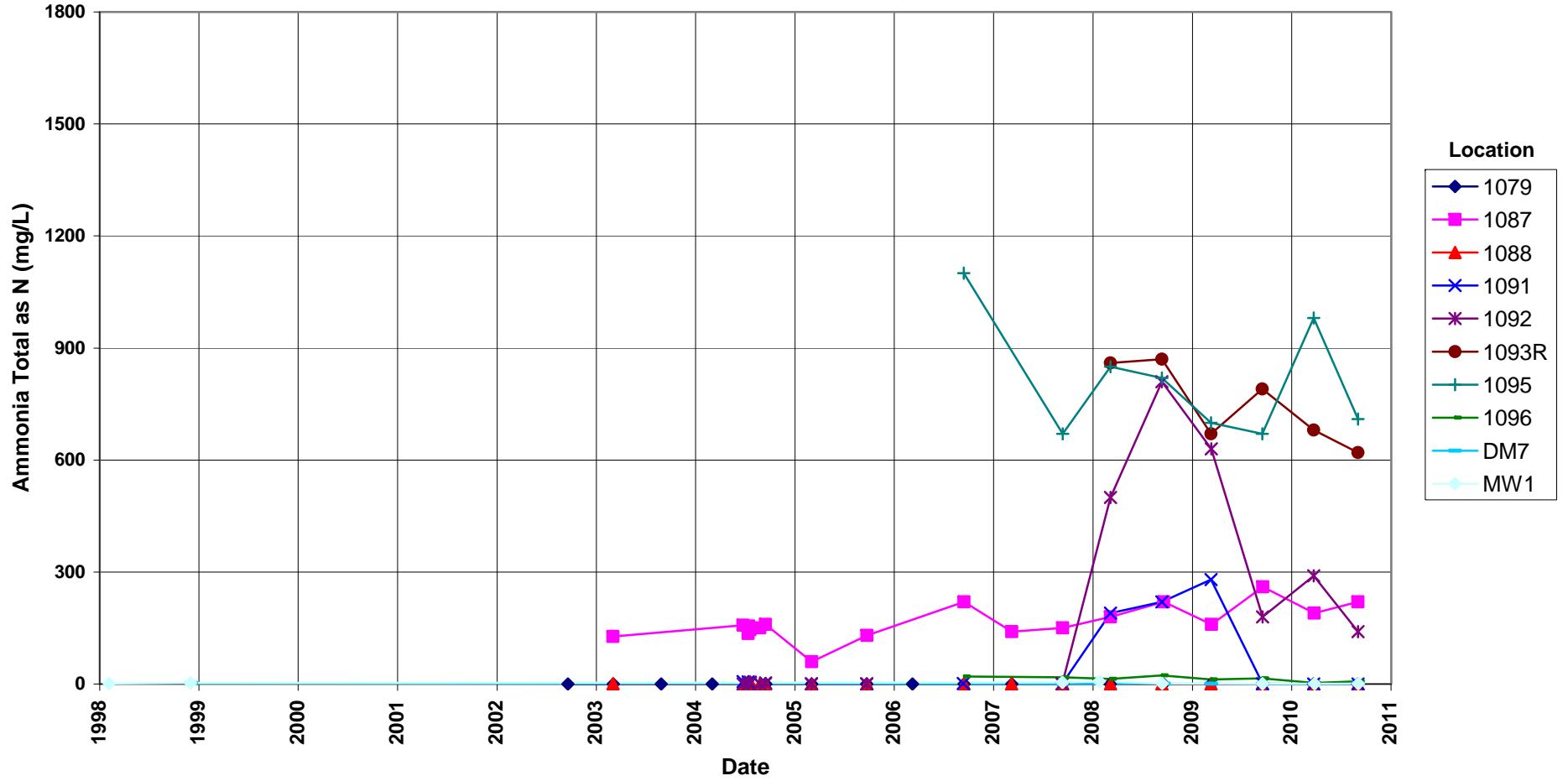
Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration

No established groundwater standard



Shiprock Disposal Site (Terrace) Ammonia Total as N Concentration

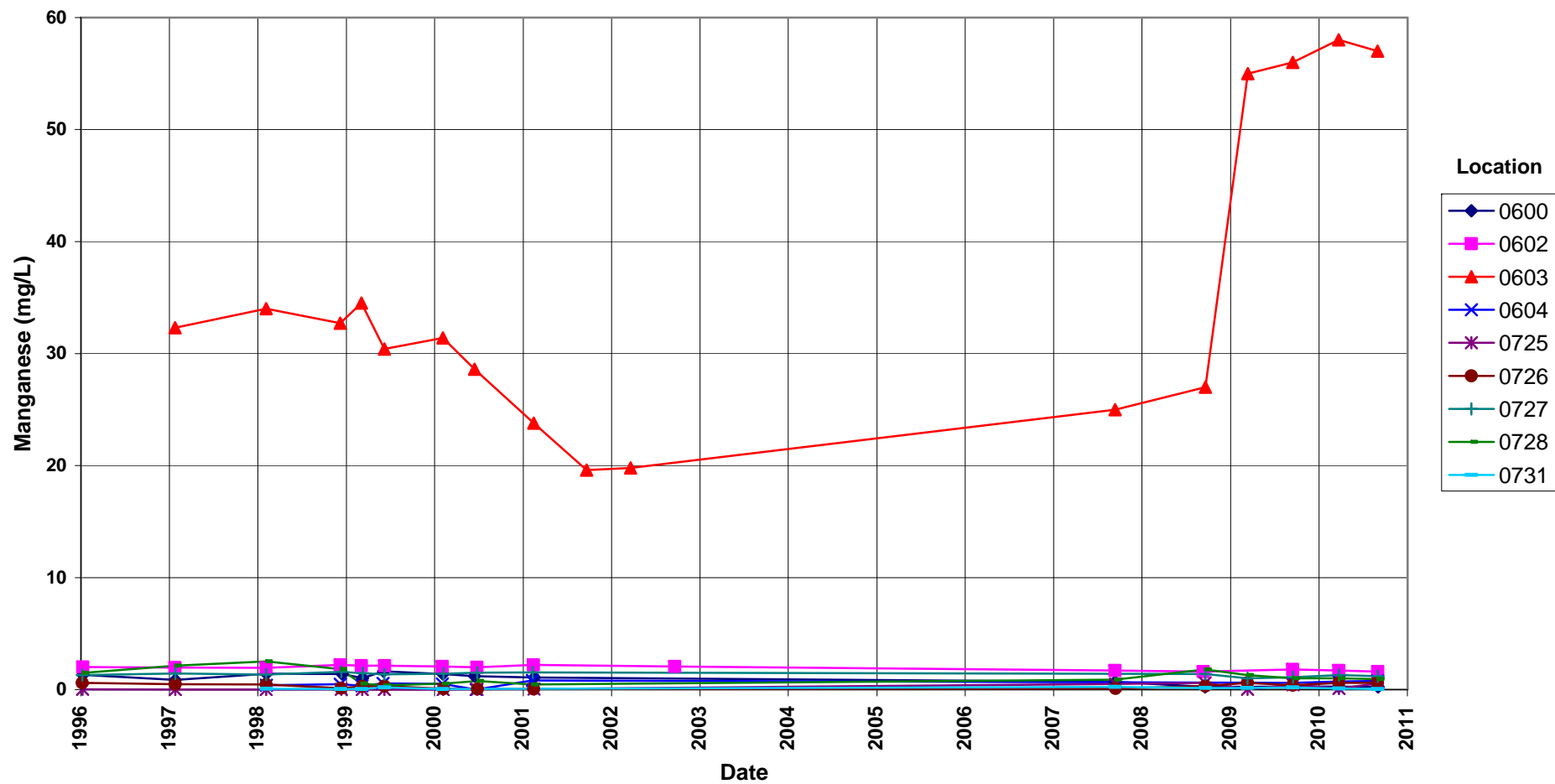
No established groundwater standard



Shiprock Disposal Site (Terrace)

Manganese Concentration

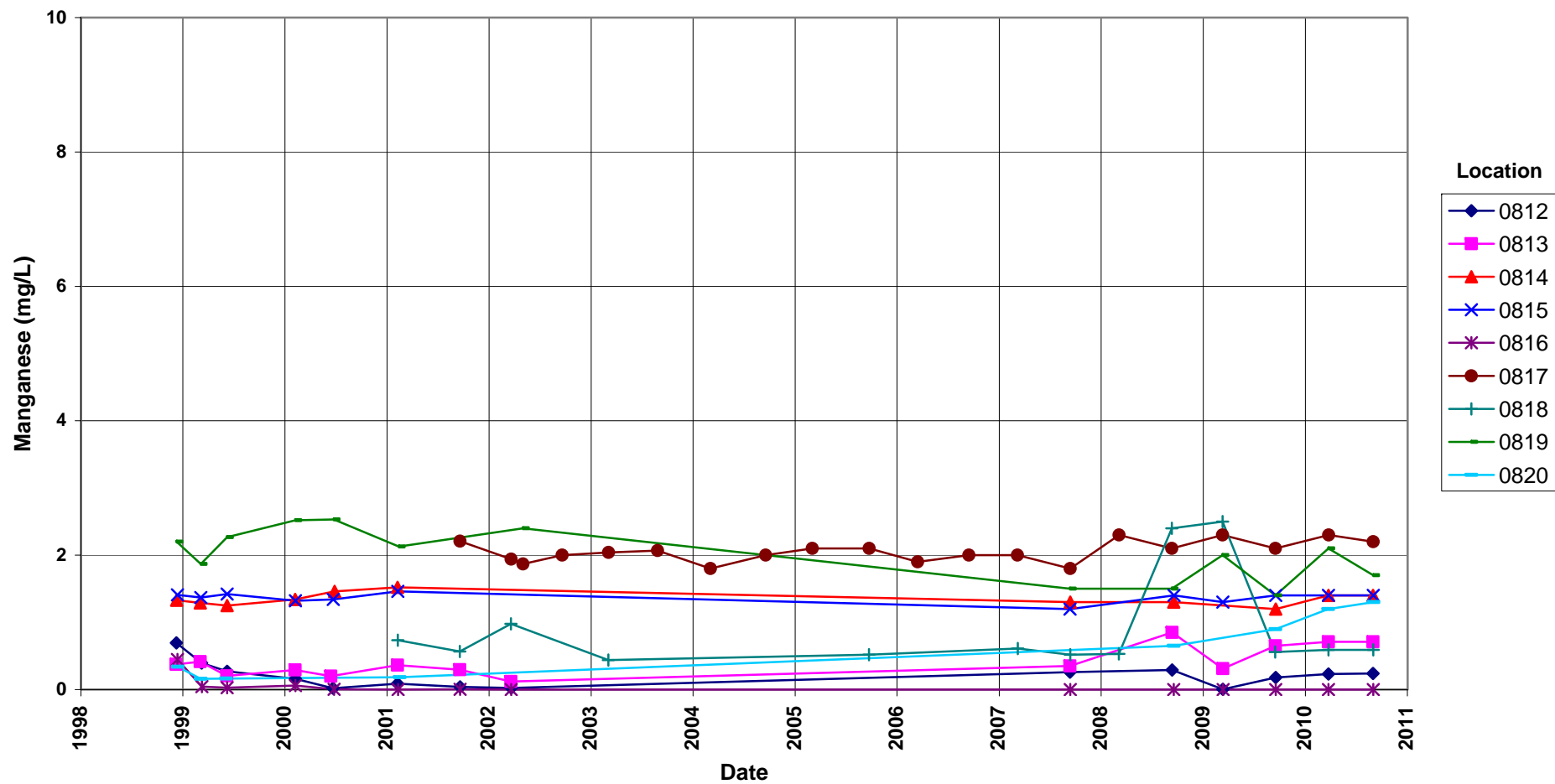
No established groundwater standard



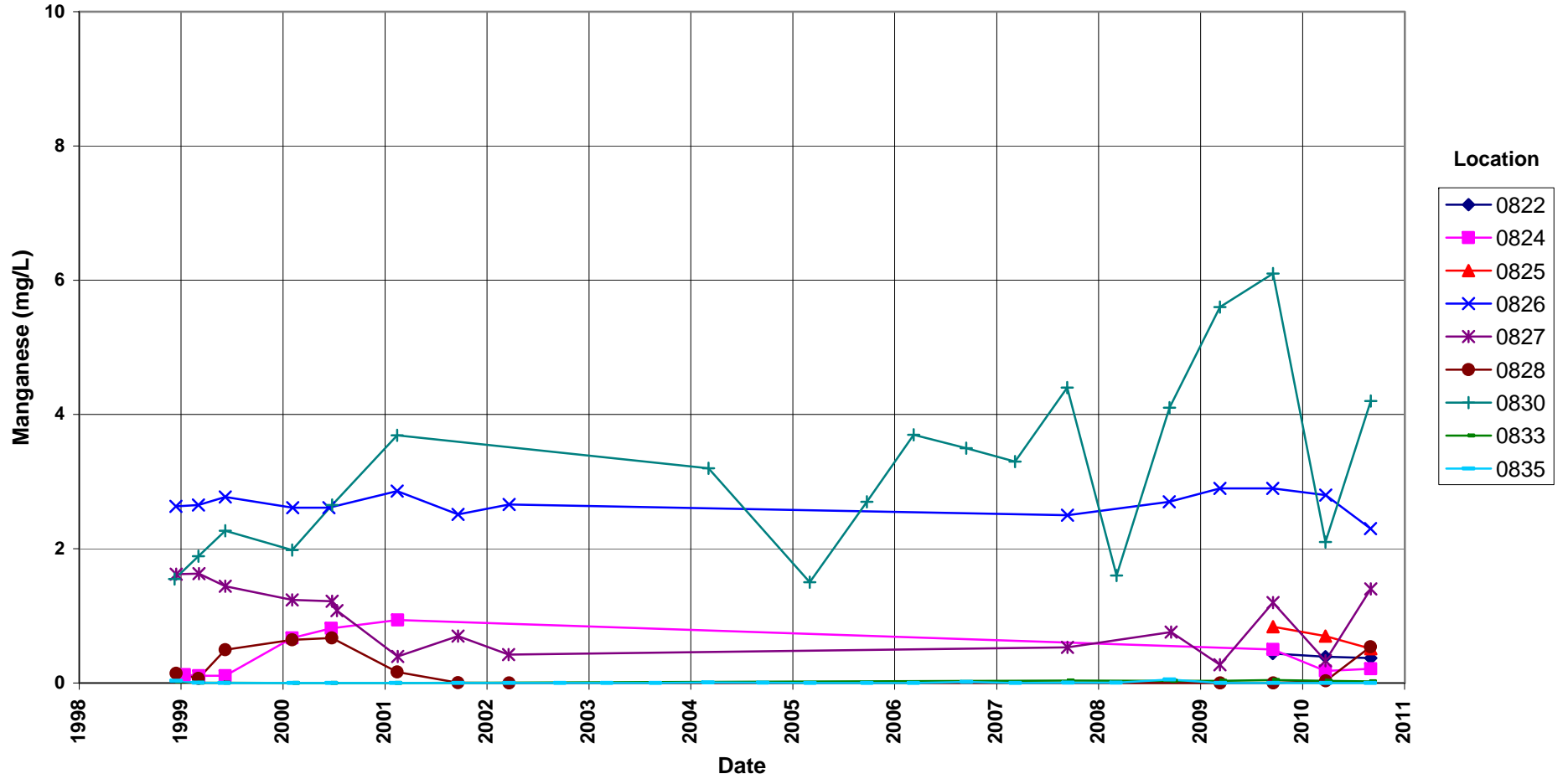
Shiprock Disposal Site (Terrace)

Manganese Concentration

No established groundwater standard



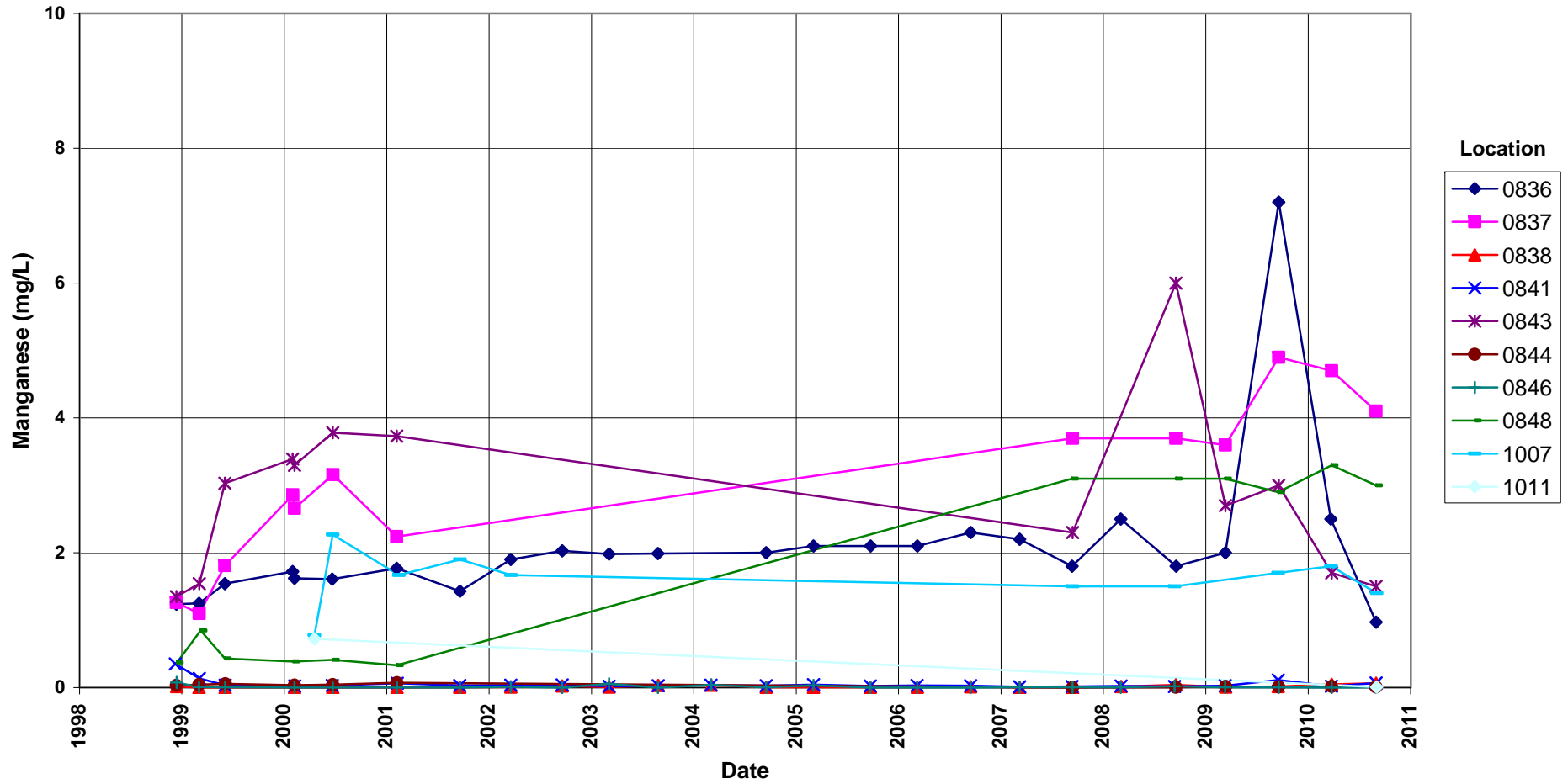
Shiprock Disposal Site (Terrace)
Manganese Concentration
No established groundwater standard



Shiprock Disposal Site (Terrace)

