Data Validation Package

September 2008
Groundwater and Surface Water Sampling at the Shiprock, New Mexico, Disposal Site

March 2009

U.S. DEPARTMENT OF ENERGY | Office of Legacy Management

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Sampling Event Summary

Site: Shiprock, New Mexico, Disposal Site

Sampling Period: September 8-18, 2008

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

The contaminants of concern for the Shiprock Disposal Site are ammonia, manganese, nitrate + nitrite as nitrogen, selenium, strontium, sulfate, and uranium. Wells with contaminant concentrations that exceeded groundwater standards or proposed alternate concentration limits are listed in Table 1. Review of these data does not indicate any unexpected movement of contaminated groundwater. Time-concentration graphs of the contaminants of concern for the groundwater locations listed in Table 1 are included in this report.

Table 1. Shiprock Locations that Exceed Standards

Comparison to UMTRCA Maximum Groundwater Concentration Standards
Laboratory: PARAGON (Fort Collins, CO)
Requisition Index Number (RIN): 08081803
Report Date: 10/27/2008

Analyte	Standard[a]	Site Code	Location	Concentration
Nitrate + Nitrite as Nitrogen	10	SHP01	0608	220
			0610	660
			0614	610
			0615	14
			0618	290
			0735	360
			1009	27
			1089	30
			1104	84
			1105	730
			1114	47
			1115	150
Selenium	0.01	SHP01	0610	0.042
			0614	0.11
			0615	0.18
			0618	0.16
			0622	0.083
			0630	0.057
			0735	0.029
			0792	0.017

Comparison to UMTRCA Maximum Groundwater Concentration Standards
Laboratory: PARAGON (Fort Collins, CO)
Requisition Index Number (RIN): 08081803
Report Date: 10/27/2008

Analyte	Standard[a]	Site Code	Location	Concentration
			0793	0.23
			0798	0.07
			0855	0.044
			1009	0.21
			1089	0.026
			1104	0.018
			1105	0.047
			1115	0.12
Uranium	0.044	SHP01	0608	0.97
			0610	1.7
			0612	0.13
			0614	2.4
			0615	0.93
			0618	2.4
			0619	0.63
			0622	0.24
			0623	0.078
			0626	0.047
			0630	0.069
			0735	0.54
			0736	0.16
			0792	3.1
			0793	0.96
			0798	1.6
			0850	0.12
			0852	0.087
			0855	0.15
			0856	0.064
			0857	0.15
			1009	0.38
			1089	0.94
			1104	0.97
			1105	3.2
			1114	0.24
			1115	0.58
Nitrate + Nitrite as Nitrogen	10	SHP02	0600	100
			0602	28
			0603	1500
			0727	180
			0728	500
			0730	190
			0731	120
			0812	1500
			0813	2500
			0814	980
			0815	800
			0816	61
			0817	390
			0818	1000
			0819	77
			0826	63
			0827	19
			0830	240
			0833	490
			0835	97
			0836	15
			0838	170
			0841	920
			0843	27

Comparison to UMTRCA Maximum Groundwater Concentration Standards
Laboratory: PARAGON (Fort Collins, CO)
Requisition Index Number (RIN): 08081803
Report Date: 10/27/2008

Analyte	Standard[a]	Site Code	Location	Concentration
			0844	710
			0846	47
			1007	740
			1057	1800
			1059	370
			1060	320
			1068	270
			1070	780
			1071	1700
			1072	1500
			1073	1500
			1074	1500
			1078	810
			1079	67
			1091	1700
			1092	2900
			1093	2900
			1095	1900
			1096	630
			DM7	240
Selenium	0.01	SHP02	0603	0.09
			0726	0.013
			0731	0.021
			0812	5.3
			0813	0.058
			0814	1.9
			0815	0.048
			0816	0.026
			0818	2.6
			0818	2.1
			0819	0.054
			0827	0.018
			0830	0.029
			0833	0.43
			0835	0.3
			0836	0.11
			0837	0.11
			0838	0.51
			0841	3.3
			0843	0.21
			0844	1.8
			0846	0.34
			0848	0.044
			1007	0.1
			1057	0.24
			1059	0.027
			1060	1.7
			1068	0.014
			1070	2.6
			1071	1
			1073	2.3
			1074	0.27
			1078	3
			1079	0.26
			1091	1.1
			1092	0.41
			1093	0.42
			1095	0.27
			1096	2.3

Comparison to UMTRCA Maximum Groundwater Concentration Standards
Laboratory: PARAGON (Fort Collins, CO)
Requisition Index Number (RIN): 08081803
Report Date: 10/27/2008

Analyte	Standard[a]	Site Code	Location	Concentration
			1096	2.7
			1120	0.027
			1122	0.072
Uranium	0.044	SHP02	0600	0.71
			0602	0.66
			0725	0.082
			0727	0.29
			0728	0.38
			0812	0.14
			0813	0.12
			0814	0.1
			0815	0.38
			0817	3.9
			0818	0.14
			0819	0.98
			0820	0.093
			0826	3.6
			0827	1
			0833	0.23
			0835	0.08
			0836	0.044
			0841	0.14
			0844	0.15
			1007	2.4
			1057	0.045
			1059	0.059
			1060	0.096
			1068	0.69
			1070	0.089
			1071	0.15
			1072	0.14
			1073	0.068
			1074	1.9
			1078	0.14
			1091	0.11
			1092	0.098
			1093	0.11
			1095	0.066
			1096	0.094
			1120	0.052
			1122	0.046
			DM7	0.046

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

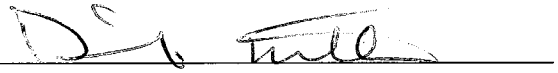
Floodplain surface water analyte concentrations were compared to statistical benchmark values derived using data from location 0898, which is upstream of the site on the San Juan River. As shown in Table 2, benchmark values were not exceeded for the point-of-exposure river location 0940 or locations 0897 and 1205 which are adjacent to the site.

Table 2. Floodplain River Locations

Analyte	Benchmark (mg/L)	0897 (mg/L)	0940 (mg/L)	1205 (mg/L)
Ammonia-N	0.1	ND[a]	ND[a]	ND[a]
Manganese	0.0396	0.091	0.073	0.083
Nitrate-N	1.0	2.0	0.29	0.31
Selenium	0.0019	0.0047	0.0008	0.0007
Strontium	1.2	0.74	0.73	0.71
Sulfate	220	190	130	120
Uranium	0.056	0.0023	0.0017	0.0016

[a]ND = Not Detected.