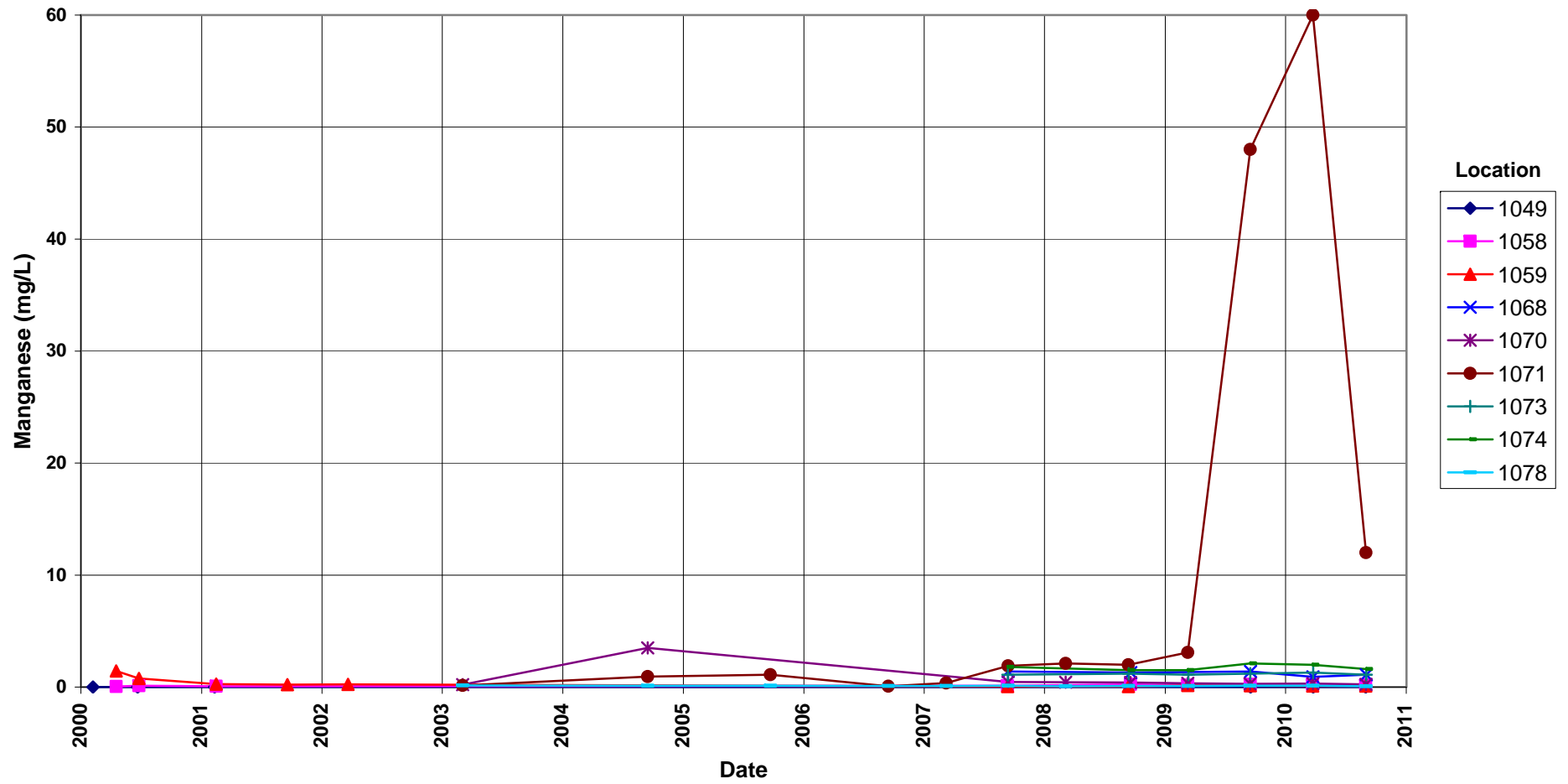
Manganese Concentration

No established groundwater standard



Shiprock Disposal Site (Terrace) Manganese Concentration

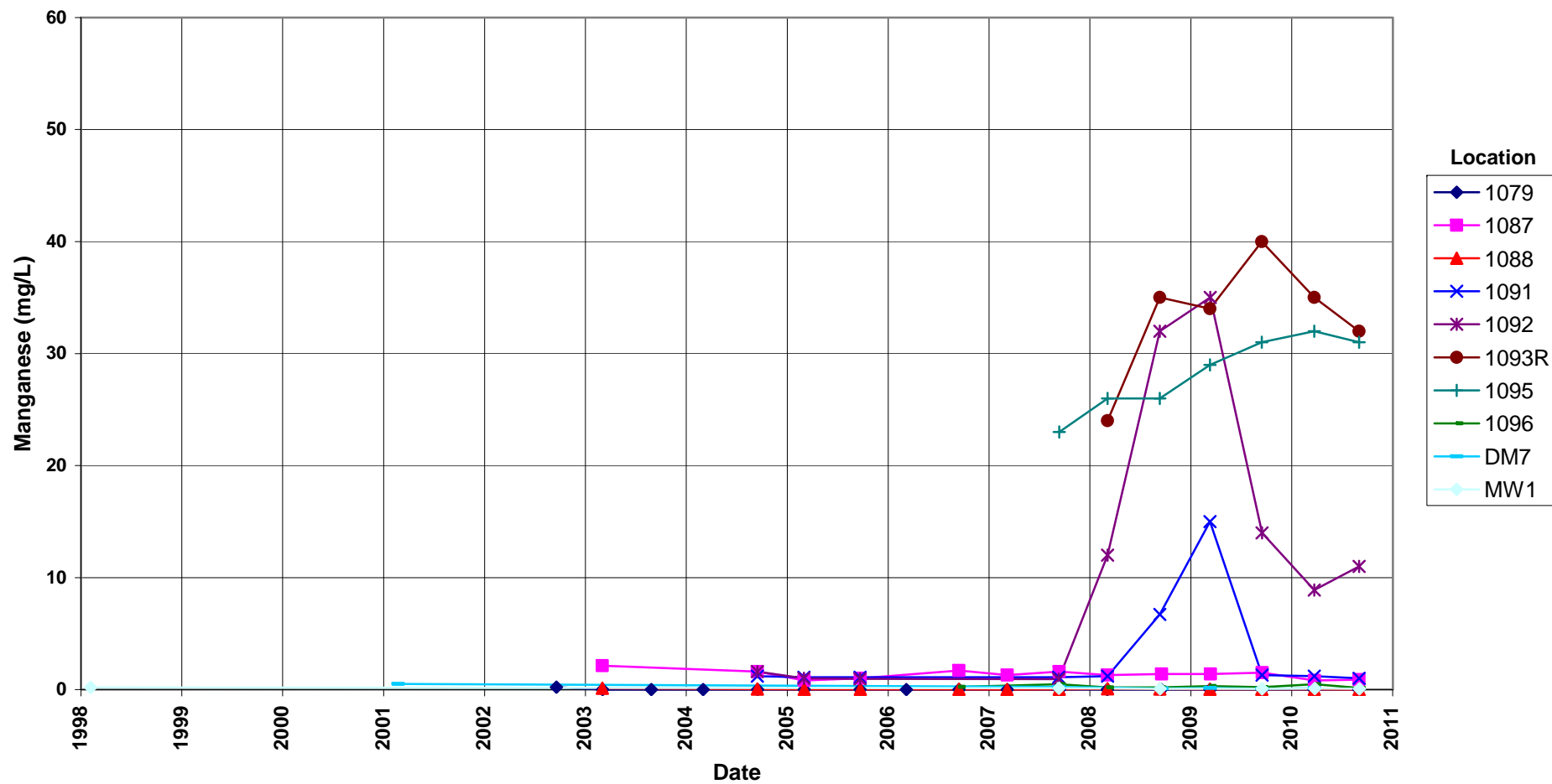
No established groundwater standard



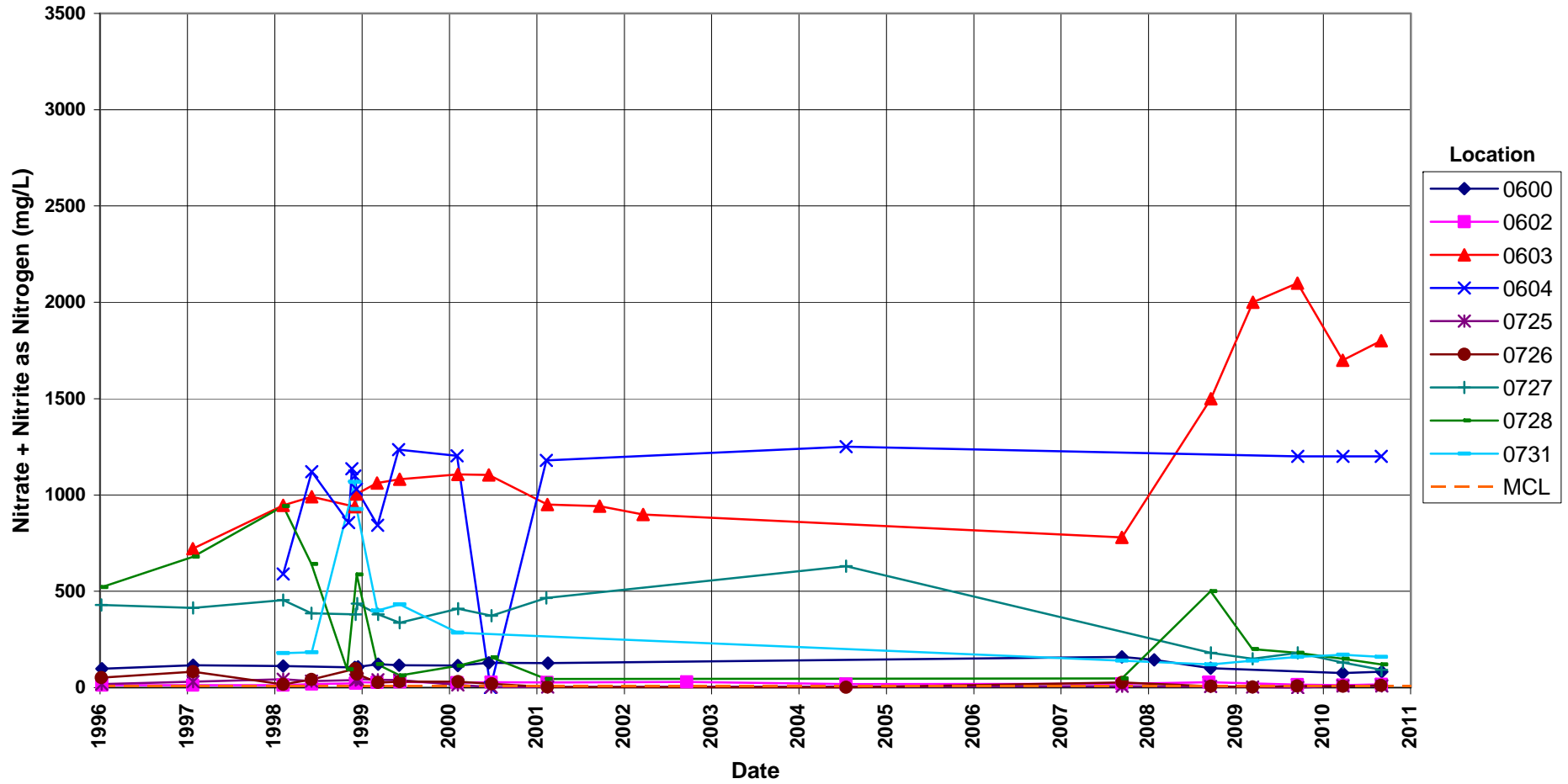
Shiprock Disposal Site (Terrace)

Manganese Concentration

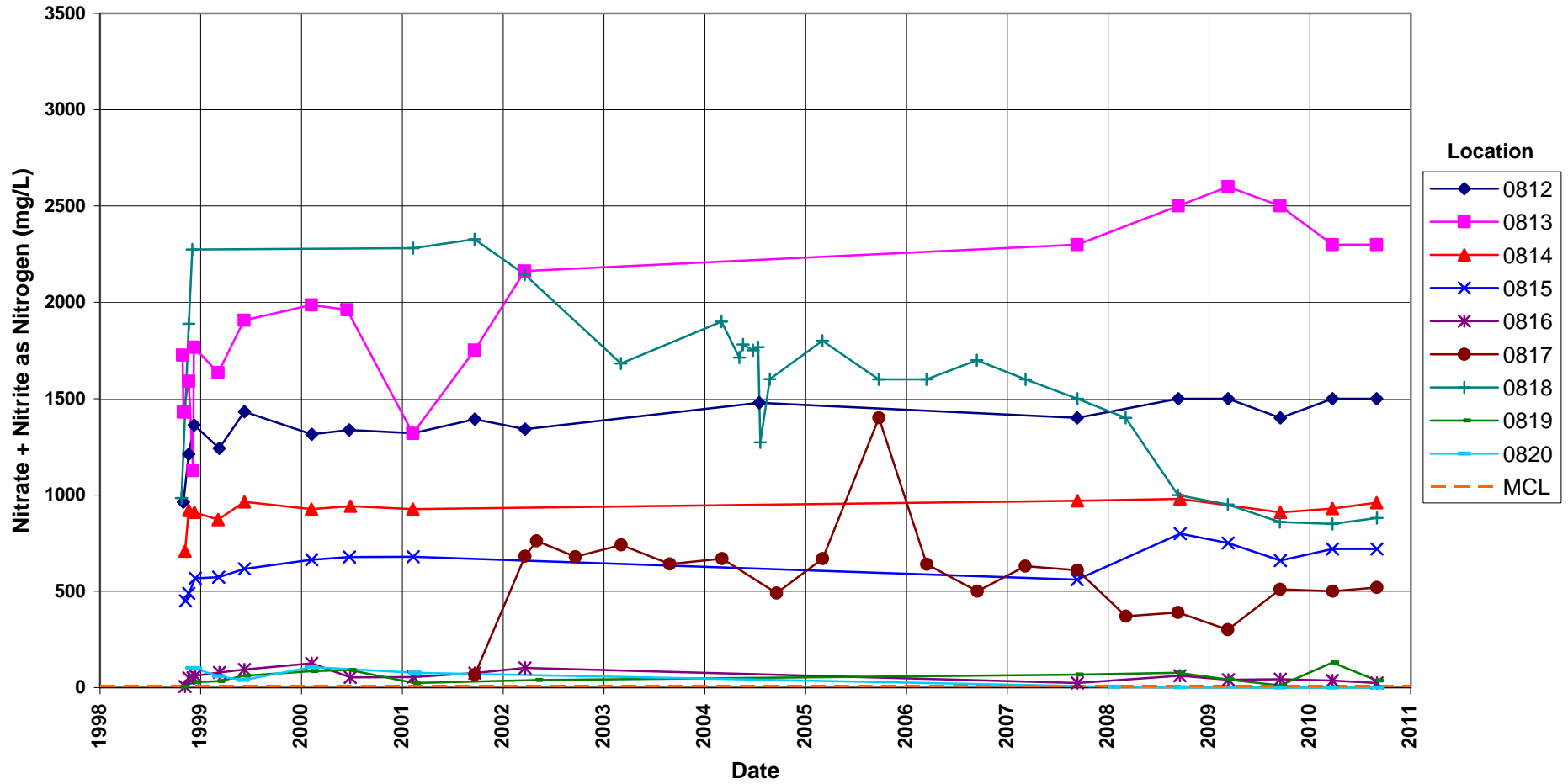
No established groundwater standard



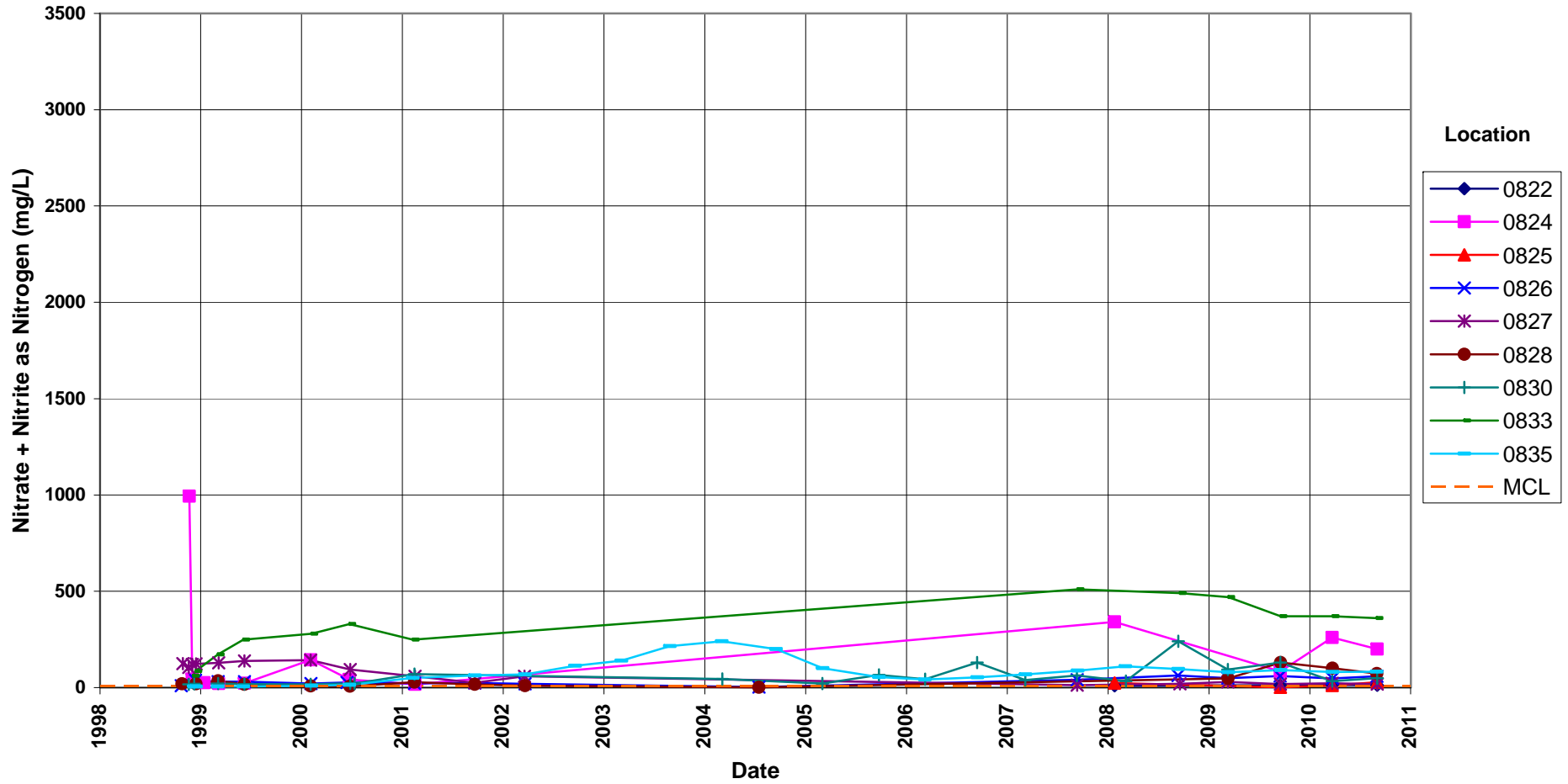
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