As shown in Table 2, the manganese benchmark values were exceeded for the point-of-exposure river location 0940, and locations 0897 and 1205 which are adjacent to the site. The nitrate and selenium benchmark values were exceeded for location 0897. Samples from these locations were submitted for analysis unfiltered when typically the samples are filtered because the turbidity exceeds 10 nepholometric turbidity unit (NTU). The analysis of unfiltered samples may have contributed to the increase concentrations observed.



David Miller
Site Lead, S.M. Stoller

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Date

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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**	September 8-18, 2008
Date(s) of Verification	February 12, 2009	**Name of Verifier**	Steve Donivan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures?	Yes	
List other documents, SOPs, instructions.		Work Order Letter dated August 18, 2008
2. Were the sampling locations specified in the planning documents sampled?	No	Twelve surface water locations and 15 wells were dry; well 0622 was purged dry prior to sample collection. At the direction of the project manager, well 0820 was sampled instead of 0822.
3. Was a pre-trip calibration conducted as specified in the above-named documents?	Yes	Pre-trip calibration was performed on September 8, 2008.
4. Was an operational check of the field equipment conducted daily?	Yes	
Did the operational checks meet criteria?	Yes	
5. Were the number and types (alkalinity, temperature, specific conductance, pH, turbidity, DO, ORP) of field measurements taken as specified?	Yes	
6. Was the category of the well documented?	Yes	
7. Were the following conditions met when purging a Category I well:		
Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	No	Water level criteria was not met for wells 0600, 0727, 0817, and DM7.
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	No	Turbidity criteria was not met for wells 0623, 0848, 0850, 0852, 1068.
Was the flow rate less than 500 mL/min?	Yes	
If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	NA	

Water Sampling Field Activities Verification Checklist (continued)

	Response (Yes, No, NA)	Comments
8. Were the following conditions met when purging a Category II well:		
Was the flow rate less than 500 mL/min?	Yes	
Was one pump/tubing volume removed prior to sampling?	Yes	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	Seven duplicate samples were collected.
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	No	Equipment blanks were not 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 (FDCS) report?	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	Yes	
15. Were the number and types of samples collected as specified?	Yes	
16. Were chain of custody records completed and was sample custody maintained?	Yes	
17. Are field data sheets signed and dated by both team members (hardcopies) or are dates present for the “Date Completed” fields (FDCS)?	Yes	
18. Was all other pertinent information documented on the field data sheets?	Yes	
19. Was the presence or absence of ice in the cooler documented at every sample location?	No	The presence of ice was not noted at locations 1109, 1110, and 1114.
20. Were water levels measured at the locations specified in the planning documents?	Yes	

Laboratory Performance Assessment

General Information

Report Number (RIN):	08081803
Sample Event:	September 9-18, 2008
Site(s):	Shiprock, New Mexico
Laboratory:	Paragon Analytics, Fort Collins, Colorado
Work Order No.:	0809171, 0809172, 0809173, 0809174
Analysis:	Metals and Wet Chemistry
Validator:	Steve Donivan
Review Date:	October 27, 2008

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

Table 3. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Ammonia as N	WCH-A-005	MCAWW 350.1	MCAWW 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	MCAWW 353.2	MCAWW 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 4. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 4. Data Qualifier Summary

Sample Number	Location	Analyte	Flag	Reason
0809171-25	0853	Selenium	U	Less than 5 times the method blank
0809172-16	1118	Manganese	U	Less than 5 times the calibration blank
0809172-25	0662	Manganese	U	Less than 5 times the calibration blank
0809172-25	0662	Selenium	U	Less than 5 times the method blank
0809172-31	0731	Nitrate + Nitrite as N	J	Matrix spike failure
0809173-21	0846	Potassium	J	Matrix spike failure
0809173-27	1058	Selenium	U	Less than 5 times the method blank
0809174-15	1122	Potassium	J	Matrix spike failure
0809174-21	MW1	Selenium	U	Less than 5 times the method blank

Sample Shipping/Receiving

Paragon Analytics in Fort Collins, Colorado, received 114 water samples on September 23, 2008, accompanied by Chain of Custody (COC) forms. The COC forms were checked to confirm that all of the samples were listed on the forms and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents including the COC forms had no errors or omissions with the following exceptions. The sample from location 0725 had a ticket number entered as GJQ 426, it should have been GJQ 428. The sample from location 0619 had a ticket entered as GJZ 808, it should have been GJZ 908. The receiving documentation included copies for the shipping labels listing the air waybill numbers.

Preservation and Holding Times

The sample shipments were received intact with the temperatures inside the iced cooler between 0.6 °C and 0.8 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses with the following exceptions. The acidified aliquots for samples 0608, 0610, 0827, and 1110 were received with a pH greater than two. The laboratory acidified and equilibrated these aliquots to a pH less than two prior to analysis. All samples were analyzed within the required holding time.

Laboratory Instrument Calibration

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

Method MCAWW 160.1
There are no initial or continuing calibration requirements associated with the determination of total dissolved solids.

Method MCAWW 350.1
Calibrations were performed for ammonia as N on September 25, 26, and 29, 2008, 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 16 verification checks. All calibration checks met the acceptance criteria.

Method MCAWW 353.2
Calibrations were performed for nitrate + nitrite as N on September 30 and October 1, 2008, 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 31 verification checks. All calibration checks met the acceptance criteria.

Method SW-846 6010B
Calibrations for calcium, magnesium, manganese, potassium, sodium, and strontium were performed on September 30 and October 2, 7, and 8, 2008, using single point calibration. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 23 verification checks. All calibration checks met the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit (PQL) and all results were within the acceptance range.

Method SW-846 6020A
Calibrations were performed for selenium on September 30 and October 2, 6, 7, and 9, 2008; and for uranium on September 30 and October 2, 6, and 9, 2008 using seven calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 29 verification checks for selenium and 39 checks for uranium. All calibration checks met the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the PQL and all results were within the acceptance range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries associated with requested analytes were stable and within acceptable ranges.

Method SW-846 9056
Calibrations were performed for chloride and sulfate on August 18, 2008, using five calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 22 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 method blank and initial and continuing calibration blank (CCB) results associated with the samples were below the PQL with the exception of several chloride and sulfate CCBs. The samples associated with these CCBs had chloride and sulfate concentrations greater than 10 times the blanks. In cases where a blank concentration exceeds the MDL, the associated sample results are qualified with a “U” flag (not detected) when the sample result is greater than the MDL but less than 5 times the blank concentration.