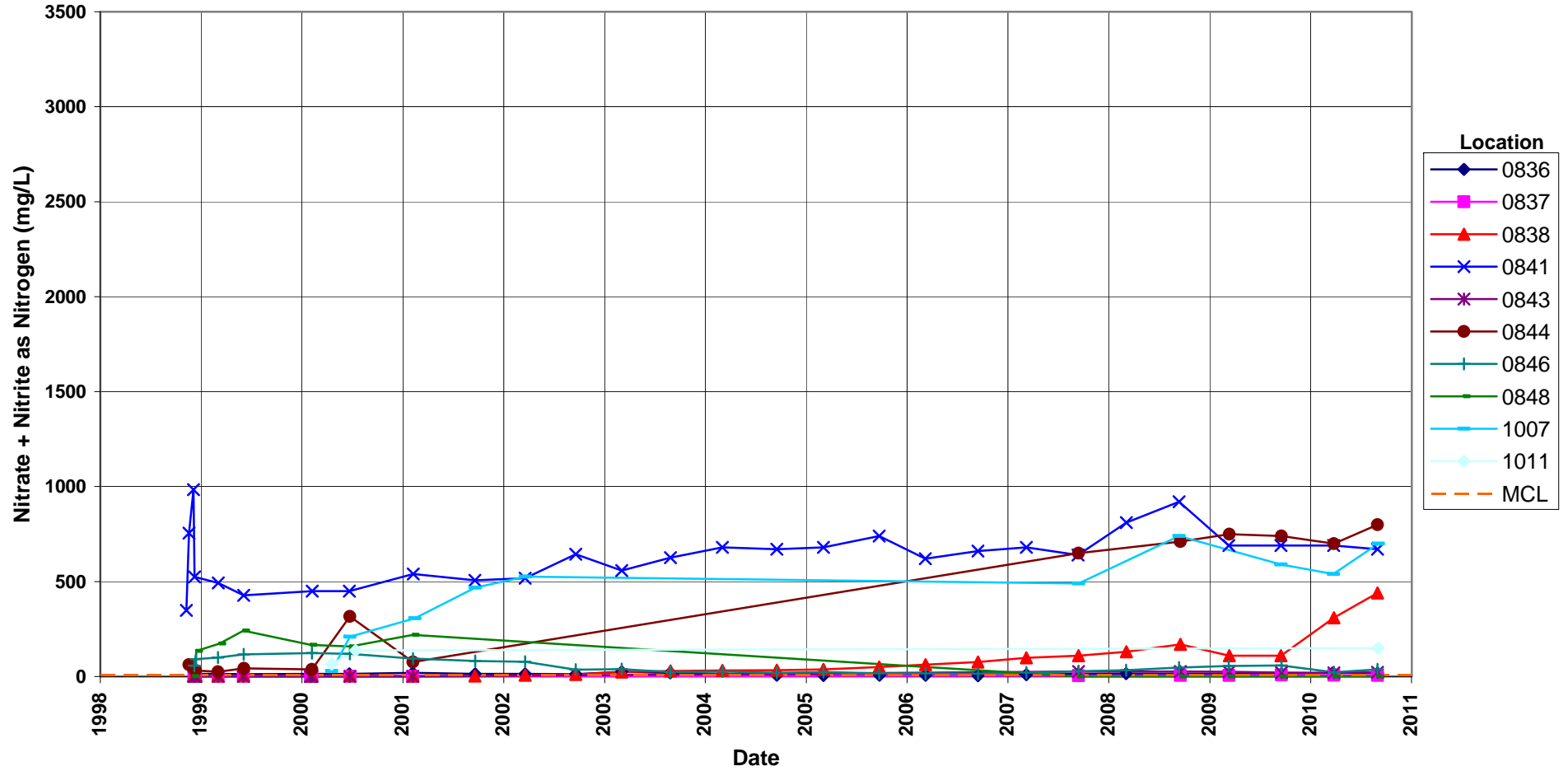
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



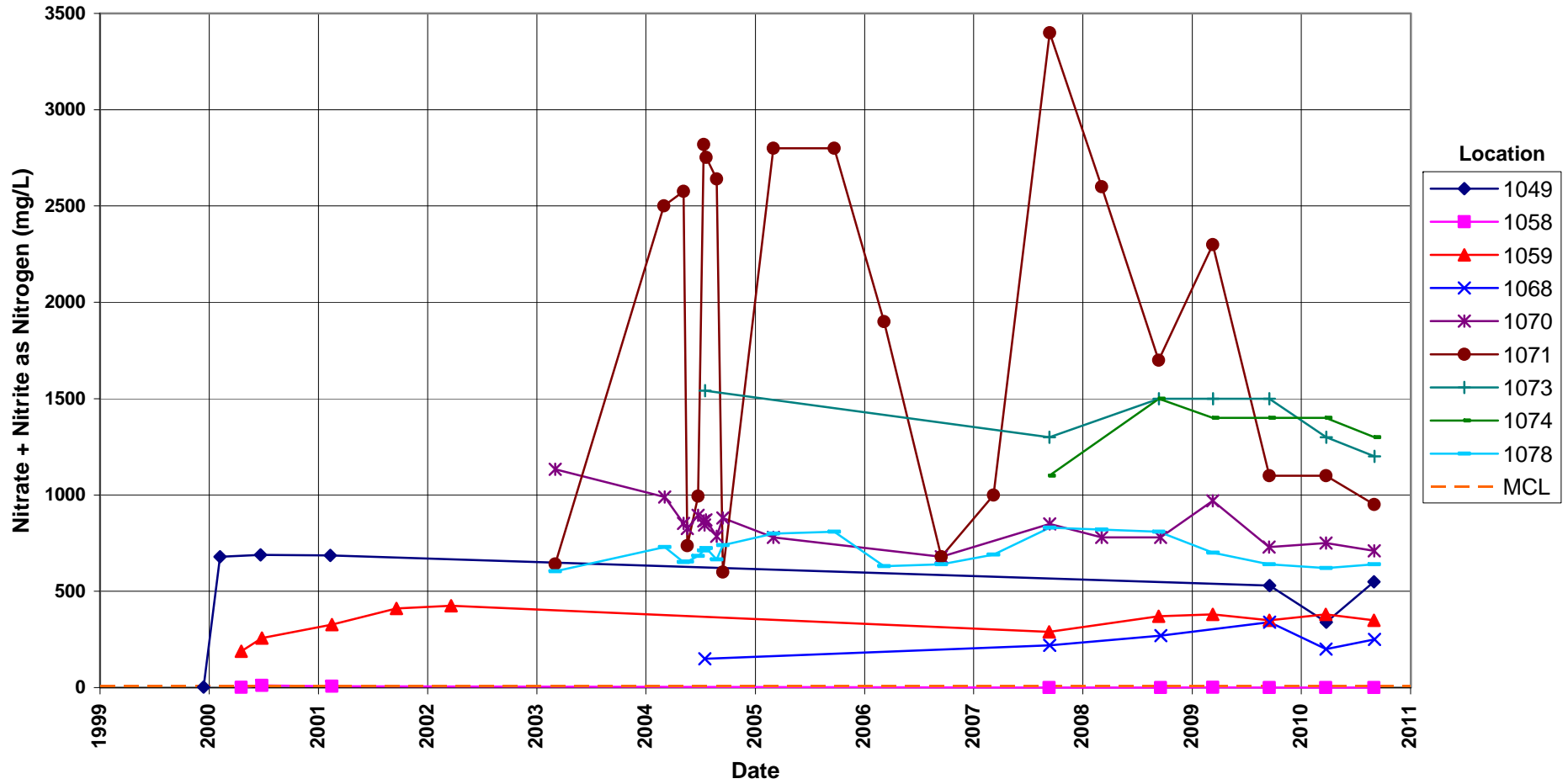
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



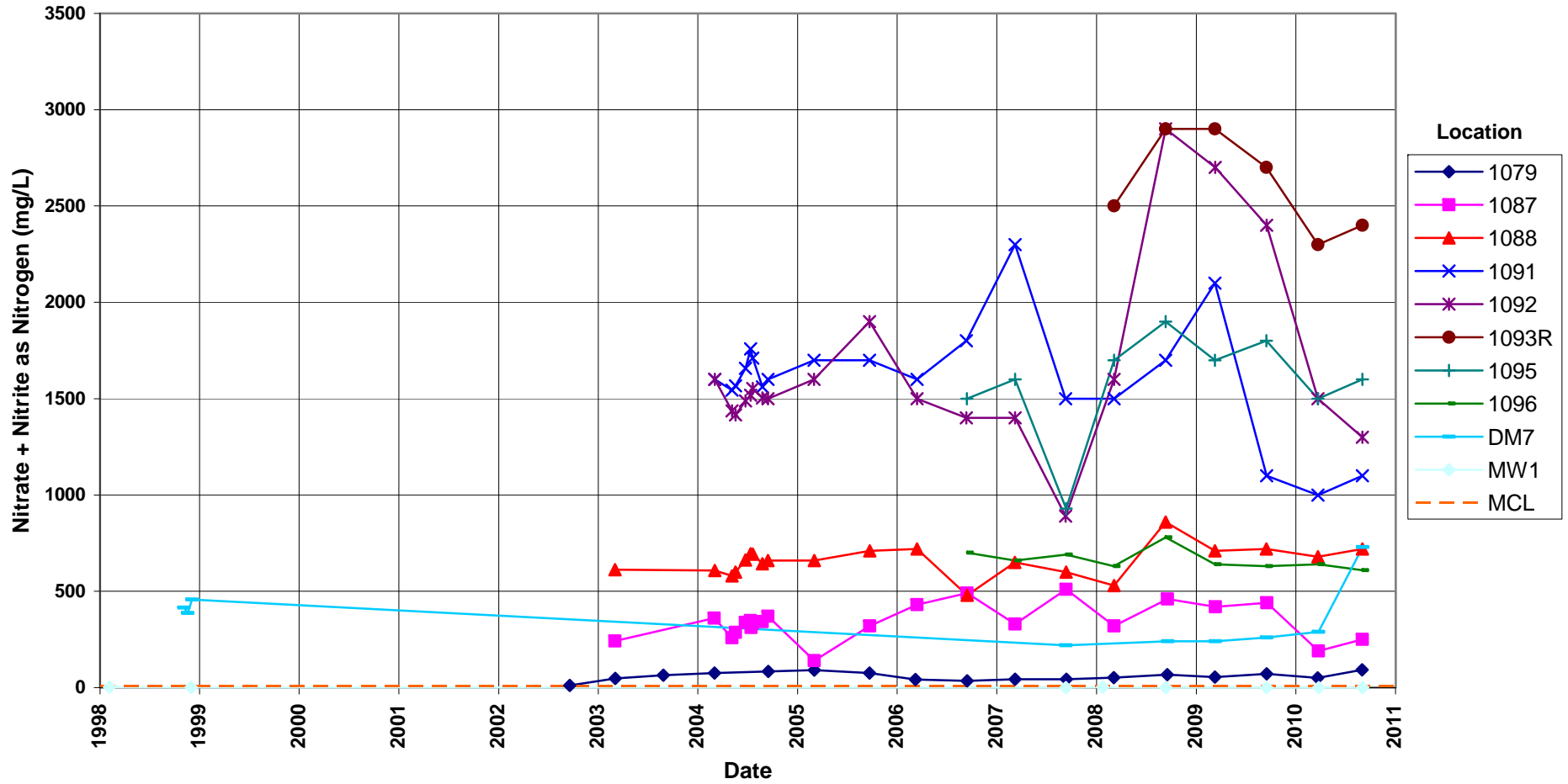
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



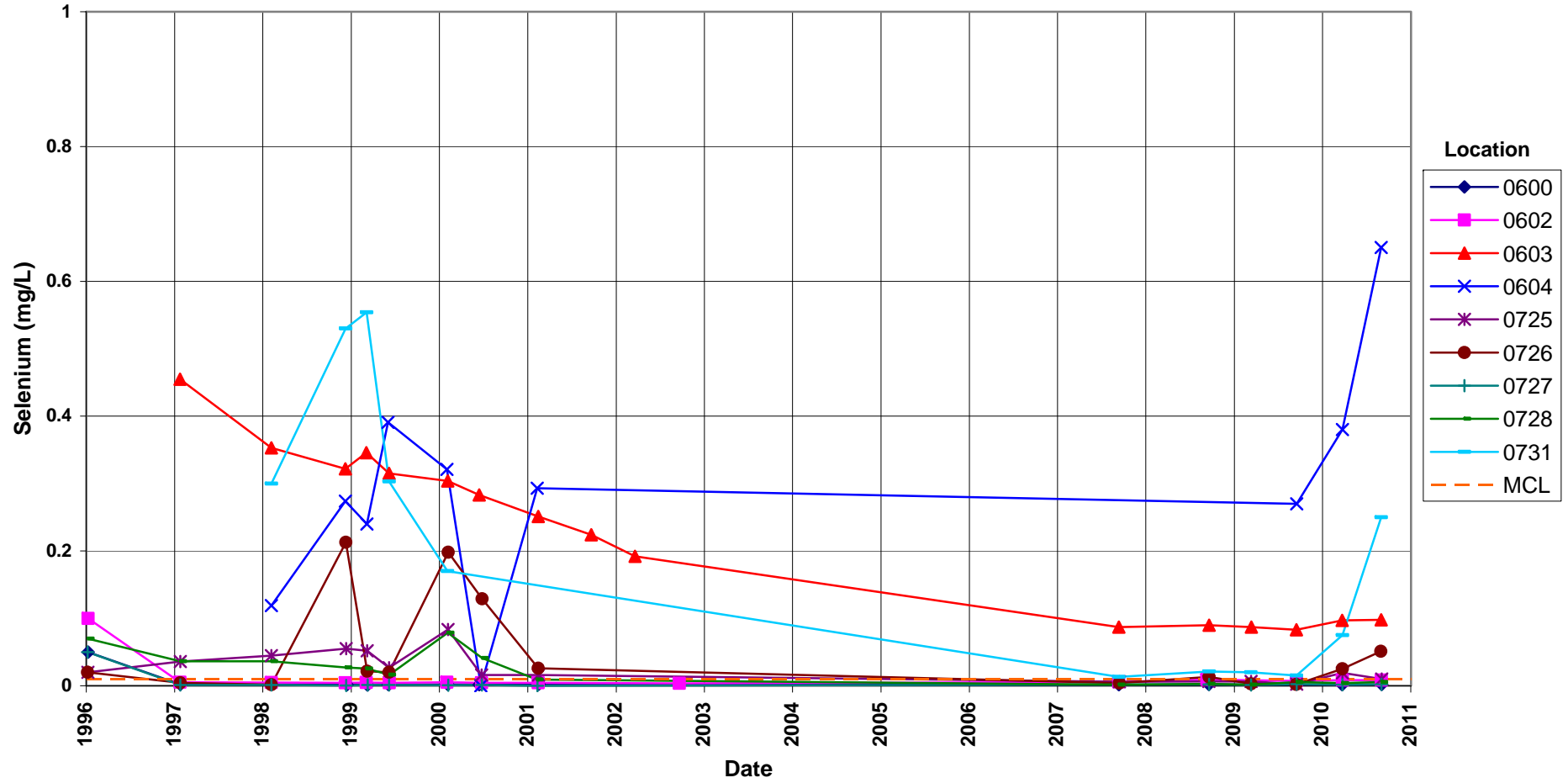
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 10.0 mg/L



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



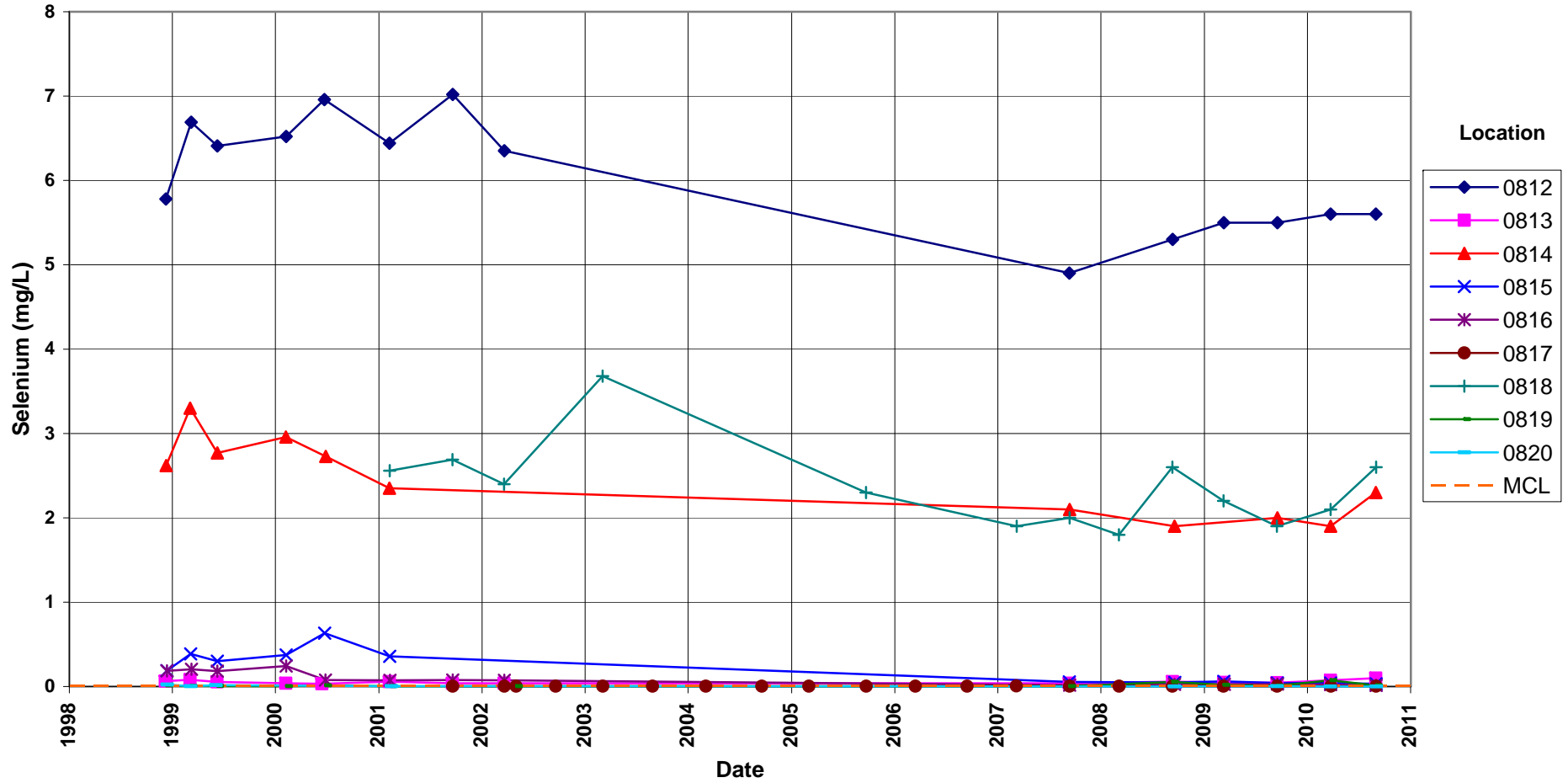
Shiprock Disposal Site (Terrace)
Selenium Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



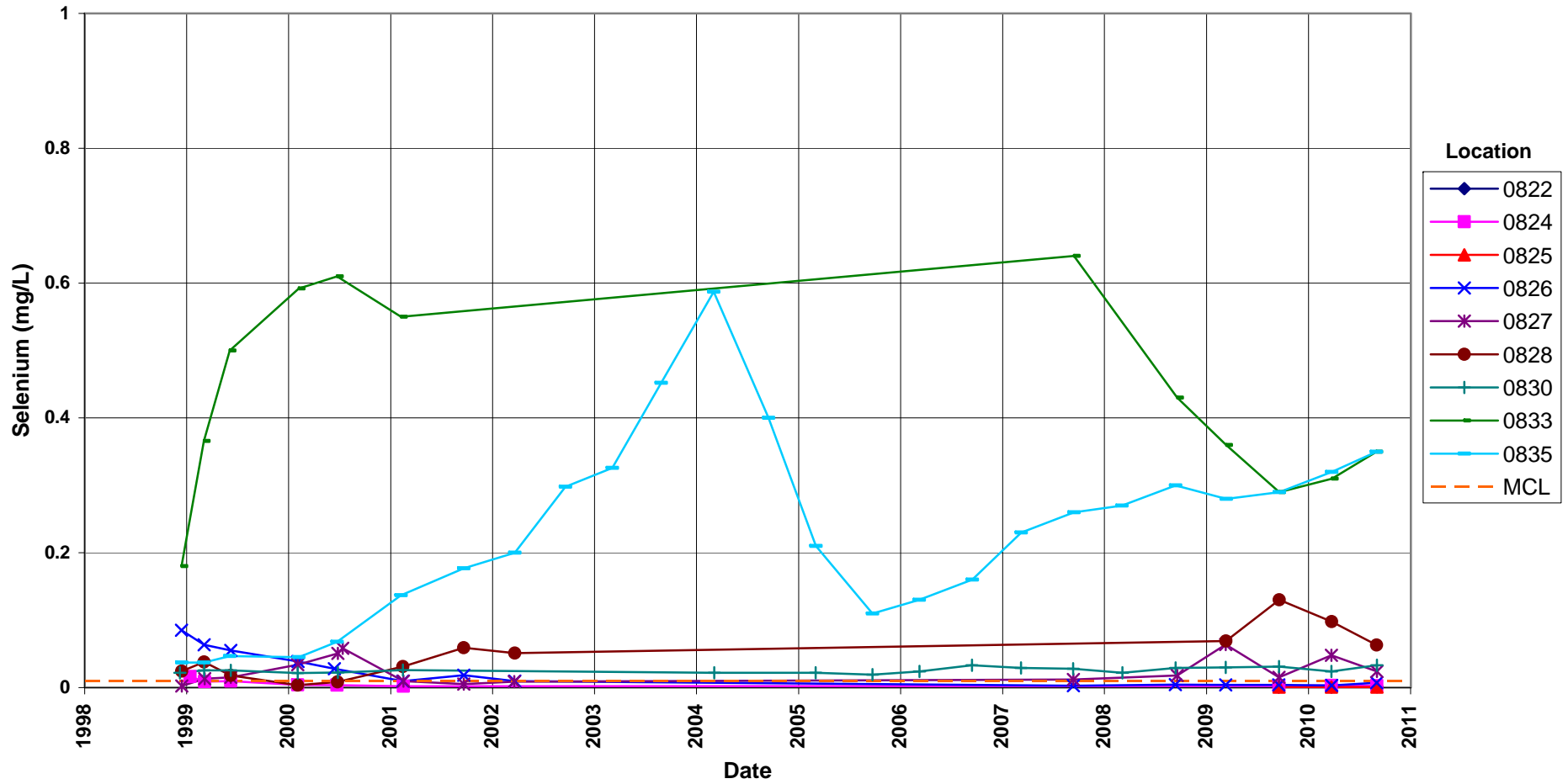
Shiprock Disposal Site (Terrace)

Selenium Concentration

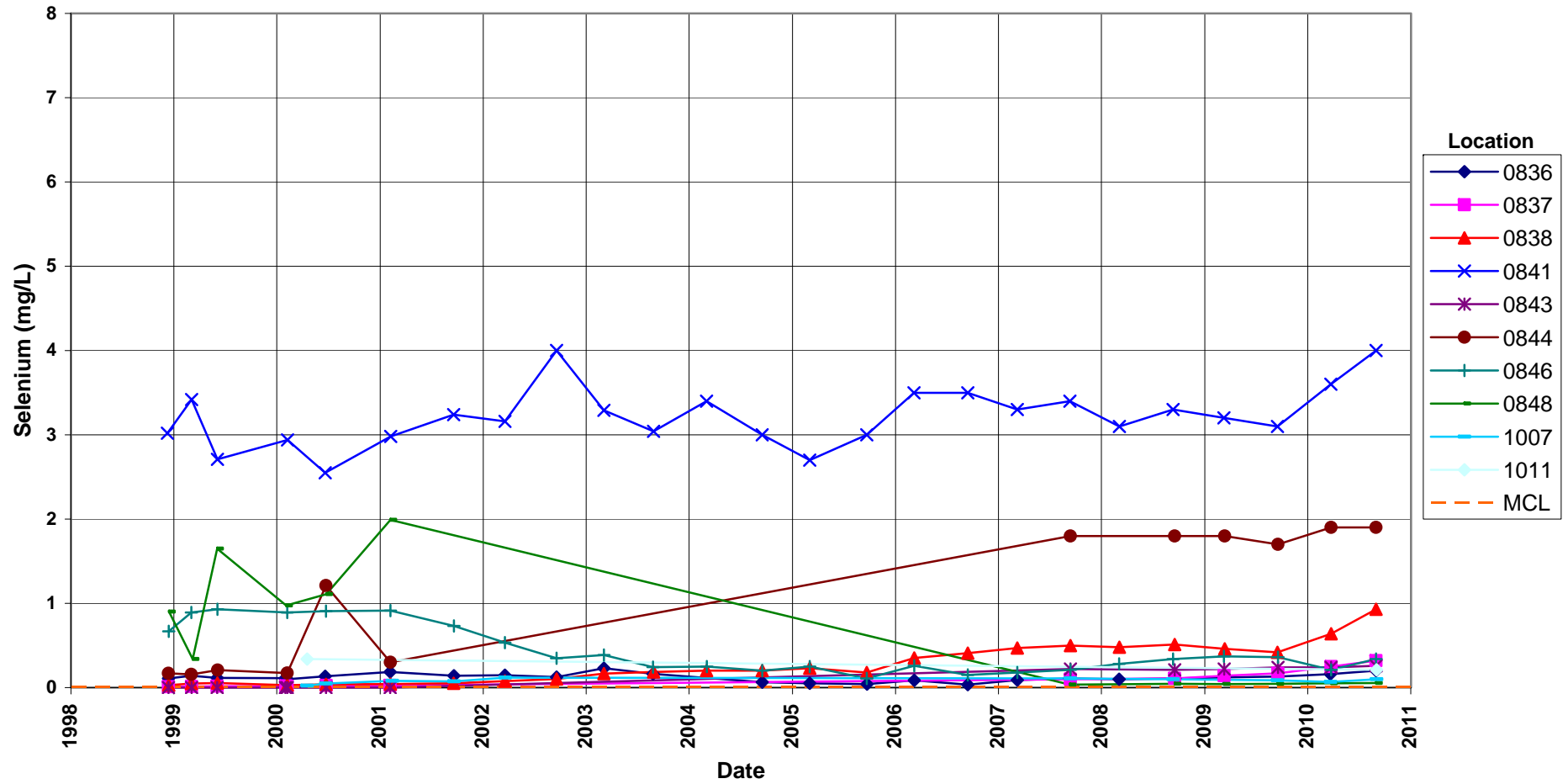
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



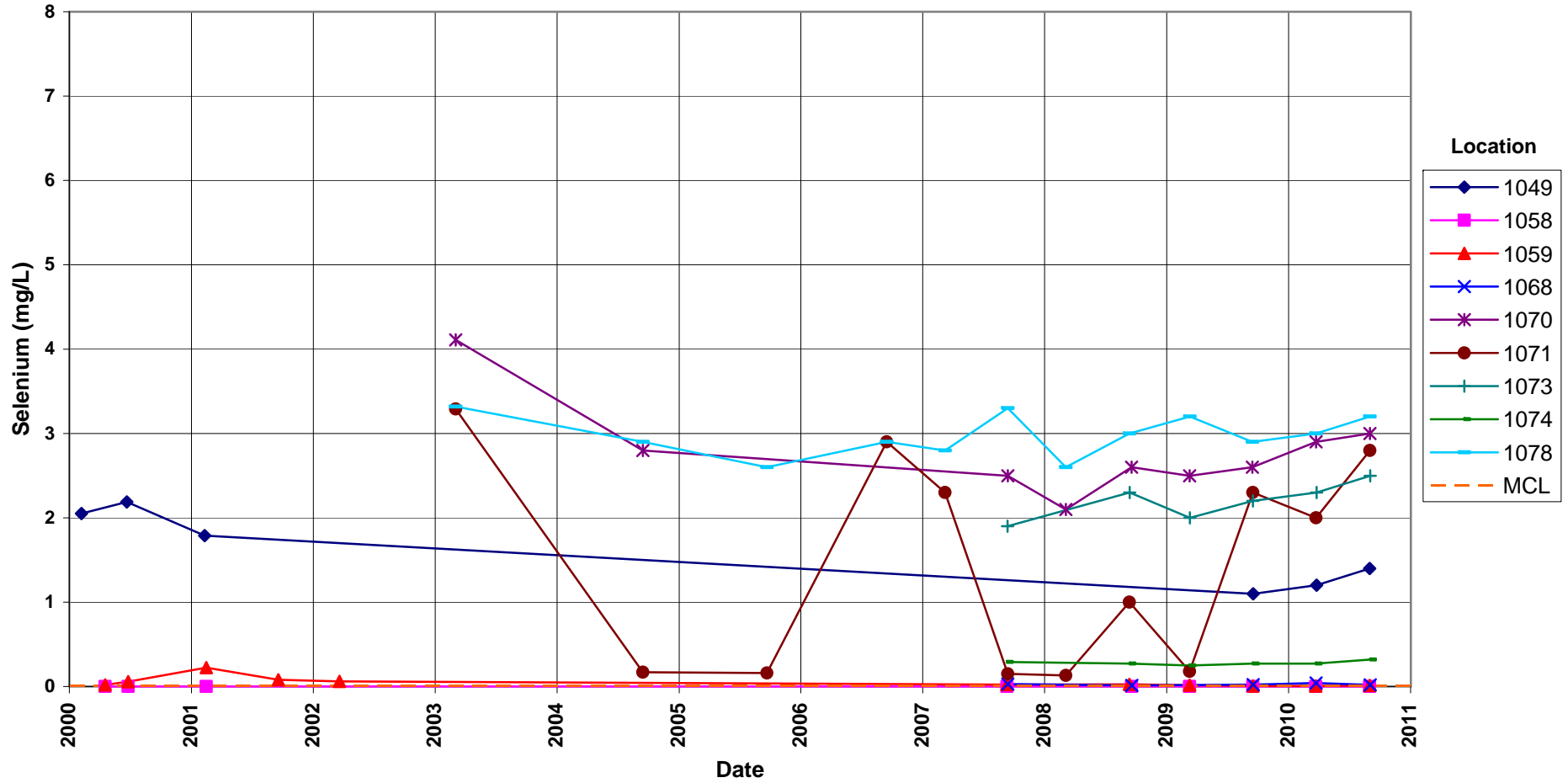
**Shiprock Disposal Site (Terrace)
Selenium Concentration**
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



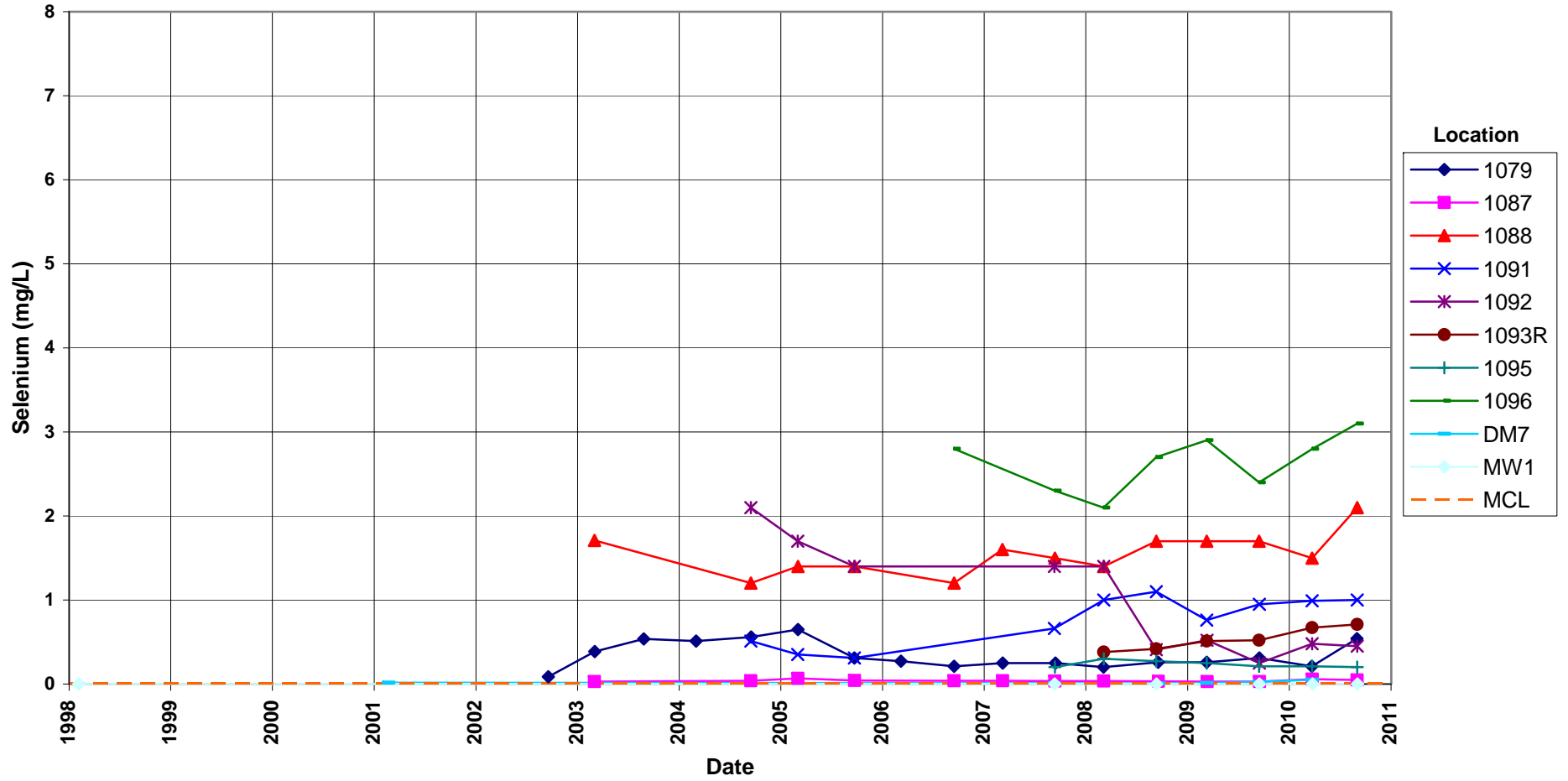
**Shiprock Disposal Site (Terrace)
Selenium Concentration**
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



Shiprock Disposal Site (Terrace)
Selenium Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L

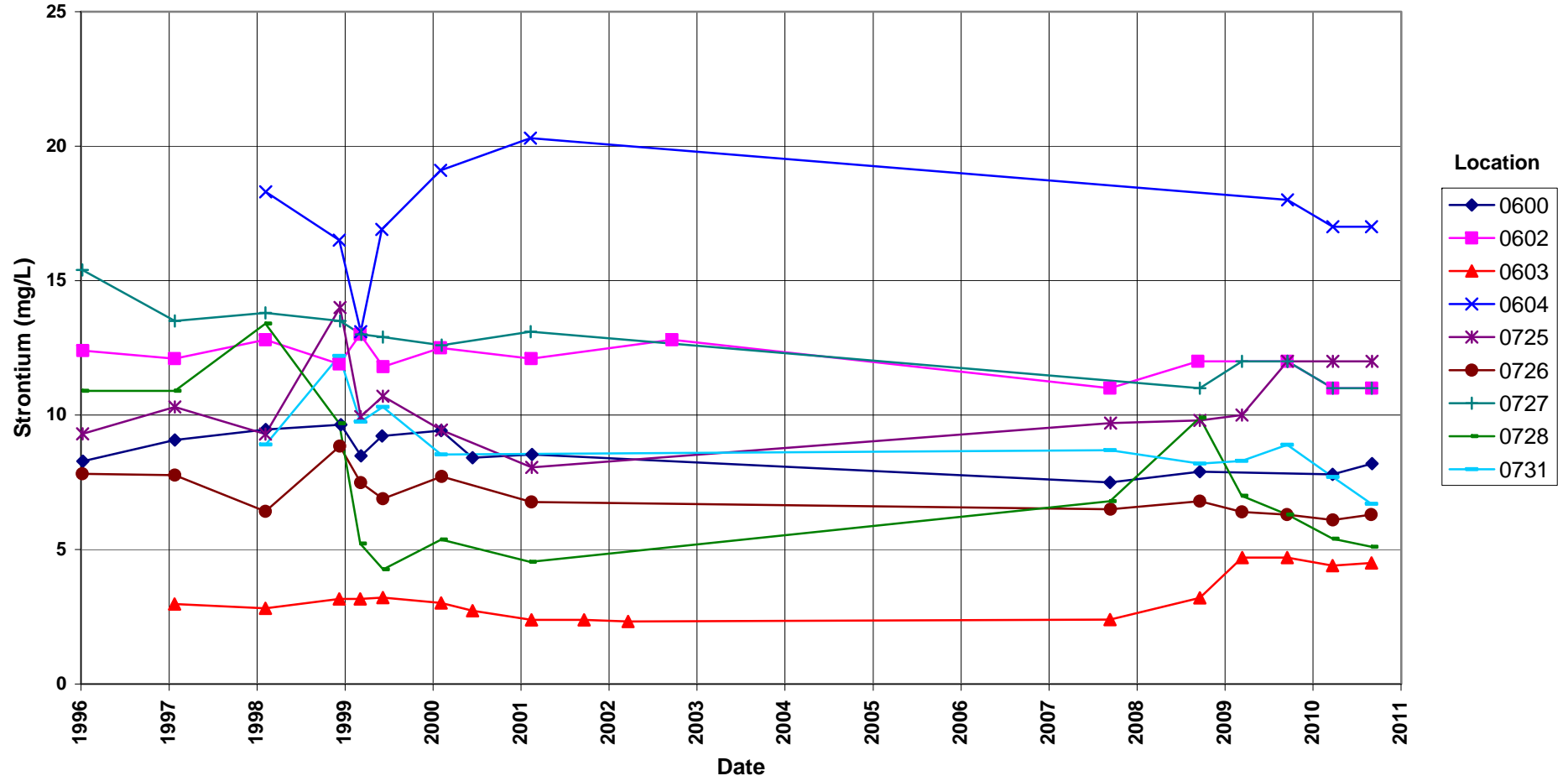


**Shiprock Disposal Site (Terrace)
Selenium Concentration**
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.01 mg/L