For magnesium, manganese, and strontium, some calibration blanks were negative and the absolute values were greater than the MDL but less than the PQL. All magnesium and strontium results were greater than 5 times the MDL and no results are qualified.

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

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

Matrix Spike Analysis

Matrix spike and matrix spike duplicate (MS/MSD) pairs were analyzed for all analytes as a measure of method performance in the sample matrix. The MS data are not evaluated when the concentration of the unspiked sample is greater than 4 times the spike concentration. The spike recoveries met the recovery criteria for all analytes evaluated with the following exceptions.

The nitrate MS recovery for sample 0731 did not meet the acceptance criteria. The sample nitrate result is qualified with a "J" flag as an estimated value.

The potassium MS recovery for sample 0846 did not meet the acceptance criteria. The sample potassium result is qualified with a "J" flag as an estimated value.

The potassium MS recovery for sample 1122 did not meet the acceptance criteria. The sample potassium result is qualified with a "J" flag as an estimated value.

Laboratory Replicate Analysis

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

Laboratory Control Samples (LCSs)

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

Metals Serial Dilution

Serial dilutions were prepared and analyzed for the metals analyses to monitor chemical or physical interferences in the sample matrix. Serial dilution data are evaluated when the concentration of the undiluted sample is greater than 100 times the PQL for ICP-MS or greater than 50 times the PQL for ICP. All evaluated serial dilution data were acceptable with the following exceptions. For sample 0846, the serial dilution analysis did not meet the acceptance criteria for potassium. The sample result is qualified with a "J" flag as an estimated value.

Detection Limits/Dilutions

Samples were diluted in a consistent and acceptable manner when required. The samples were

diluted prior to analysis of uranium to reduce interferences. The required detection limits were achieved for all analytes.

Completeness

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

Chromatography Peak Integration

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

Electronic Data Deliverable (EDD) File

The EDD files arrived on October 31, 2008. 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.

Anion/Cation Balance

The anion/cation balance is used to determine if major ion concentrations have been quantified correctly. The total anions should balance with (be equal to) the total cations when expressed in milliequivalents per liter (meq/L). Table 5 shows the total cation and anion results from this event and the charge balance, which is an RPD calculation. Typically, a charge balance difference of 10 percent is considered acceptable.

Table 5. Comparison of Major Anions and Cations

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP01	0501	5.13	5.84	6.49
SHP01	0608	146.96	150.77	1.28
SHP01	0610	239.26	253.02	2.79
SHP01	0612	17.32	18.54	3.40
SHP01	0614	309.47	392.34	11.81
SHP01	0615	94.28	98.29	2.09
SHP01	0618	295.79	332.50	5.84
SHP01	0619	152.23	194.14	12.10
SHP01	0622	91.30	107.99	8.37
SHP01	0623	59.83	27.89	36.41
SHP01	0626	63.56	80.13	11.54
SHP01	0628	64.69	72.34	5.58
SHP01	0630	55.02	65.40	8.61
SHP01	0734	56.53	65.94	7.68
SHP01	0735	363.02	378.64	2.11

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP01	0736	110.50	141.36	12.26
SHP01	0782R	7.12	7.31	1.30
SHP01	0783R	12.18	11.47	3.02
SHP01	0784	9.61	10.13	2.61
SHP01	0792	483.25	618.76	12.30
SHP01	0793	78.08	88.18	6.08
SHP01	0797	108.29	117.01	3.87
SHP01	0798	368.55	352.78	2.19
SHP01	0850	64.92	73.49	6.19
SHP01	0852	60.19	72.01	8.94
SHP01	0853	12.53	12.98	1.75
SHP01	0855	98.53	117.58	8.82
SHP01	0856	59.45	69.69	7.93
SHP01	0857	29.56	30.81	2.07
SHP01	0887	5.18	5.57	3.68
SHP01	0897	6.57	7.44	6.16
SHP01	0898	4.92	5.04	1.24
SHP01	0939	6.01	6.23	1.82
SHP01	0940	5.32	5.73	3.75
SHP01	0956	5.33	5.56	2.13
SHP01	0965	5.23	5.44	1.93
SHP01	1009	81.05	66.99	9.49
SHP01	1089	182.41	163.30	5.53
SHP01	1104	161.20	146.01	4.94
SHP01	1105	395.71	376.81	2.45
SHP01	1109	29.71	32.39	4.30
SHP01	1110	262.91	296.69	6.04
SHP01	1114	37.66	37.83	0.22
SHP01	1115	87.13	88.37	0.71
SHP01	1117	5.45	6.40	8.00
SHP01	1118	117.14	142.95	9.92
SHP01	1203	5.18	5.43	2.34
SHP02	0600	233.41	304.88	13.28
SHP02	0602	398.80	447.84	5.79
SHP02	0603	168.57	177.11	2.47
SHP02	0662	35.86	47.89	14.37
SHP02	0725	77.84	88.33	6.31
SHP02	0726	101.65	139.69	15.76
SHP02	0727	255.80	287.24	5.79
SHP02	0728	219.28	236.11	3.70
SHP02	0730	53.96	57.74	3.38
SHP02	0731	109.31	127.07	7.51
SHP02	0812	416.52	550.73	13.88
SHP02	0813	413.62	451.95	4.43
SHP02	0814	345.82	408.33	8.29
SHP02	0815	378.06	437.54	7.29
SHP02	0816	63.95	76.32	8.82
SHP02	0817	341.37	394.51	7.22

Site Code	Location	Cations (meq/L)	Anions (meq/L)	Charge Balance (%)
SHP02	0818	380.54	416.22	4.48
SHP02	0819	281.70	309.18	4.65
SHP02	0820	285.72	384.24	14.71
SHP02	0826	347.76	392.00	5.98
SHP02	0827	224.21	256.58	6.73
SHP02	0830	45.91	58.90	12.38
SHP02	0833	221.54	252.42	6.51
SHP02	0835	93.59	107.68	7.00
SHP02	0836	62.38	69.39	5.32
SHP02	0837	53.86	51.07	2.66
SHP02	0838	80.63	94.77	8.06
SHP02	0841	316.81	442.14	16.51
SHP02	0843	43.70	47.92	4.60
SHP02	0844	255.01	292.00	6.76
SHP02	0846	54.50	59.50	4.39
SHP02	0848	325.74	420.78	12.73
SHP02	0889	533.67	672.72	11.53
SHP02	0949	65.22	72.44	5.25
SHP02	1007	312.32	369.70	8.41
SHP02	1057	253.35	261.80	1.64
SHP02	1058	117.63	142.84	9.68
SHP02	1059	195.25	258.93	14.02
SHP02	1060	137.33	189.18	15.88
SHP02	1068	142.54	153.97	3.86
SHP02	1070	378.22	466.83	10.49
SHP02	1071	380.71	428.49	5.91
SHP02	1072	384.06	457.93	8.77
SHP02	1073	307.19	354.11	7.09
SHP02	1074	302.87	345.15	6.53
SHP02	1078	326.79	418.47	12.30
SHP02	1079	48.42	55.26	6.59
SHP02	1087	226.51	250.49	5.03
SHP02	1088	434.60	588.45	15.04
SHP02	1091	371.76	417.87	5.84
SHP02	1092	315.40	350.51	5.27
SHP02	1093	332.90	337.30	0.66
SHP02	1095	279.03	298.53	3.38
SHP02	1096	310.38	403.34	13.02
SHP02	1120	54.17	64.77	8.91
SHP02	1122	48.87	55.25	6.13
SHP02	1215	879.91	894.15	0.80
SHP02	DM7	222.23	298.77	14.69
SHP02	MW1	163.29	214.51	13.56