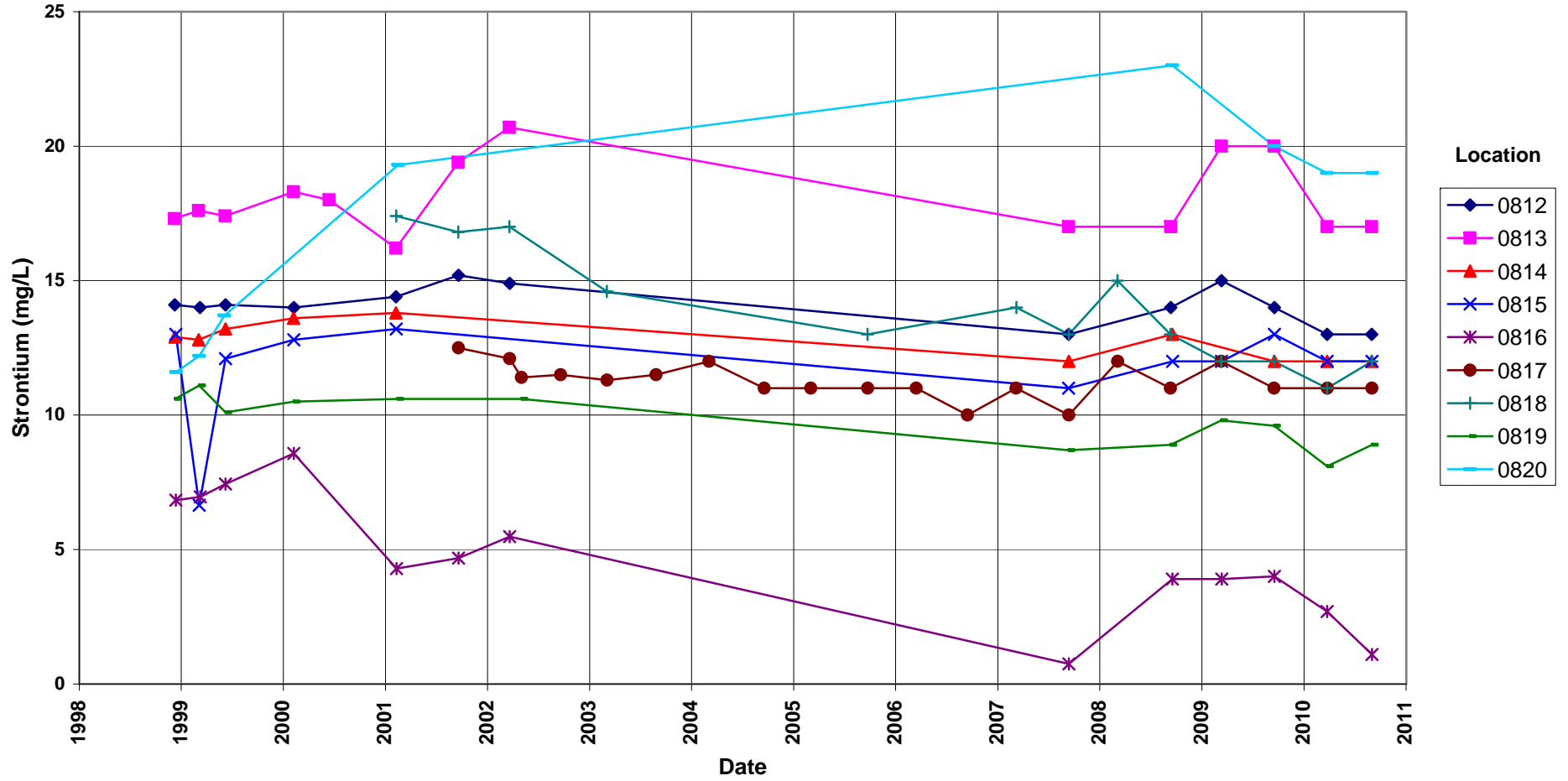
Shiprock Disposal Site (Terrace) Strontium Concentration

No established groundwater standard



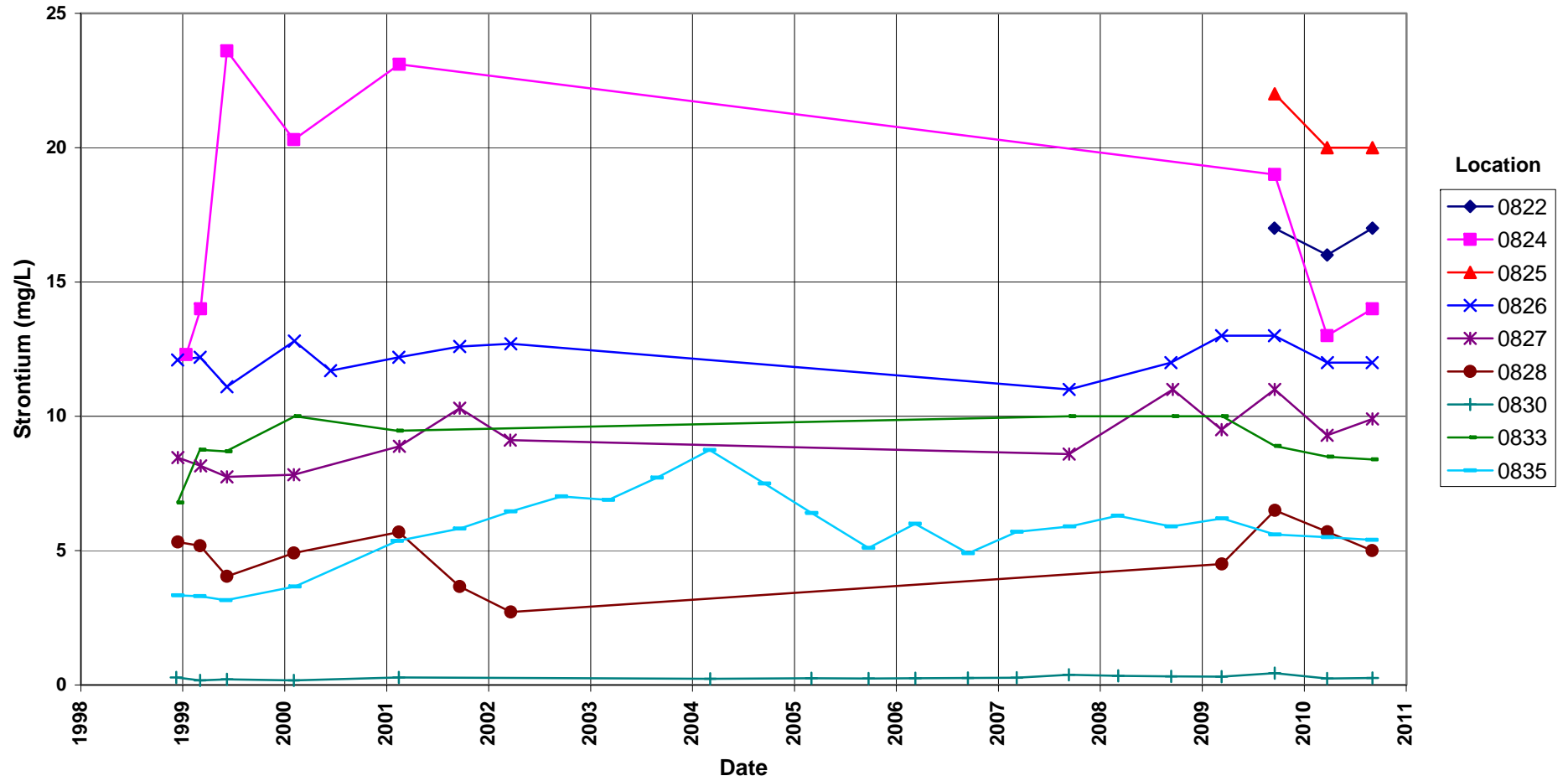
Shiprock Disposal Site (Terrace) Strontium Concentration

No established groundwater standard



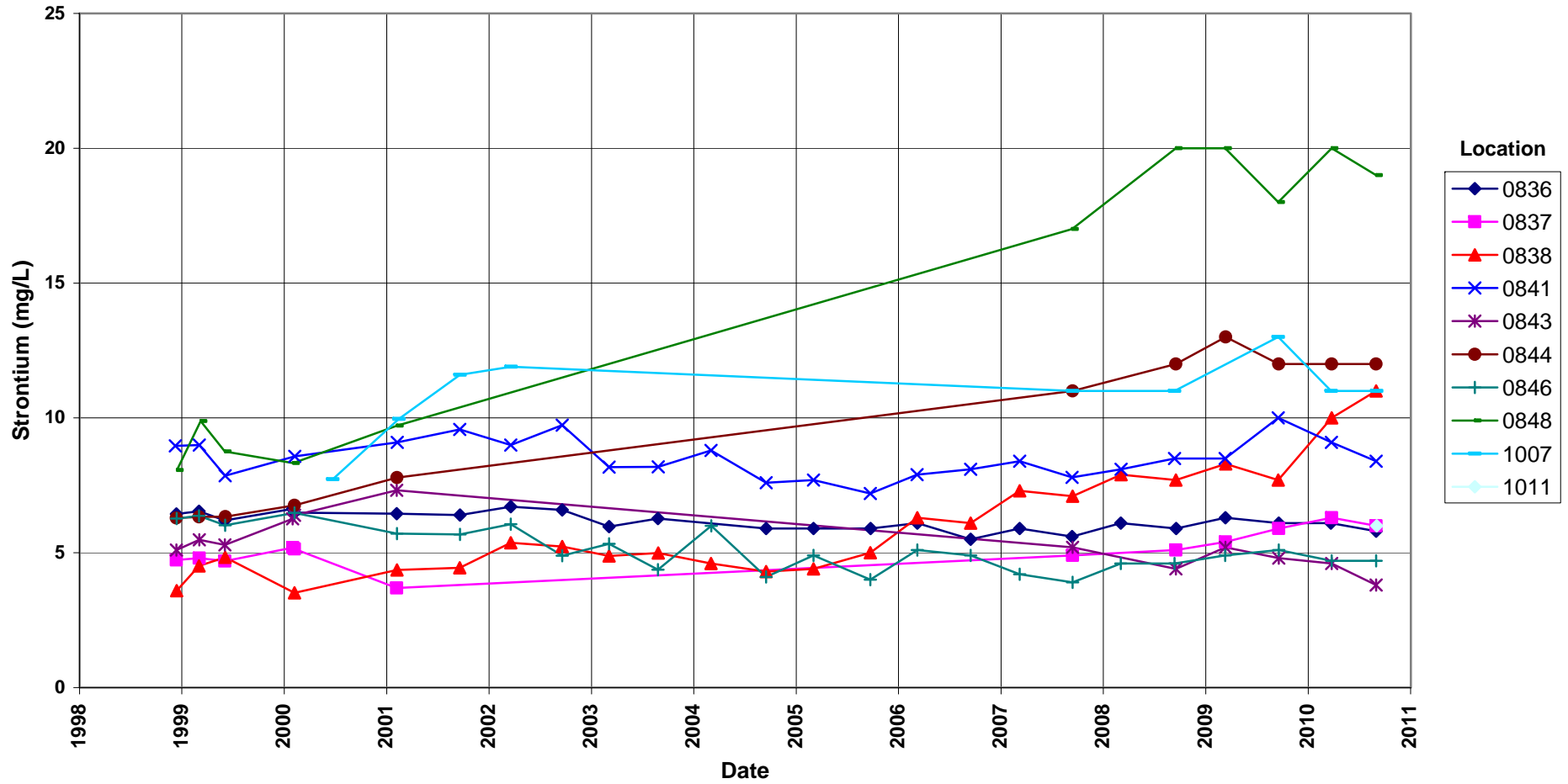
Shiprock Disposal Site (Terrace) Strontium Concentration

No established groundwater standard



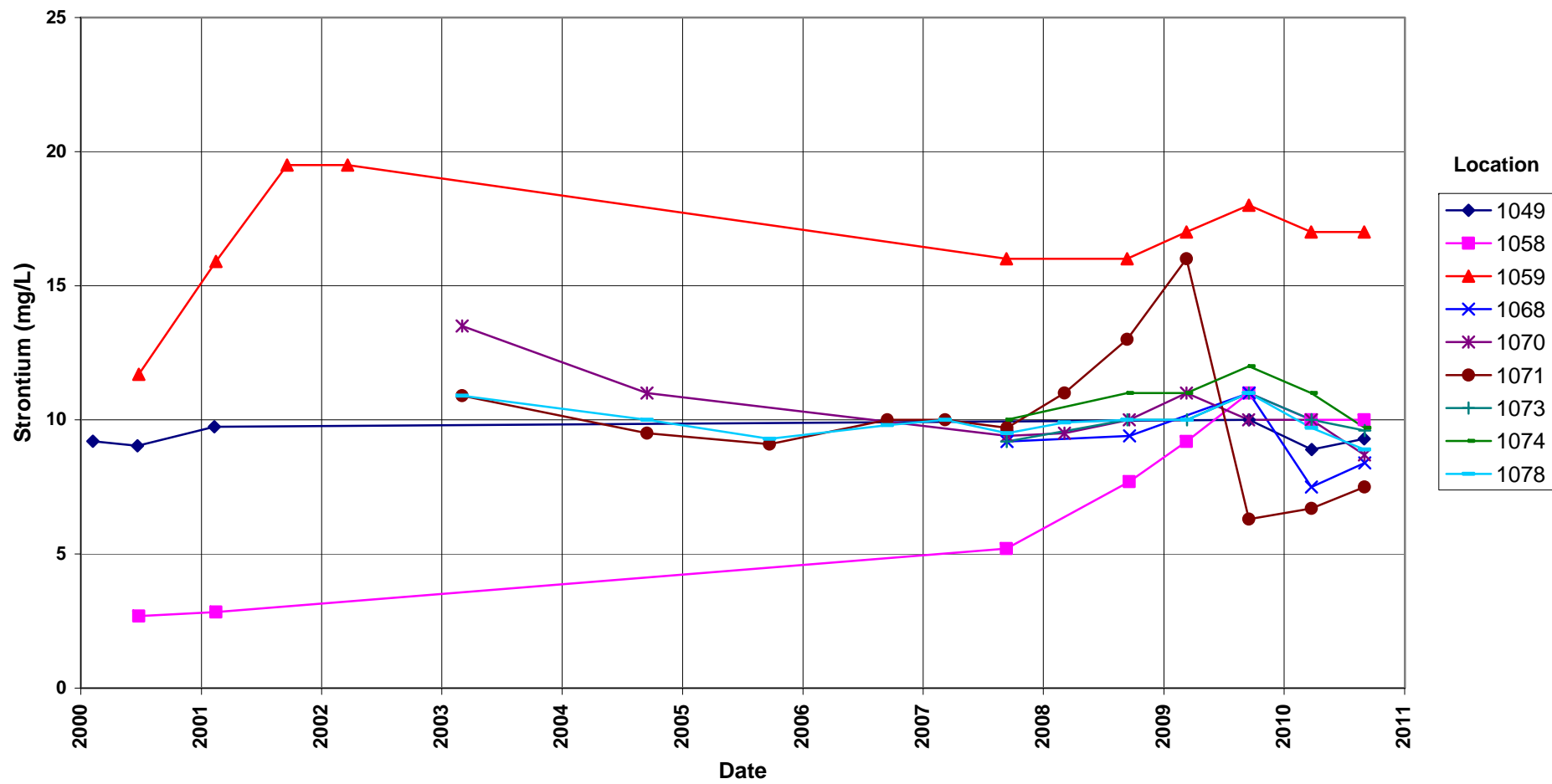
Shiprock Disposal Site (Terrace) Strontium Concentration

No established groundwater standard



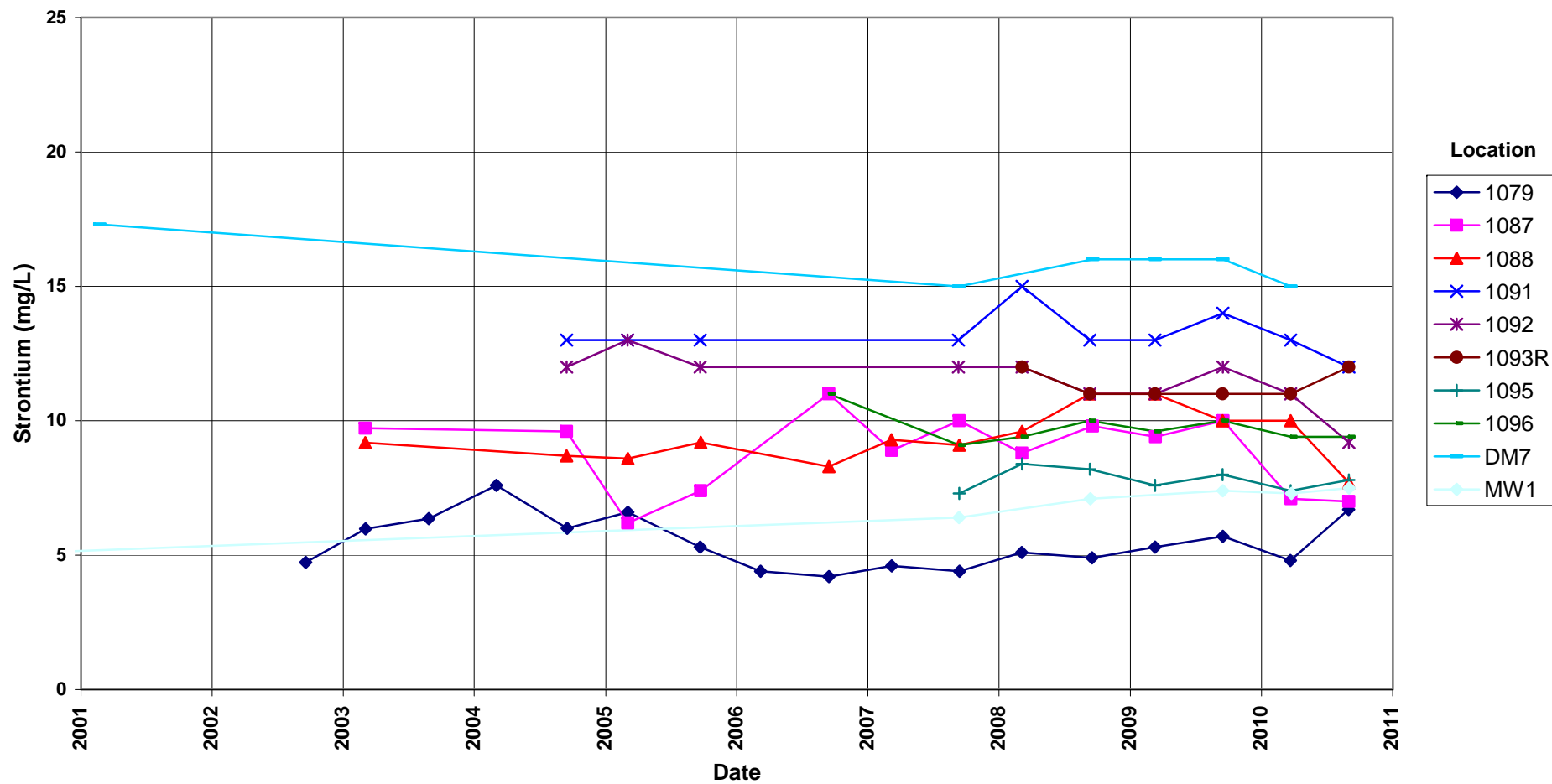
Shiprock Disposal Site (Terrace) Strontium Concentration

No established groundwater standard



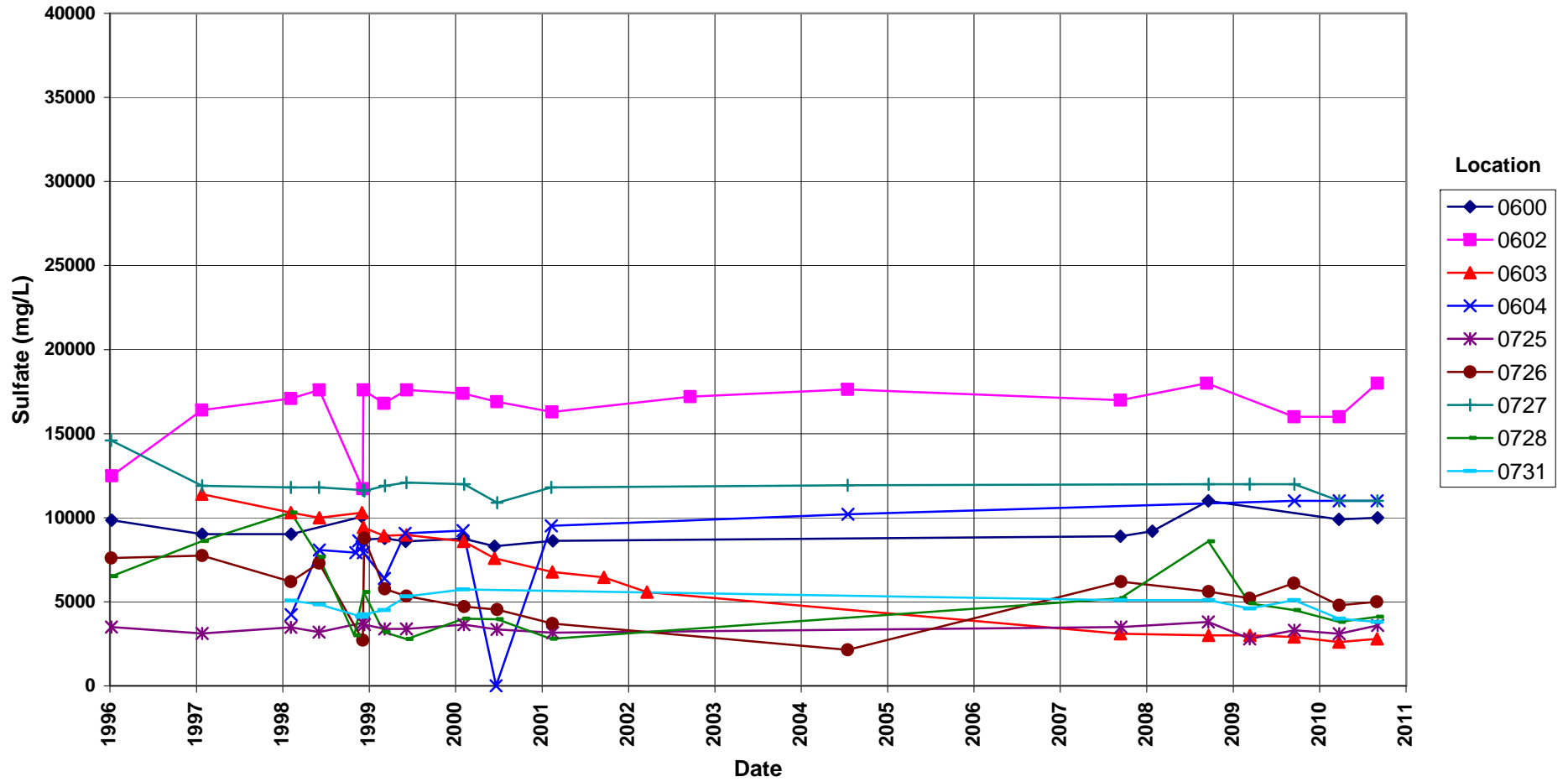
Shiprock Disposal Site (Terrace) Strontium Concentration

No established groundwater standard



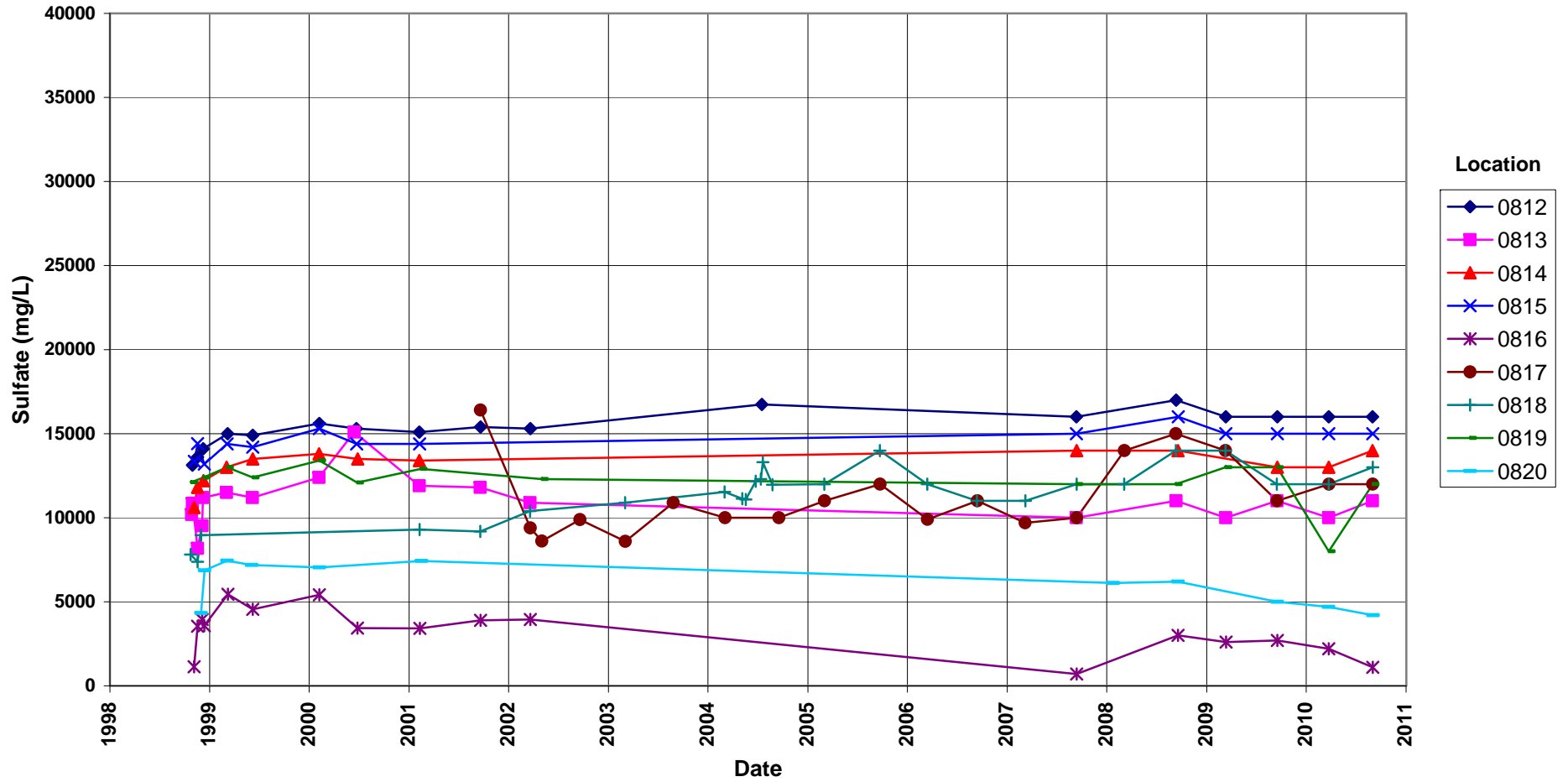
Shiprock Disposal Site (Terrace) Sulfate Concentration

No established groundwater standard



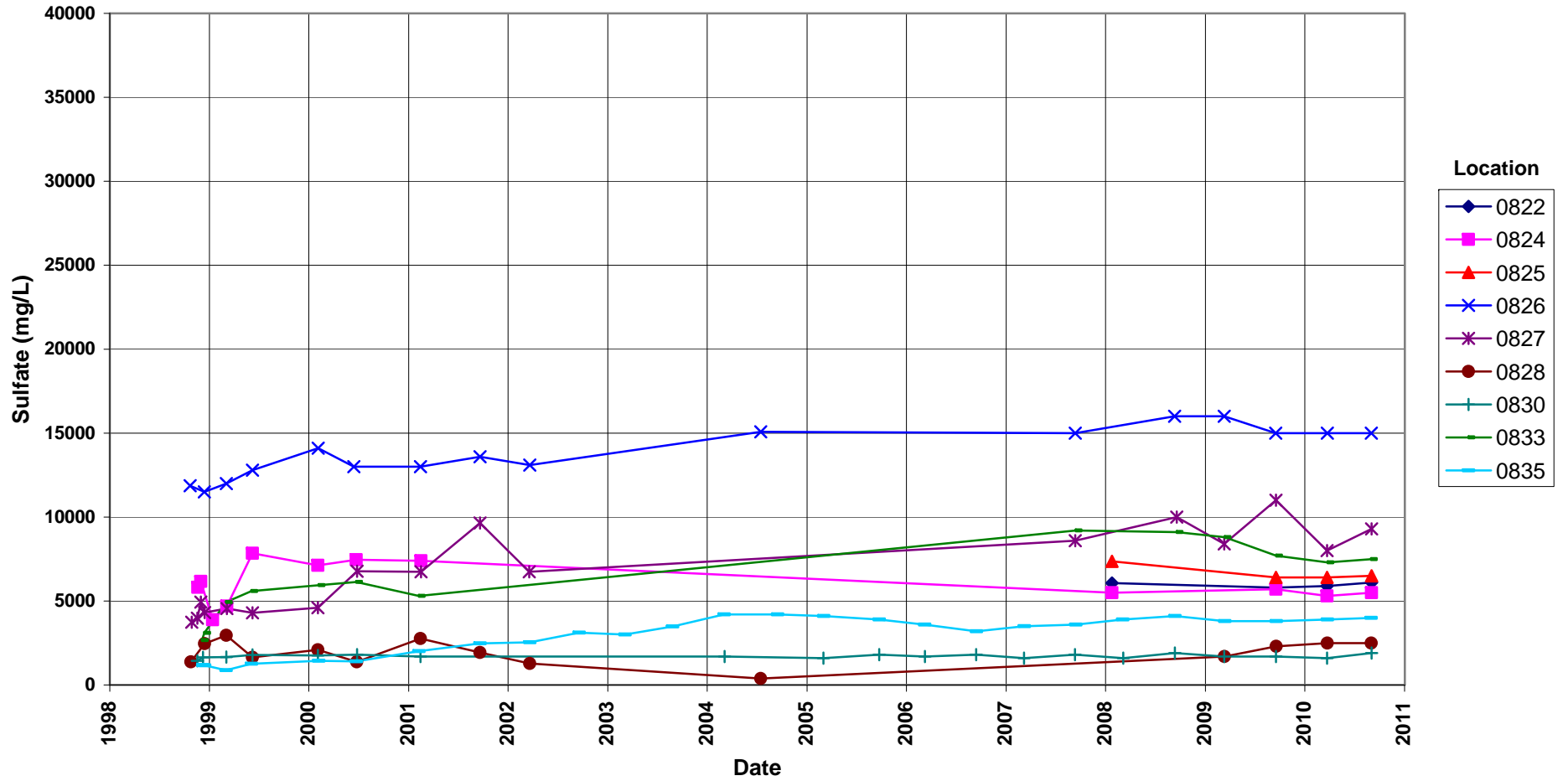
Shiprock Disposal Site (Terrace) Sulfate Concentration

No established groundwater standard



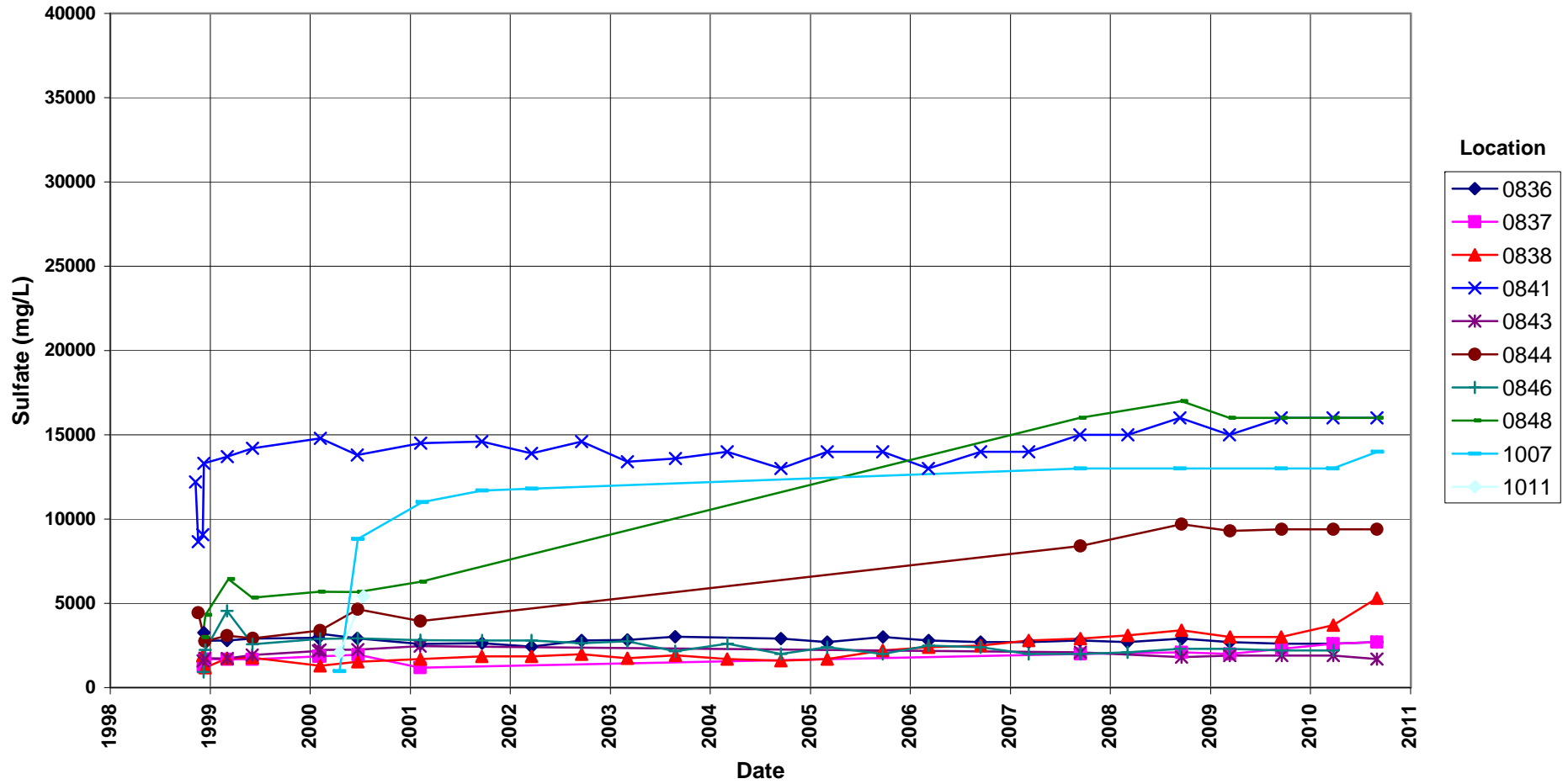
Shiprock Disposal Site (Terrace) Sulfate Concentration

No established groundwater standard



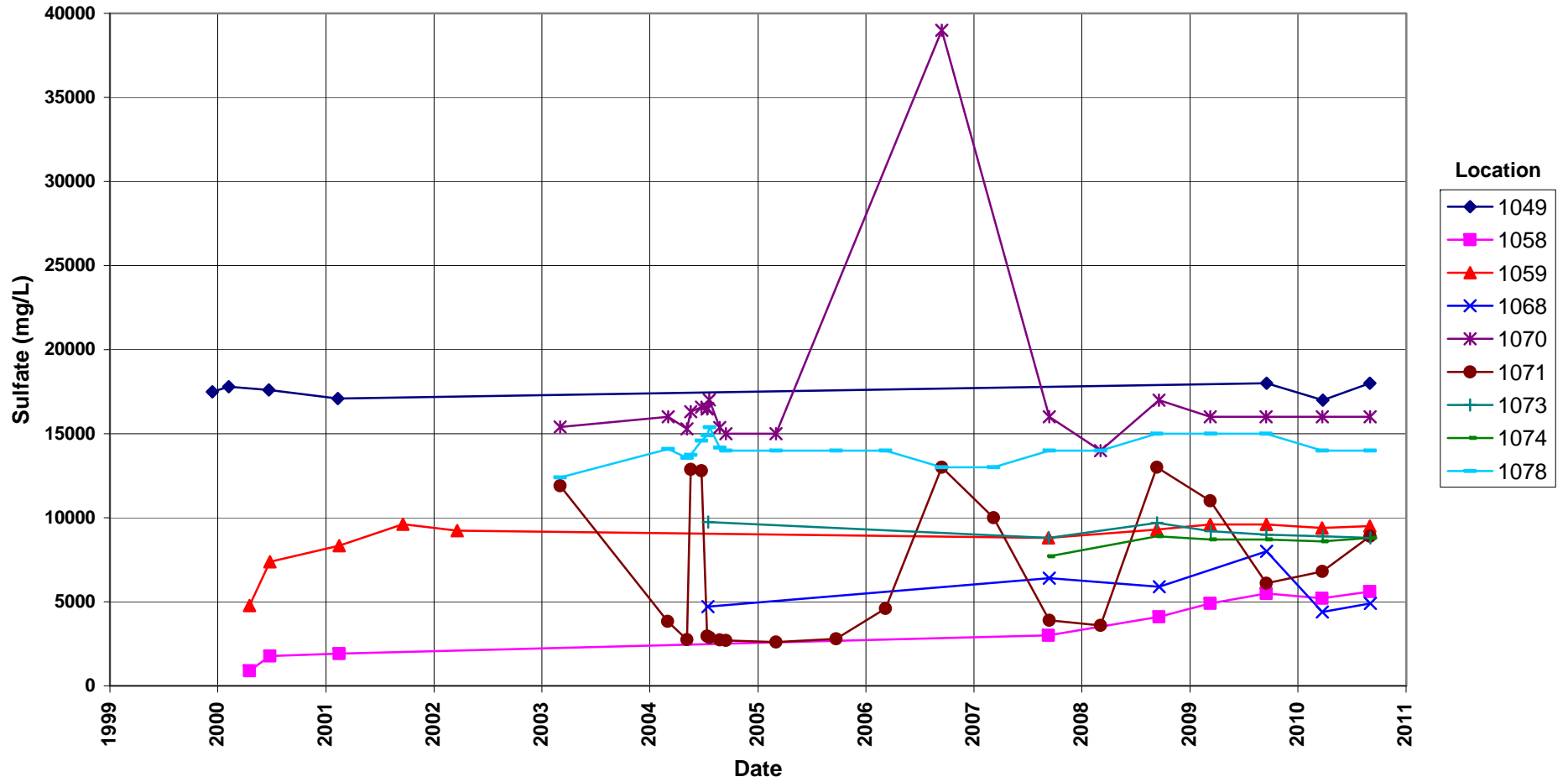
Shiprock Disposal Site (Terrace) Sulfate Concentration

No established groundwater standard



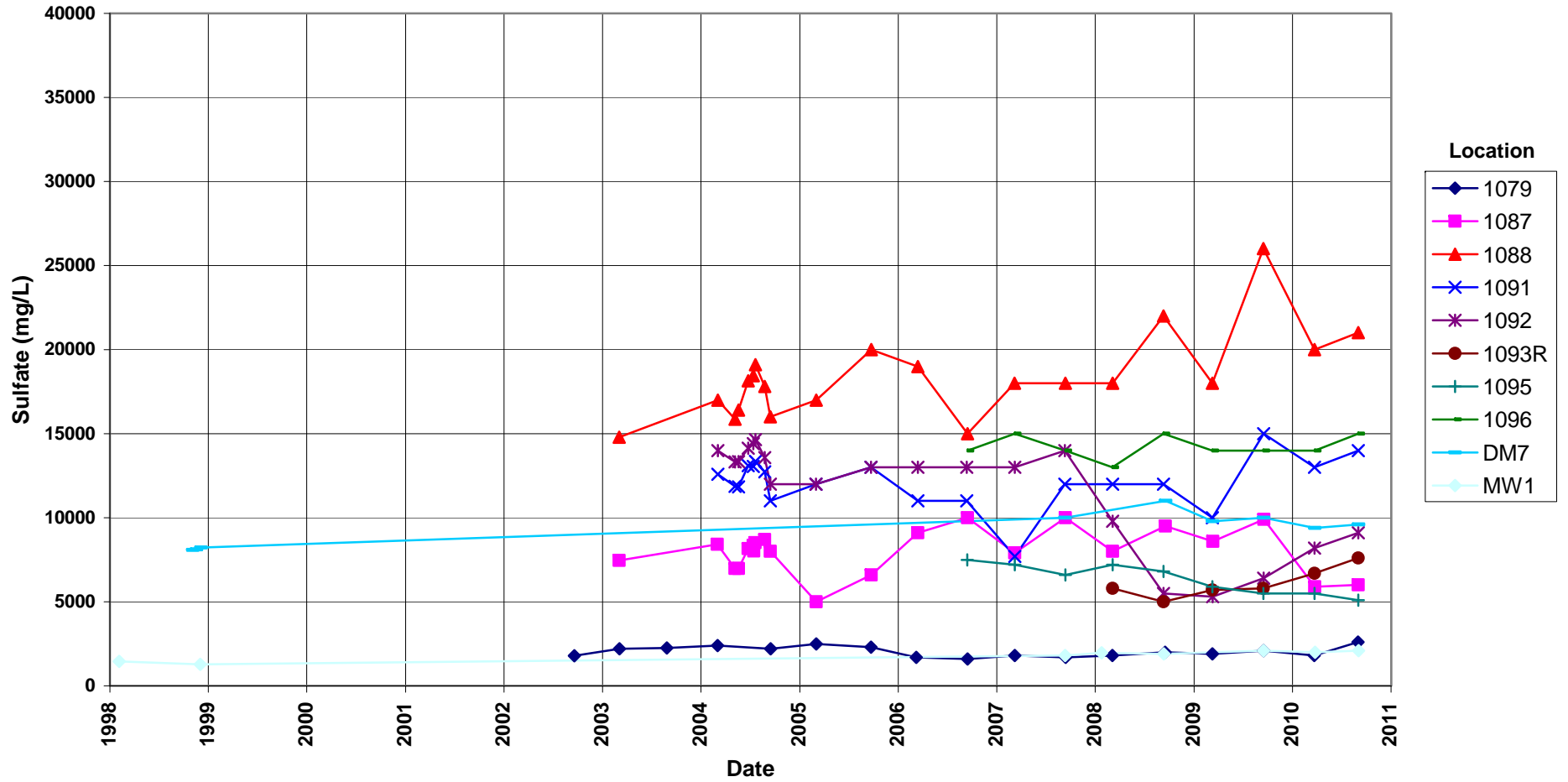
Shiprock Disposal Site (Terrace) Sulfate Concentration