The charge balance value for most locations was less than ten percent. Sixteen locations where the data were not qualified had charge balance values greater than ten percent. Further review of the data for these locations did not indicate any errors in the data.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Report

RIN: 08081803 **Lab Code:** PAR **Validator:** _____ **Validation Date:** 10/27/2008

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

# of Samples: 114 **Matrix:** WATER **Requested Analysis Completed:** Yes

Chain of Custody

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

Sample

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

Select Quality Parameters

☑ Holding Times	All analyses were completed within the applicable holding times.
☑ Detection Limits	The reported detection limits are equal to or below contract requirements.
☐ Field/Trip Blanks	
☑ Field Duplicates	There were 7 duplicates evaluated.

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 08081803 **Lab Code:** PAR **Date Due:** 10/21/2008

Matrix: Water **Site Code:** SHP **Date Completed:** 10/22/2008

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
CALCIUM	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	101.0	106.0	110.0	1.0	104.0	5.0	101.0
CALCIUM	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	107.0	111.0	101.0	4.0	99.0	1.0	109.0
CALCIUM	10/07/2008	0.0000	1.0000	OK	OK	OK	OK	OK	97.0	93.0	105.0	5.0	106.0	4.0	102.0
CALCIUM	10/08/2008	0.0000	1.0000	OK	OK	OK	OK	OK	103.0	114.0	169.0	5.0	99.0	1.0	114.0
CALCIUM	10/08/2008							OK	103.0	19.0	77.0	4.0	100.0	6.0	113.0
MAGNESIUM	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	101.0	101.0	101.0	0.0	104.0	4.0	98.0
MAGNESIUM	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	105.0	104.0	102.0	2.0	101.0	0.0	103.0
MAGNESIUM	10/07/2008	0.0000	1.0000	OK	OK	OK	OK	OK	99.0	105.0	104.0	0.0	106.0	3.0	98.0
MAGNESIUM	10/08/2008	0.0000	1.0000	OK	OK	OK	OK	OK	102.0	111.0	121.0	2.0	101.0	0.0	105.0
MAGNESIUM	10/08/2008							OK	102.0	83.0	108.0	5.0	102.0	3.0	103.0
MAGNESIUM	10/08/2008							OK	103.0				103.0		105.0
MANGANESE	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	96.0	94.0	94.0	1.0	92.0	0.0	96.0
MANGANESE	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	104.0	100.0	97.0	3.0	94.0	7.0	107.0
MANGANESE	10/07/2008	0.0000	1.0000	OK	OK	OK	OK	OK	93.0	90.0	94.0	3.0	94.0	8.0	94.0
MANGANESE	10/08/2008	0.0000	1.0000	OK	OK	OK	OK	OK	94.0	90.0	97.0	3.0	88.0	11.0	102.0
MANGANESE	10/08/2008							OK	94.0	85.0	88.0	4.0	89.0		99.0
MANGANESE	10/08/2008								94.0				88.0		100.0
POTASSIUM	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	96.0	104.0	102.0	2.0		5.0	83.0

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 08081803 **Lab Code:** PAR **Date Due:** 10/21/2008

Matrix: Water **Site Code:** SHP **Date Completed:** 10/22/2008

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
POTASSIUM	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	98.0	107.0	108.0	1.0		3.0	87.0
POTASSIUM	10/07/2008	0.0000	1.0000	OK	OK	OK	OK	OK	94.0	120.0	120.0	0.0		2.0	83.0
POTASSIUM	10/08/2008	0.0000	1.0000	OK	OK	OK	OK	OK	93.0	127.0	129.0	1.0		11.0	89.0
POTASSIUM	10/08/2008							OK	93.0	125.0	131.0	4.0		16.0	89.0
SELENIUM	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	90.0	120.0	81.0	1.0	101.0		
SELENIUM	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	100.0	90.0	94.0	3.0	95.0		81.0
SELENIUM	10/06/2008	0.0000	1.0000	OK	OK	OK	OK	OK	97.0	120.0	81.0	1.0	100.0	6.0	89.0
SELENIUM	10/07/2008	0.0000	1.0000	OK	OK	OK	OK	OK	91.0	90.0	94.0	3.0	100.0	7.0	86.0
SELENIUM	10/07/2008							OK	100.0	82.0	82.0	0.0	95.0	8.0	89.0
SELENIUM	10/07/2008							OK	106.0	113.0	116.0	1.0			79.0
SELENIUM	10/07/2008							OK	101.0						
SELENIUM	10/09/2008	0.0000	1.0000	OK	OK	OK	OK	OK	96.0	89.0	108.0	3.0	103.0	10.0	75.0
SODIUM	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	95.0	104.0	101.0	2.0		10.0	86.0
SODIUM	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	98.0	106.0	105.0	0.0		7.0	89.0
SODIUM	10/07/2008	0.0000	1.0000	OK	OK	OK	OK	OK	97.0	100.0	102.0	1.0		9.0	84.0
SODIUM	10/08/2008	0.0000	1.0000	OK	OK	OK	OK	OK	96.0	104.0	117.0	2.0		5.0	90.0
SODIUM	10/08/2008							OK	96.0	78.0	116.0	5.0			89.0
SODIUM	10/08/2008								97.0						91.0

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 08081803 **Lab Code:** PAR **Date Due:** 10/21/2008