No established groundwater standard

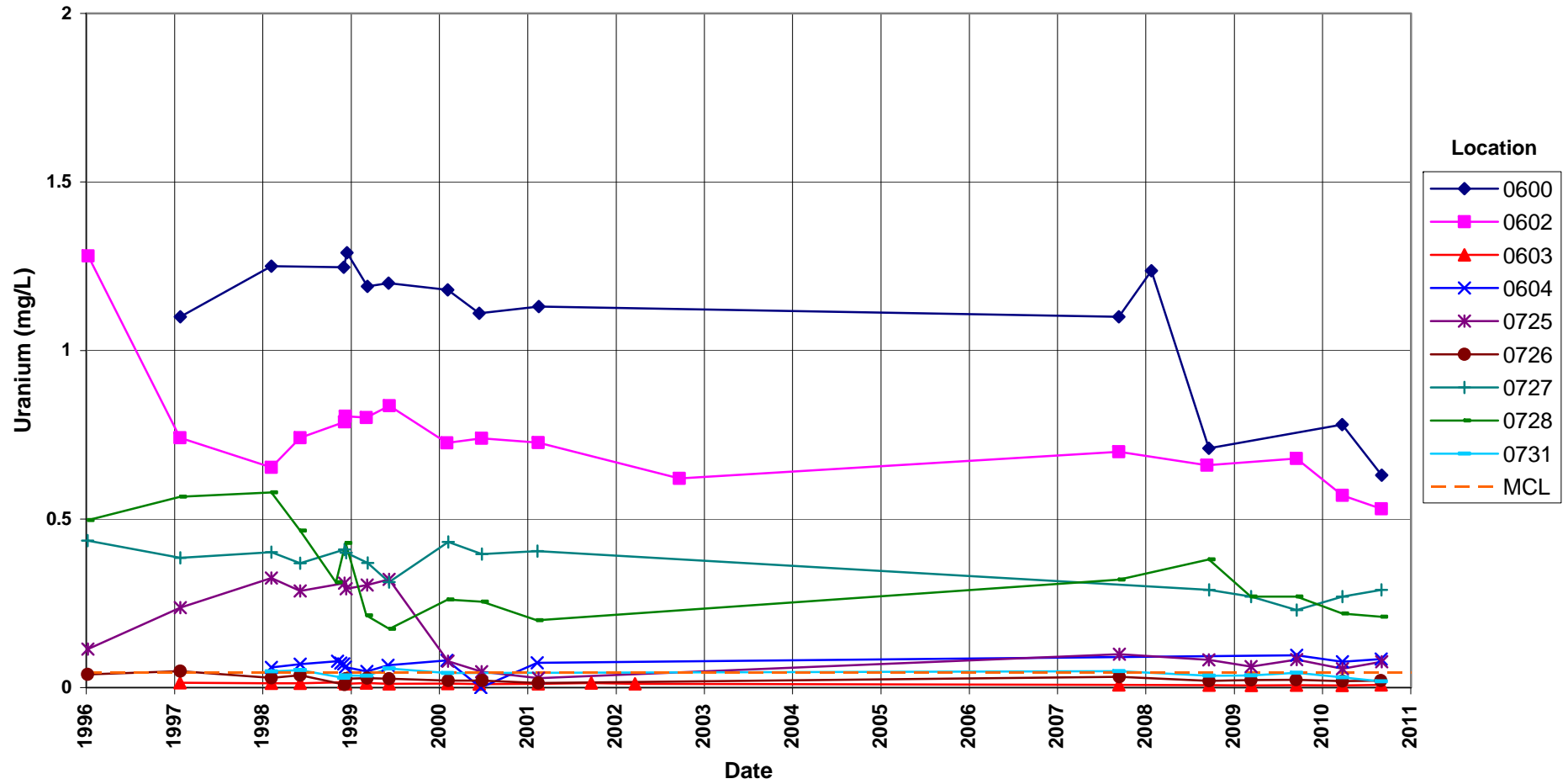


Shiprock Disposal Site (Terrace) Sulfate Concentration

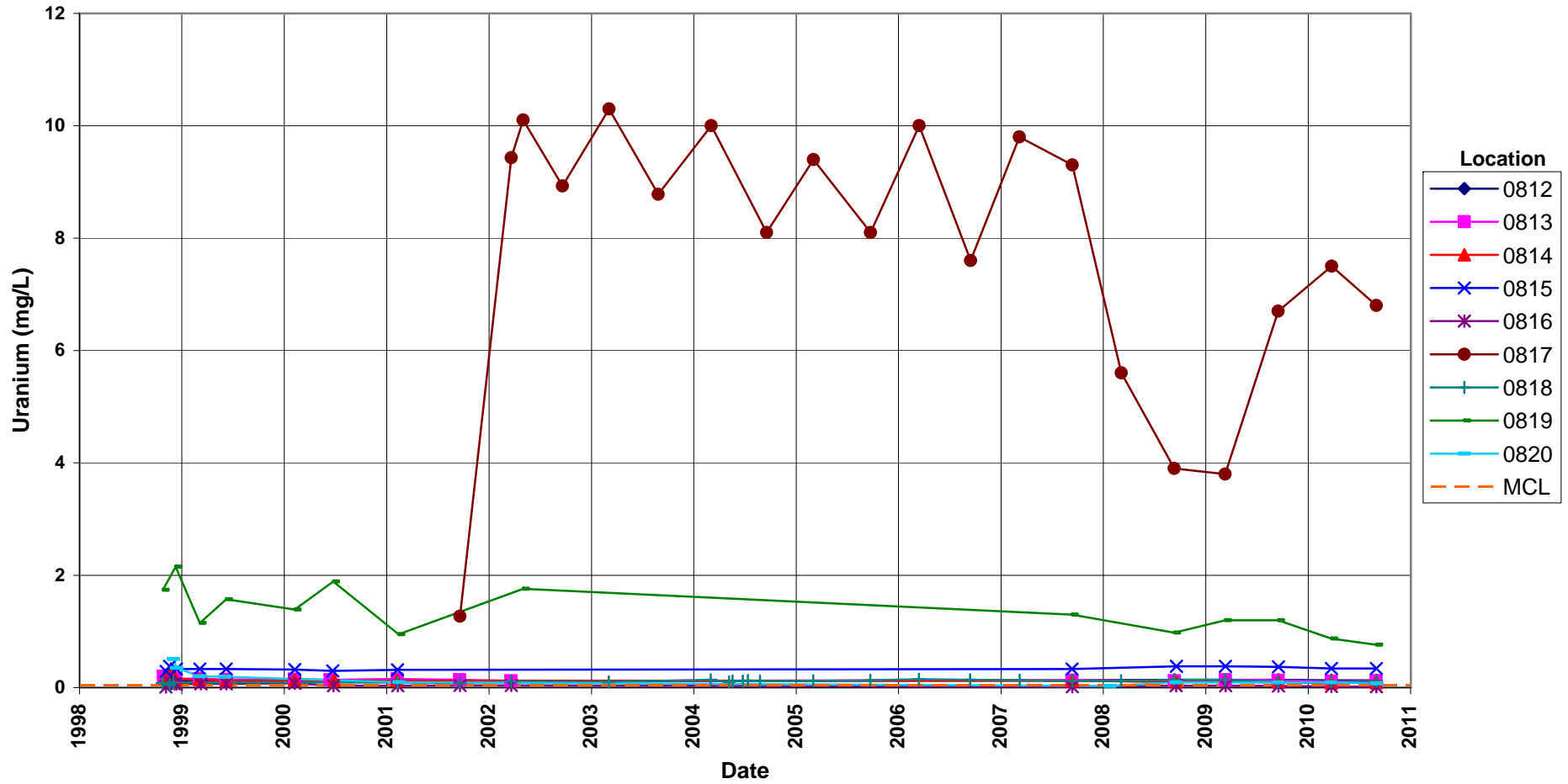
No established groundwater standard



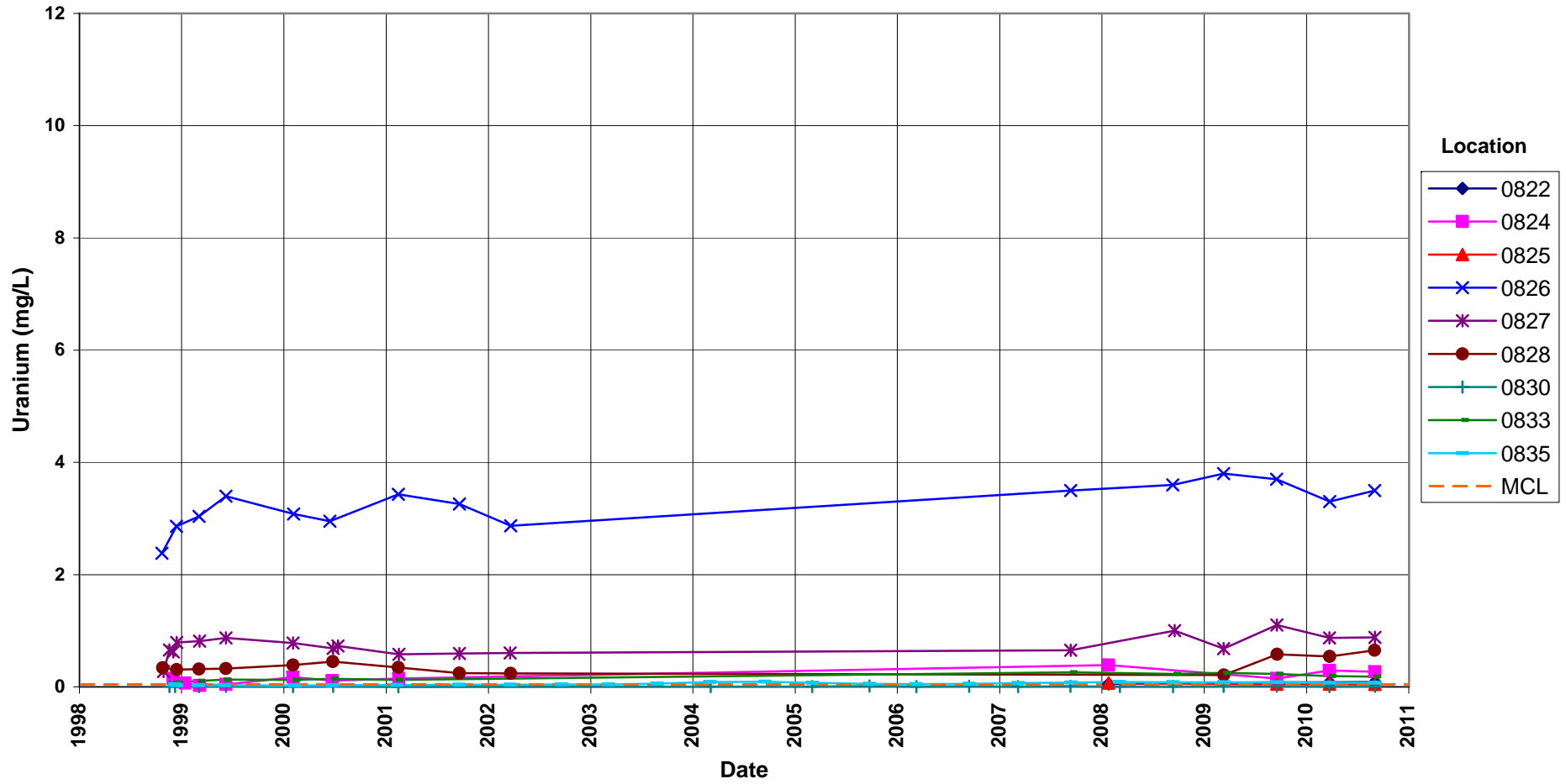
Shiprock Disposal Site (Terrace)
Uranium Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



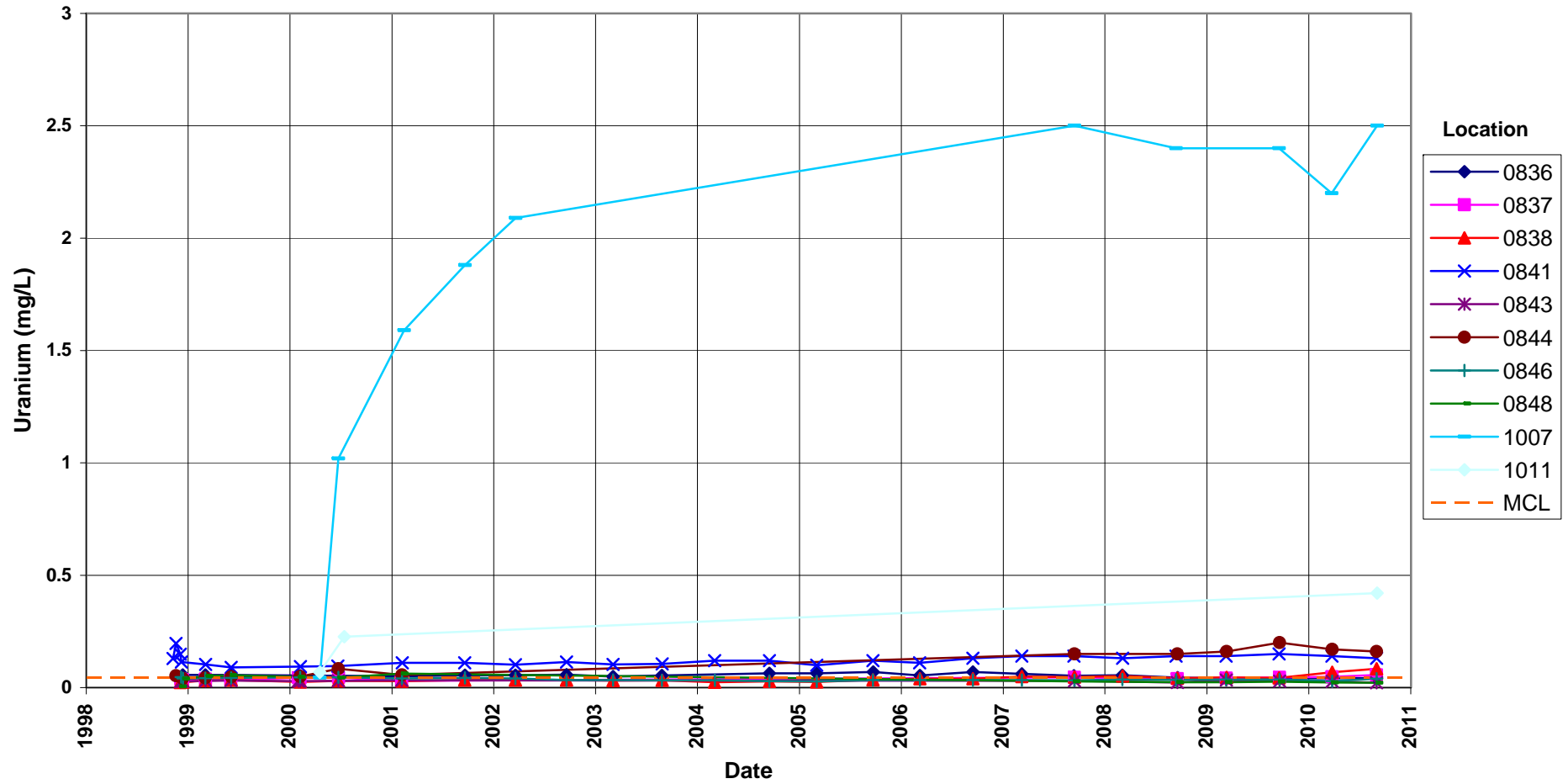
**Shiprock Disposal Site (Terrace)
Uranium Concentration**
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



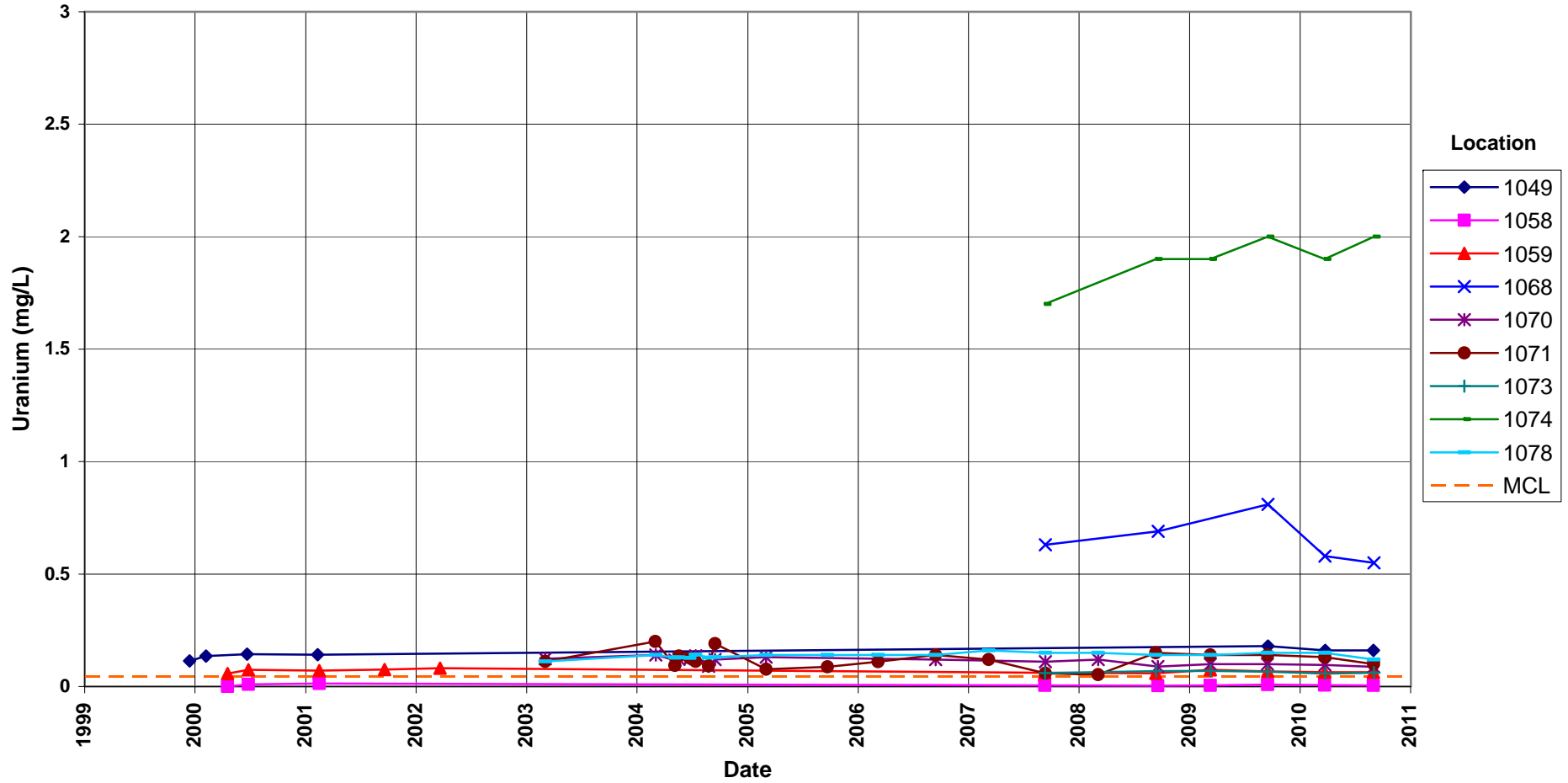
Shiprock Disposal Site (Terrace)
Uranium Concentration
 40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