Matrix: Water **Site Code:** SHP **Date Completed:** 10/22/2008

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
STRONTIUM	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	100.0	103.0	99.0	1.0	99.0	2.0	118.0
STRONTIUM	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	98.0	97.0	96.0	0.0	93.0	1.0	117.0
STRONTIUM	10/07/2008	0.0000	1.0000	OK	OK	OK	OK	OK	94.0	94.0	94.0	0.0	95.0	1.0	110.0
STRONTIUM	10/08/2008	0.0000	1.0000	OK	OK	OK	OK	OK	94.0	94.0	110.0	2.0	92.0	4.0	118.0
STRONTIUM	10/08/2008							OK	94.0	66.0	97.0	3.0	92.0		116.0
URANIUM	09/30/2008	0.0000	1.0000	OK	OK	OK	OK	OK	100.0	106.0	105.0	1.0	101.0	5.0	117.0
URANIUM	10/02/2008	0.0000	1.0000	OK	OK	OK	OK	OK	101.0	103.0	103.0	0.0	101.0		108.0
URANIUM	10/06/2008	0.0000	1.0000	OK	OK	OK	OK	OK	97.0	104.0	98.0	4.0	103.0	2.0	106.0
URANIUM	10/06/2008							OK	96.0	97.0	95.0	2.0		7.0	106.0
URANIUM	10/09/2008	0.0000	1.0000	OK	OK	OK	OK	OK	101.0	96.0	102.0	2.0	103.0	10.0	110.0
URANIUM	10/09/2008							OK	101.0	101.0	105.0	1.0		3.0	
URANIUM	10/09/2008							OK	99.0						

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 08081803 **Lab Code:** PAR **Date Due:** 10/21/2008

Matrix: Water **Site Code:** SHP **Date Completed:** 10/22/2008

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	09/25/2008	0.000	1.0000	OK	OK	OK	OK	OK	97	114	119	4	
AMMONIA AS N	09/25/2008							OK	100	101	101	0	
AMMONIA AS N	09/26/2008	-0.004	0.9999	OK	OK	OK	OK	OK	96	102	110	8	
AMMONIA AS N	09/26/2008							OK	97	103	103	1	
AMMONIA AS N	09/29/2008	-0.024	0.9997	OK	OK	OK	OK	OK	99	101	101	0	
AMMONIA AS N	09/29/2008							OK	97	76	83	9	
AMMONIA AS N	09/29/2008							OK	98	74.0	77.0	4.00	
CHLORIDE	09/25/2008	0.000	1.0000	OK	OK	OK	OK	OK	105	107	103	1	
CHLORIDE	09/25/2008							OK	105	109	106	2	
CHLORIDE	09/26/2008	0.000	1.0000	OK	OK	OK	OK	OK	103	103	100	0	
CHLORIDE	09/26/2008							OK	107	100	108	0	
CHLORIDE	09/26/2008									103			
CHLORIDE	09/26/2008									108	108	0	
CHLORIDE	09/27/2008	0.000	1.0000	OK	OK	OK	OK			103			
CHLORIDE	09/29/2008	0.000	1.0000	OK	OK	OK	OK	OK	103	100	107	1	
CHLORIDE	09/29/2008							OK	103	105.0	107	1	

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 08081803 **Lab Code:** PAR **Date Due:** 10/21/2008

Matrix: Water **Site Code:** SHP **Date Completed:** 10/22/2008

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
CHLORIDE	09/29/2008								103	106			
CHLORIDE	09/29/2008								103	105			
NITRATE/NITRITE AS N	09/30/2008	0.005	0.9999	OK	OK	OK	OK	OK	99	118	132	4	
NITRATE/NITRITE AS N	09/30/2008							OK	99	104	102	1	
NITRATE/NITRITE AS N	09/30/2008							OK	97	121	122	0	
NITRATE/NITRITE AS N	09/30/2008							OK	103				
NITRATE/NITRITE AS N	10/01/2008	0.000	1.0000	OK	OK	OK	OK	OK	101	123	101	5	
NITRATE/NITRITE AS N	10/01/2008							OK	103	82	87	1	
NITRATE/NITRITE AS N	10/01/2008							OK	101	98	92	2	
NITRATE/NITRITE AS N	10/01/2008							OK	100				
SULFATE	09/25/2008	0.000	1.0000	OK	OK	OK	OK	OK	103	110	107	1	
SULFATE	09/25/2008							OK	104	114	107	3	
SULFATE	09/26/2008							OK	102	102	106	0	
SULFATE	09/26/2008							OK	107	106	112	1	
SULFATE	09/26/2008									107			
SULFATE	09/26/2008									115	112	1	

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 08081803 **Lab Code:** PAR **Date Due:** 10/21/2008

Matrix: Water **Site Code:** SHP **Date Completed:** 10/22/2008

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	09/27/2008	0.000	1.0000	OK	OK	OK	OK			108			
SULFATE	09/29/2008	0.000	1.0000	OK	OK	OK	OK	OK	105	112	110	0	
SULFATE	09/29/2008								105	107	117	4	
SULFATE	09/29/2008								105	111			
SULFATE	09/29/2008							OK	105	101	100.0		
SULFATE	09/29/2008							OK	103				

Sampling Quality Control Assessment

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

Sampling Protocol

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

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

- Wells 0610, 0730, 0734, 0797, 0857, 1058, 1059, 1074, and 1120 were classified as Category II.
- Wells 0812, 0814, 0820, 0846, 1007, 1060, 1072, 1073, and MW1 were classified as Category III.
- Turbidity requirements were not met for wells 0623, 0848, 0850, 0852, 1068.

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

Surface locations 0501, 0887, 0897, 0939, 0940, 0949, 0956, 0965, 1203, 1205 had turbidity values greater than ten NTU. These samples were not filtered at the direction of the project manager.

Equipment Blank Assessment

An equipment blank may be collected after completion of decontamination and prior to collection of environmental samples when using non-dedicated sampling equipment. This blank is useful in documenting adequate decontamination of sampling equipment. An equipment blank was not collected during this sampling event because all samples were collected with a peristaltic pump and new or dedicated tubing, or a dedicated bladder pump.

Field Duplicate Assessment

Field duplicate samples are collected and analyzed as an indication of overall precision of the measurement process. The precision observed includes both field and laboratory precision and has more variability than laboratory duplicates, which measure only laboratory performance. Duplicate samples were collected from locations 01-0619, 01-0623, 01-1110, 02-0818, 02-1079, 02-1087, and 02-1096. The U.S. Environmental Protection Agency recommended laboratory duplicate criterion is less than 20 percent relative difference for results that are greater than 5 times the PQL. The selenium relative difference was 70 percent for duplicates from location 01-0619. These results were below 5 times the PQL because of the dilution performed. The duplicate results were acceptable for all analytes with the following exceptions.