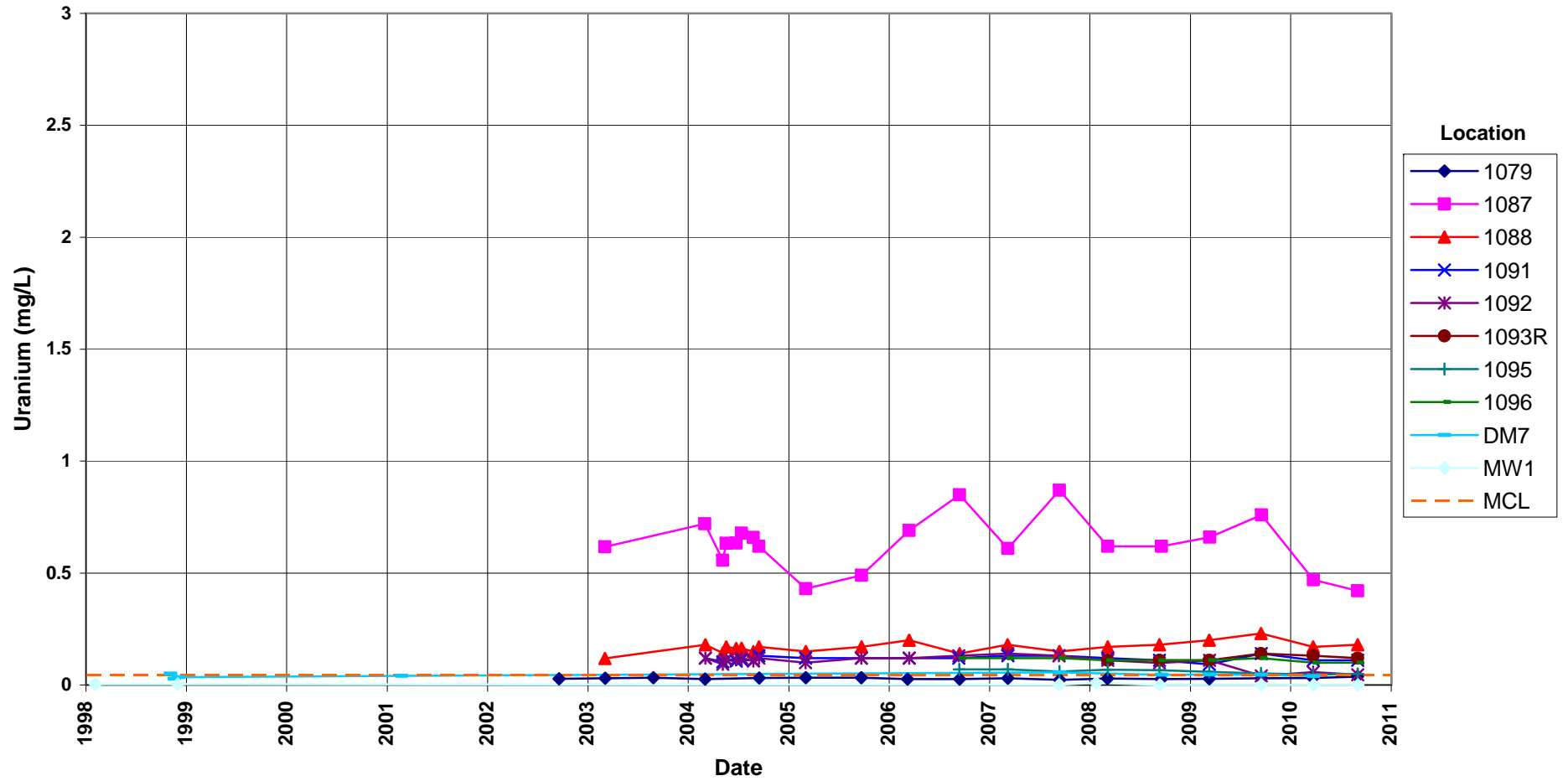
Shiprock Disposal Site (Terrace)
Uranium Concentration
40 CFR 192.02 Maximum Contaminant Level (MCL) = 0.044 mg/L



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



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



Attachment 3
Sampling and Analysis Work Order

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established 1959

Task Order LM00-501
Control Number 10-0813

July 27, 2010

U.S. Department of Energy
Office of Legacy Management
ATTN: Dr. April Gil
Site Manager
2597 B ¼ Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AM01-07LM00060, S.M. Stoller Corporation (Stoller)
August 2010 Environmental Sampling at Shiprock, New Mexico

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

Dear Dr. Gil:

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 monitoring at the Shiprock Disposal site. Water quality data will be collected at this site as part of the environmental sampling currently scheduled to begin the week of August 30, 2010.

Samples collected at the following SHP01 (floodplain) locations will be both filtered and unfiltered: 0501, 0897, 0898, 0899, 0940, 0956, 0965, 1203, and 1205.

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

FLOODPLAIN

608 Km	623 Al	768 Al	798 Al	1009 Al	1113 Nr	1136
610 Al	625 Al	773 Al	850 Al	1089 Al	1114 Nr	1137
611 Nr	626 Al	775 Al	853 Al	1104 Nr	1115 Nr	1138
612 Al	628 Al	779 Al	854 Al	1105 Nr	1117 Nr	1139
614 Al	630 Al	782R Al	855 Al	1109 Nr	1128	1140 Al
615 Al	734 Al	783R Al	856 Al	1110 Nr	1132 Nr	1141 Al
618 Al	735 Al	792 Al	857 Al	1111 Nr	1134 Nr	1142
619 Al	736 Al	793 Al	1008 Al	1112 Nr	1135	1143
622 Al	766 Al	797 Al				

TERRACE

600	813 Al/Km	823 Km	835 Al	1002 Km	1060 Al	1088 Nr
602 Km	814 Al/Km	824 Km	836 Al	1003 Km	1068 Al	1091 Al
603 Al/Km	815 Al/Km	825 Km	837 Al	1004 Km	1069 Al/Km	1092 Al
604 Km	816 Al/Km	826 Al/Km	838 Al	1007 Al/Km	1070 Al/Km	1093R Al
725 Al/Km	817 Km	827 Al/Km	839 Al	1011 Al/Km	1071 Al/Km	1095 Nr
726 Km	818 Al	828 Al/Km	841 Al	1048 Al/Km	1073 Al/Km	1096 Nr
727 Km	819 Km	829 Km	843 Al	1049 Al/Km	1074 Al/Km	1120 Nr
728 Al/Km	820 Km	830 Km	844 Al/Km	1057 Al/Km	1078 Al/Km	1122 Nr
730 Al	821 Km	832 Al	846 Al	1058 Km	1079 Al	DM7 Km
731 Al/Km	822 Km	833 Al	848 Al/Km	1059 Km	1087 Nr	MW1 Km
812 Al/Km						

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

Surface Locations

SHP01

501	897	937	939	956	965	1203
655	898	938	940	959	1118	1205
887	899					

SHP02

662	885	934	942	958	1218	1220
786	889	936	949	1215	1219	1221
884	933					

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

Please contact me at (970) 248-6652 if you have any questions or concerns.

Sincerely,



David Miller
Site Lead

DM/lcg/lb

Enclosures (3)

cc: (electronic)

Steve Donovan, Stoller
Lauren Goodknight, Stoller
David Miller, Stoller
EDD Delivery
rc-grand.junction

**Sampling Frequencies for Locations at
Shiprock, New Mexico**

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Monitoring Wells						
SHP01						
608		X				Low flow
610		X				
611		X				
612		X				
614		X				Low flow
615		X				Low flow
617					X	Data logger only
618		X				Low flow
619		X				Low flow
622		X				
623		X				
625		X				
626		X				
628		X				
630		X				
734		X				Low flow
735		X				Low flow
736		X				Low flow; data logger
766		X				
768		X				
773		X				
775		X				
779		X				
782R		X				
783R		X				
792		X				
793		X				
797		X				Low flow
798		X				
850		X				Low flow
853		X				
854		X				Data logger
855		X				
856		X				
857		X				Data logger
862					X	WLS only
863					X	WLS only
1000					X	WLS only
1001					X	WLS only
1008		X				Data logger
1009		X				
1062					X	WLS only
1089		X				U, SO4, N as NO3 only at vault
1104		X				U, SO4, N as NO3 only at vault
1105		X				
1109		X				Trench 2; U, SO4, N as NO3 only at vault
1110		X				Trench 1; U, SO4, N as NO3 only at vault

SHP01						
1111		X				Well point; U, SO4, N as NO3 only. Purge 1 casing vol then sample
1112		X				Well point; U, SO4, N as NO3 only. Purge 1 casing vol then sample
1113		X				Well point; U, SO4, N as NO3 only. Purge 1 casing vol then sample
1114		X				Well point; U, SO4, N as NO3 only. Purge 1 casing vol then sample
1115		X				Well point; U, SO4, N as NO3 only. Purge 1 casing vol then sample
1117		X				Well point; U, SO4, N as NO3 only. Purge 1 casing vol then sample
1128		X				
1132		X				
1134		X				
1135		X				
1136		X				
1137		X				
1138		X				
1139		X				
1140		X				
1141		X				
1142		X				
1143		X				
SHP02						
600		X				
602		X				Data logger
603		X				
604		X				Data logger
648				Odd year		Measure flow rate semiannually; sample biennially; next in 2011
725		X				Data logger
726		X				
727		X				
728		X				Data logger
730		X				Data logger
731		X				Data logger
800					X	WLs only
801					X	WLs only
802					X	WLs only
803					X	WLs only
812		X				
813		X				Data logger
814		X				
815		X				
816		X				
817		X				Low flow
818		X				Ext. well; U, SO4, N as NO3 only at vault
819		X				Data logger
SHP02						
820		X				
821		X				
822		X				
823		X				
824		X				

825		X				
826		X				Data logger
827		X				Data logger
828		X				Data logger
829		X				
830		X				Data logger
832		X				Low flow
833		X				
835		X				Low flow; data logger
836		X				Low flow; data logger
837		X				Data logger
838		X				Low flow
839		X				Low flow
841		X				Low flow; data logger
843		X				Data logger
844		X				
846		X				Low flow; data logger
848		X				Data logger
1002		X				
1003		X				
1004		X				
1007		X				
1011		X				
1048		X				
1049		X				
1057		X				
1058		X				
1059		X				
1060		X				Low flow; data logger
1067					X	WL only; Bob Lee Wash
1068		X				Bob Lee Wash
1069		X				Bob Lee Wash; data logger
1070		X				Ext. well; U, SO4, N as NO3 only at vault
1071		X				Ext. well; U, SO4, N as NO3 only at vault
1073		X				Data logger
1074		X				
1078		X				Ext. well; U, SO4, N as NO3 only at vault
1079		X				Low flow
1087		X				SUMP-Bob Lee Wash
1088		X				SUMP-Many Devils Wash
1091		X				Ext. well; U, SO4, N as NO3 only at vault
1092		X				Ext. well; U, SO4, N as NO3 only at vault
SHP02						
1093R		X				Ext. well; U, SO4, N as NO3 only at vault
1095		X				Ext. well; U, SO4, N as NO3 only at vault
1096		X				Ext. well; U, SO4, N as NO3 only at vault
1120		X				
1122		X				
MW1		X				
DM7		X				
Surface Locations						
SHP01						

501		X			East of disposal cell
655		X			Drainage channel
887		X			Distributary channel
897		X			Just below mouth of Many Devils Wash
898		X			San Juan River upgradient
899		X			
937		X			
938		X			
939		X			
940		X			Just NE of 1004, San Juan River
956		X			San Juan River at intake
959		X			Distributary channel just below 1st wash
965		X			San Juan River about 1500' below dist. Channel
1118		X			Seep sump (423/426) U, SO4, N as NO3 only at vault
1203		X			East of disposal cell
1205		X			San Juan River E of well 853
SHP02					
662		X			Lower Bob Lee Wash
786		X			Seep below US Hwy 491 bridge; FLOW RATE
884		X			Irrigation return flow
885		X			Upper Bob Lee Wash; water level
889		X			Many Devils Wash
933		X			1st wash W of Highway 491
934		X			2nd wash W of Highway 491
936		X			Seep between 1st & 2nd washes
942		X			Pond NW of 847
949		X			
958		X			Helium lateral canal where water comes into canal at pump station
1215		X			
1218		X			NEW LOCATION
1219		X			NEW LOCATION
1220		X			NEW LOCATION
1221		X			NEW LOCATION

Sampling conducted in March and September

NOTE: All San Juan River locations will have both filtered and unfiltered samples collected

Constituent Sampling Breakdown

Site	Shiprock		Required Detection Limit (mg/L)	Analytical Method	Line Item Code
Analyte	Groundwater	Surface Water			
Approx. No. Samples/yr	244	56			
<i>Field Measurements</i>					
Alkalinity	X	X			
Dissolved Oxygen					
Redox Potential	X	X			
pH	X	X			
Specific Conductance	X	X			
Turbidity	X	X			
Temperature	X	X			
<i>Laboratory Measurements</i>					
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					
Total Organic Carbon					
Uranium	X	X	0.0001	SW-846 6020	LMM-02
Vanadium					
Zinc					
Total No. of Analytes	12	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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Memorandum

DATE: October 6, 2010
 TO: David Miller
 FROM: Gretchen Baer
 SUBJECT: Sampling Trip Report

Site: Shiprock, NM (Floodplain, SHP01, and Terrace, SHP02)

Dates of Sampling Event: August 30 through September 2, 2010

Team Members: Gretchen Baer, Jeff Price, Jeff Walters, Joe Trevino, Kent Moe, and Dan Sellers. On August 31 through September 2, some team members also helped Paul Garvin (University of Nevada, Reno) with his split sampling project at several groundwater and surface water locations.

Number of Locations Sampled: Samples were collected from 128 of the 162 locations identified on the sampling notification letter as follows:

	Locations That Were Sampled	Planned Locations
SHP01 monitoring wells	56	59
SHP02 monitoring wells	56	71
SHP01 surface locations	10	16
SHP02 surface locations	6	16

Locations Not Sampled/Reason: A total of 34 locations were not sampled for the following reasons:

- 15 surface water locations (SHP01 locations 0655, 0887, 0937, 0938, 0939, and 0959 and SHP02 locations 0786, 0884, 0885, 0933, 0934, 0936, 0942, 0958, and 1218) were dry.
- An access agreement is not in place for SHP02 surface water location 1219.
- 15 wells (SHP01 locations 0773 and 0775 and SHP02 locations 0730, 0821, 0823, 0829, 0832, 1002, 1003, 1004, 1048, 1060, 1069, 1120, and 1122) were dry.
- SHP01 well 1134 was inadvertently not sampled. The site lead confirmed that this location was used in an earlier study and is not required for this sampling event.
- SHP02 well 0839 has been destroyed.
- SHP02 well 1057 had a dedicated pump that was not functioning.

Location Specific Information:

Location IDs	Site	Comments
0501, 0897, 0898, 0899, 0940, 0956, 0965, 1203, 1205	SHP01	Filtered and unfiltered samples were collected at these 9 locations on the San Juan River.
1089	SHP01	Alkalinity not recorded.
1112	SHP01	Equipment installed in well prevented WLs from being measured during purge.
0830	SHP02	pH < 4.
0846	SHP02	Bailed dry. Insufficient volume for alkalinity measurement and for anions. Limited volume for metals and NOx.
0949	SHP02	Surface water samples were taken ~75 feet above the regular location, which was dry.
1011	SHP02	Bailed dry. Insufficient volume for alkalinity measurement and for anions. Limited volume for metals and NOx.
1068	SHP02	Purged dry. Insufficient volume for alkalinity measurement. Limited volume for metals, anions, and NOx.
1087	SHP02	Flowmeter was not working, but was repaired by C. Holmes.
DM7	SHP02	Purged dry. Insufficient volume for metals.
MW1	SHP02	WL measured from top of steel casing.

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

False ID	Site	True ID	Ticket Number	Sample Type	Associated Matrix
2041	SHP01	0628	IJX 729	Duplicate	Groundwater
2604	SHP01	0735	IJX 658	Duplicate	Groundwater
2729	SHP01	0614	IJX 673	Duplicate	Groundwater
2731	SHP01	1105	IJX 708	Duplicate	Groundwater
2810	SHP02	0837	IJX 794	Duplicate	Groundwater
2811	SHP02	0836	IJX 795	Duplicate	Groundwater
2812	SHP02	0848	IJX 803	Duplicate	Groundwater
2813	SHP02	1079	IJX 796	Duplicate	Groundwater
2899	SHP01	Associated with surface water samples sampled with the tubing reel: SHP02 0889, 0949, 1220 & SHP01 0501, 0897, 0898, 0899, 1203, 1205	IJX 723	Equipment Blank	Water

RIN Number Assigned: Samples were assigned to RIN 10083299 (SHP01-Floodplain) and 10083302 (SHP02-Terrace).

Sample Shipment: Samples were shipped from Grand Junction to ALS Laboratory Group on September 8, 2010.

Well Inspection Summary: One SHP02 well (0839) has been destroyed. The pump doesn't work at SHP02 well 1057.

Equipment: All equipment functioned properly. Multi-gas meters were used to verify the air quality in the vaults. Wells were sampled with a peristaltic pump and dedicated tubing, a dedicated bailer, or a dedicated pump. Surface waters were sampled using a peristaltic pump and dedicated tubing, a peristaltic pump and tubing reel, or by container immersion. An equipment blank was collected after decontamination of the tubing reel. All other equipment was dedicated or disposable.

Water Level Measurements: Water levels were measured in all sampled wells and in 11 additional wells. Water level data in the additional 11 wells was collected with the Water Level Recorder program on a PDA.

Field Variance: None.

Institutional Controls:

Fences, Gates, and Locks: All gates were locked and in good condition.

Signs: Good.

Trespassing/Site Disturbances: N/A

Site Issues: Cell phone service (Verizon) was available at the site.

Disposal Cell/Drainage Structure Integrity: N/A

Vegetation/Noxious Weed Concerns: None.

Maintenance Requirements:

The pump in well 1057 needs to be fixed.

Bird netting in Bob Lee Wash needs to be replaced.

Safety Issues: None.

Corrective Action Required/Taken: None.

(GB/lcg)

cc: (electronic)
April Gil, DOE
Steve Donovan, Stoller
EDD Delivery, Stoller

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