The nitrate duplicate results from locations 01-1110 and 02-1096; sulfate duplicate results from location 01-0623; and selenium duplicate results from location 02-0818 had RPD greater than 20 percent. These results are qualified with a “J” flag as estimated values.

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 08081803 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 10/27/2008

Duplicate: 2659 **Sample:** 0619

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	0.28			0.17					MG/L
CALCIUM	320000			320000			0		UG/L
CHLORIDE	260			260			0		MG/L
MAGNESIUM	520000			530000			1.90		UG/L
MANGANESE	3800			3700			2.67		UG/L
NITRATE/NITRITE AS N	0.01	U		0.037					MG/L
POTASSIUM	76000			70000			8.22		UG/L
SELENIUM	1.5			0.72			70.27		UG/L
SODIUM	2100000			2200000			4.65		UG/L
STRONTIUM	8500			8100			4.82		UG/L
SULFATE	8300			8800			5.85		MG/L
URANIUM	690			630			9.09		UG/L

Duplicate: 2660 **Sample:** 0623

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	0.1	U		0.13					MG/L
CALCIUM	240000			240000			0		UG/L
CHLORIDE	67			88					MG/L
MAGNESIUM	65000			65000			0		UG/L
MANGANESE	1500			1500			0		UG/L
NITRATE/NITRITE AS N	0.01	U		0.01	U				MG/L
POTASSIUM	21000			22000			4.65		UG/L
SELENIUM	2.6			2.3			12.24		UG/L
SODIUM	960000			990000			3.08		UG/L
STRONTIUM	8900			8500			4.60		UG/L
SULFATE	780			2900			115.22		MG/L
URANIUM	84			78			7.41		UG/L

Duplicate: 2661 **Sample:** 1110

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	13			13			0		MG/L
CALCIUM	440000			420000			4.65		UG/L
CHLORIDE	510			490			4.00		MG/L
MAGNESIUM	1500000			1500000			0		UG/L
MANGANESE	2500			2400			4.08		UG/L
NITRATE/NITRITE AS N	300			180			50.00		MG/L

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 08081803 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 10/27/2008

Duplicate: 2661 **Sample:** 1110

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
POTASSIUM	130000			120000			8.00		UG/L
SELENIUM	420			420			0		UG/L
SODIUM	2600000			2500000			3.92		UG/L
STRONTIUM	11000			11000			0		UG/L
SULFATE	12000			12000			0		MG/L
URANIUM	1500			1500			0		UG/L

Duplicate: 2662 **Sample:** 1087

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	220			200			9.52		MG/L
CALCIUM	440000			430000			2.30		UG/L
CHLORIDE	380			370			2.67		MG/L
MAGNESIUM	1500000			1500000			0		UG/L
MANGANESE	1400			1400			0		UG/L
NITRATE/NITRITE AS N	440			460			4.44		MG/L
POTASSIUM	170000			170000			0		UG/L
SELENIUM	30			31			3.28		UG/L
SODIUM	1400000			1400000			0		UG/L
STRONTIUM	9600			9800			2.06		UG/L
SULFATE	9500			9400			1.06		MG/L
URANIUM	620			520			17.54		UG/L

Duplicate: 2664 **Sample:** 1079

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	0.1	U		0.1	U				MG/L
CALCIUM	530000			550000			3.70		UG/L
CHLORIDE	82			81			1.23		MG/L
MAGNESIUM	120000			120000			0		UG/L
MANGANESE	1.8	B		3.9	B				UG/L
NITRATE/NITRITE AS N	67			61			9.38		MG/L
POTASSIUM	9500			9600			1.05		UG/L
SELENIUM	260			250			3.92		UG/L
SODIUM	270000			270000			0		UG/L
STRONTIUM	4900			4900			0		UG/L
SULFATE	2000			2000			0		MG/L

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 08081803 **Lab Code:** PAR **Project:** Shiprock **Validation Date:** 10/27/2008

Duplicate: 2664 **Sample:** 1079

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
URANIUM	26			26			0		UG/L

Duplicate: 2665 **Sample:** 0818

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	91			81			11.63		MG/L
CALCIUM	490000			500000			2.02		UG/L
CHLORIDE	1400			1400			0		MG/L
MAGNESIUM	2200000			2200000			0		UG/L
MANGANESE	2400			2400			0		UG/L
NITRATE/NITRITE AS N	990			1000			1.01		MG/L
POTASSIUM	120000			120000			0		UG/L
SELENIUM	2100			2600			21.28		UG/L
SODIUM	3800000			3600000			5.41		UG/L
STRONTIUM	13000			13000			0		UG/L
SULFATE	14000			14000			0		MG/L
URANIUM	130			140			7.41		UG/L

Duplicate: 2666 **Sample:** 1096

Analyte	Sample Result	Sample Flag	Sample Error	Duplicate Result	Duplicate Flag	Duplicate Error	RPD	RER	Units
AMMONIA AS N	23			23			0		MG/L
CALCIUM	420000			410000			2.41		UG/L
CHLORIDE	1200			1100			8.70		MG/L
MAGNESIUM	1300000			1300000			0		UG/L
MANGANESE	200			180			10.53		UG/L
NITRATE/NITRITE AS N	630			780			21.28		MG/L
POTASSIUM	90000			88000			2.25		UG/L
SELENIUM	2300			2700			16.00		UG/L
SODIUM	4100000			4100000			0		UG/L
STRONTIUM	10000			9900			1.01		UG/L
SULFATE	15000			15000			0		MG/L
URANIUM	94			110			15.69		UG/L

Certification

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

Laboratory Coordinator: Steve Donivan — Date: 3-30-2009

Data Validation Lead: Steve Donivan — Date: 3-30-2009

Attachment 1
Assessment of Anomalous Data

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Potential Outliers Report

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Potential Outliers Report

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

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

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

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

There were 36 potential outlier results identified that were not qualified as estimated values. Four of these results are from surface water locations where the samples were submitted for analysis unfiltered, which may have resulted in the differences observed. The other 32 potential outliers are listed on the Anomalous Data Review Checksheet to be compared to future results.

Five of these results were from location 0838 where all of the analytical results were higher than the historical maximums. All of these results were uniformly high and the charge balance was less than ten percent. There is no evidence of data errors and the data for this event are acceptable as qualified.

There were 12 results from the March 2008 sampling event that had been previously noted as potentially anomalous. These results were confirmed as acceptable as qualified based on the results from this sampling event. Of these six were from location 0838 where an upward trend in concentration continues.

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 08081803
Comparison: All Historical Data
Report Date: 2/17/2009

Site Code	Location Code	Sample Date	Analyte	Current	Qualifiers		Historical Maximum	Qualifiers		Historical Minimum	Qualifiers		Number of Data Points		Normally Distributed	Statistical Outlier
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0501	09/09/2008	Manganese	0.079			0.02			0.0022	B		9	1	Yes (log)	No
SHP01	0608	09/09/2008	Calcium	350		F	520			360		F	44	0	Yes	No
SHP01	0608	09/09/2008	Chloride	210		F	525	H	J	230		F	43	0	Yes	No
SHP01	0608	09/09/2008	Magnesium	750		F	2620			860			42	0	No	No
SHP01	0608	09/09/2008	Manganese	2.9		F	9.85			3.2		F	41	0	No	No
SHP01	0608	09/09/2008	Nitrate + Nitrite as Nitrogen	220		F	650		F	260	N	FJ	9	0	Yes	No
SHP01	0608	09/09/2008	Sodium	1200		F	3300			1220			44	0	Yes	No
SHP01	0608	09/09/2008	Strontium	8.1		F	15.8			8.2		F	39	0	No	No
SHP01	0608	09/09/2008	Sulfate	6200		F	15400			6900		F	45	0	No	No
SHP01	0608	09/09/2008	Uranium	0.97		F	3.73			1.2		F	46	0	Yes (log)	No
SHP01	0610	09/09/2008	Manganese	0.52		FQ	3.71		L	1.2		FQ	19	0	Yes	No
SHP01	0612	09/10/2008	Potassium	6.4		F	31.6			6.7	EN	F	11	0	Yes (log)	No
SHP01	0615	09/09/2008	Calcium	540		F	534			297			36	0	Yes	No
SHP01	0615	09/09/2008	Chloride	91		F	1034			216			36	0	Yes	No
SHP01	0615	09/09/2008	Magnesium	460		F	3800			840			36	0	Yes	No
SHP01	0615	09/09/2008	Manganese	0.48		F	9.75			0.52		F	30	0	No	No
SHP01	0615	09/09/2008	Nitrate + Nitrite as Nitrogen	14		F	1200		F	96		F	8	0	Yes	No
SHP01	0615	09/09/2008	Sodium	630		F	6900			1100		F	36	0	Yes	No

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SHP01	0615	09/09/2008	Strontium	6		F	17		F	6.3		F	30	0	Yes	No
SHP01	0615	09/09/2008	Sulfate	4300		F	30868			6136			36	0	Yes	No
SHP01	0615	09/09/2008	Uranium	0.93		F	4.8		F	1.3018			36	0	Yes	No
SHP01	0618	09/09/2008	Ammonia Total as N	60		F	54		F	27			16	0	No	No
SHP01	0622	09/10/2008	Sodium	1300		F	3756			1400		F	5	0	Yes	No
SHP01	0626	09/11/2008	Magnesium	49		F	938			54		F	26	0	No	No
SHP01	0630	09/11/2008	Manganese	2.7		F	0.94			0.11			18	0	Yes	Yes
SHP01	0734	09/11/2008	Magnesium	110		FQ	928		F	150		FQ	22	0	Yes	No
SHP01	0734	09/11/2008	Uranium	0.041		FQ	0.528		L	0.056			26	0	No	No
SHP01	0735	09/08/2008	Ammonia Total as N	25		F	22		F	3.8		JF	10	0	Yes	No
SHP01	0735	09/08/2008	Calcium	550		F	520		F	46		F	29	0	Yes	No
SHP01	0735	09/08/2008	Sodium	4400		F	4100			313		F	29	0	Yes (log)	Yes
SHP01	0735	09/08/2008	Strontium	15		F	14		F	0.908		F	28	0	Yes	No
SHP01	0797	09/18/2008	Calcium	620		FQ	460		FQ	42		F	15	0	No	No
SHP01	0797	09/18/2008	Chloride	310		FQ	210		FQ	16.7		F	15	0	No	No
SHP01	0797	09/18/2008	Magnesium	140		FQ	110		F	10.9		F	15	0	No	No
SHP01	0797	09/18/2008	Potassium	14		FQ	12		F	1.84		F	15	0	Yes (log)	No
SHP01	0797	09/18/2008	Sodium	1500		FQ	1300		FQ	240		QF	15	0	No	No

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SHP01	0797	09/18/2008	Strontium	10		FQ	7.1		F	0.834		F	15	0	No	No
SHP01	0797	09/18/2008	Sulfate	5200		FQ	4300		FQ	427		L	15	0	No	No
SHP01	0797	09/18/2008	Uranium	0.032		FQ	0.029		FQ	0.0083		QF	15	0	Yes (log)	Yes
SHP01	0850	09/17/2008	Calcium	310		FQ	290		F	39.5		F	21	0	Yes	No
SHP01	0850	09/17/2008	Magnesium	68		FQ	55		F	8.64		F	21	0	Yes	No
SHP01	0850	09/17/2008	Potassium	10		FQ	9.9		F	2.52		F	21	0	Yes	No
SHP01	0850	09/17/2008	Strontium	4.3		FQ	3.7		F	0.614		F	21	0	Yes	No
SHP01	0850	09/17/2008	Uranium	0.12		FQ	0.071		F	0.0069		F	21	0	Yes	Yes
SHP01	0853	09/10/2008	Calcium	100		F	466			103			7	0	Yes	No
SHP01	0853	09/10/2008	Chloride	14		F	49.4			15			7	0	Yes	No
SHP01	0853	09/10/2008	Magnesium	31		F	170			36			7	0	Yes	No
SHP01	0853	09/10/2008	Manganese	0.47		F	2.49			0.55		F	6	0	Yes	No
SHP01	0853	09/10/2008	Sodium	77		F	250			110	E	FJ	7	0	Yes	No
SHP01	0853	09/10/2008	Strontium	1.2		F	4.21			1.3	N	F	6	0	Yes	No
SHP01	0853	09/10/2008	Sulfate	420		F	1980			424			7	0	No	No
SHP01	0853	09/10/2008	Uranium	0.041		F	0.224			0.052		F	7	0	Yes	No
SHP01	0855	09/11/2008	Chloride	160		F	119			75.9			9	0	Yes	Yes
SHP01	0855	09/11/2008	Potassium	26		F	21		F	10			9	0	Yes (log)	No

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				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP01	0855	09/11/2008	Sodium	1600		F	1380			880		F	9	0	Yes	No
SHP01	0855	09/11/2008	Strontium	11		F	10.5			6.8		F	8	0	Yes	No
SHP01	0855	09/11/2008	Sulfate	5300		F	3830			3100		F	10	0	Yes	Yes
SHP01	0856	09/11/2008	Manganese	1.7		F	1.51			1.3		F	7	0	Yes	Yes
SHP01	0856	09/11/2008	Strontium	5.1		F	4.9		F	3.84			7	0	No	No
SHP01	0857	09/09/2008	Calcium	150		FQ	499			214			7	0	Yes	No
SHP01	0857	09/09/2008	Chloride	59		FQ	110		F	64.1			7	0	Yes	No
SHP01	0857	09/09/2008	Magnesium	110		FQ	309			170			7	0	Yes	No
SHP01	0857	09/09/2008	Manganese	1.5		FQ	5.06			2.4		F	7	0	Yes	No
SHP01	0857	09/09/2008	Sodium	270		FQ	586			370		F	7	0	Yes	No
SHP01	0857	09/09/2008	Strontium	1.8		FQ	5.75			3.1		F	6	0	Yes	No
SHP01	0857	09/09/2008	Sulfate	1400		FQ	3260			1733			8	0	Yes	No
SHP01	0857	09/09/2008	Uranium	0.15		FQ	0.311			0.174			8	0	Yes	No
SHP01	0897	09/09/2008	Manganese	0.091			0.034			0.0017	B		23	3	No	Yes
SHP01	0897	09/09/2008	Nitrate + Nitrite as Nitrogen	2			1.1		J	0.16			9	0	Yes	Yes
SHP01	0897	09/09/2008	Selenium	0.0047			0.0021	B		0.00027			23	3	No	Yes
SHP01	0965	09/09/2008	Manganese	0.094			0.061			0.0032	B		13	0	Yes (log)	Yes
SHP01	1009	09/10/2008	Sulfate	2900		F	4690			3920		L	5	0	Yes	Yes

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SHP01	1104	09/11/2008	Sulfate	6100		F	19000			7400			6	0	Yes	No
SHP01	1114	09/09/2008	Ammonia Total as N	82		F	420			91		F	7	0	Yes	No
SHP01	1114	09/09/2008	Chloride	51		F	346			69			7	0	Yes	No
SHP01	1114	09/09/2008	Sodium	210		F	2800			330		F	7	0	Yes	No
SHP01	1114	09/09/2008	Uranium	0.24		F	1.0482			0.33		F	7	0	Yes	No
SHP01	1117	09/09/2008	Magnesium	11		F	29			12		F	6	0	Yes	No
SHP01	1117	09/09/2008	Uranium	0.0054		F	0.0203			0.0075		F	6	0	Yes	No
SHP01	1118	09/11/2008	Chloride	240			230			168			5	0	No	No
SHP01	1118	09/11/2008	Magnesium	520			510			350			5	0	Yes	No
SHP01	1118	09/11/2008	Potassium	39			37			21			5	0	Yes	No
SHP01	1118	09/11/2008	Sulfate	5900			5600			4100			6	0	Yes	No
SHP01	1203	09/09/2008	Manganese	0.076			0.031			0.0028	B		14	0	Yes (log)	Yes
SHP01	1205	09/09/2008	Manganese	0.083			0.0508			0.00099	B		22	0	Yes (log)	Yes
SHP02	0600	09/17/2008	Calcium	260		F	477			340		FQ	21	0	No	Yes
SHP02	0600	09/17/2008	Chloride	1500		F	680			79			21	0	Yes	Yes
SHP02	0600	09/17/2008	Magnesium	290		F	858			510		FQ	21	0	Yes	Yes
SHP02	0600	09/17/2008	Manganese	0.24		F	1.63		L	0.62			19	0	Yes	No
SHP02	0600	09/17/2008	Sodium	4400		F	4240			2450		L	21	0	Yes	No

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				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	0600	09/17/2008	Uranium	0.71		F	1.57			1.06			22	0	Yes	Yes
SHP02	0602	09/10/2008	Chloride	1100		F	1000		F	610	N		20	0	Yes	Yes
SHP02	0602	09/10/2008	Sodium	3400		F	3230			2120			19	0	No	No
SHP02	0603	09/18/2008	Calcium	760		F	710		F	367			12	0	Yes (log)	Yes
SHP02	0603	09/18/2008	Sulfate	3000		F	15900			3100		F	14	0	Yes	No
SHP02	0603	09/18/2008	Uranium	0.0073		F	0.017			0.0077		F	14	0	Yes	No
SHP02	0725	09/17/2008	Manganese	0.61		F	0.51		F	0.0006	U		17	7	Yes (log)	Yes
SHP02	0726	09/18/2008	Potassium	41		F	34.3			20.7		F	11	0	Yes	No
SHP02	0727	09/18/2008	Chloride	320		F	523			345			13	0	Yes	No
SHP02	0727	09/18/2008	Magnesium	1800		F	2390			1820			11	0	Yes	No
SHP02	0727	09/18/2008	Potassium	100		F	85.8			45.8			10	0	Yes	No
SHP02	0727	09/18/2008	Sodium	1900		F	3130			2190		L	13	0	Yes	No
SHP02	0727	09/18/2008	Uranium	0.29		F	0.546			0.313			17	0	Yes	No
SHP02	0728	09/17/2008	Potassium	150		F	142			41	E	J	13	0	Yes	No
SHP02	0730	09/10/2008	Nitrate + Nitrite as Nitrogen	190		FQ	170		FQ	98		JF	8	0	Yes	No
SHP02	0731	09/18/2008	Chloride	190		F	627			200		FQ	9	0	Yes	No
SHP02	0731	09/18/2008	Magnesium	490		F	856			520			8	0	Yes	No
SHP02	0812	09/11/2008	Chloride	2700		FQ	2400		FQ	2160		L	9	0	Yes	Yes

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				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect		
SHP02	0812	09/11/2008	Sodium	5000		FQ	6360		L	5400		FQ	8	0	Yes	No
SHP02	0812	09/11/2008	Sulfate	17000		FQ	16746			13126			12	0	Yes	No
SHP02	0813	09/11/2008	Chloride	880		F	753			593		F	9	0	Yes	Yes
SHP02	0813	09/11/2008	Manganese	0.85		F	0.416			0.119	E	JF	9	0	Yes	Yes
SHP02	0813	09/11/2008	Sodium	3000		F	2760			2360		F	9	0	Yes	No
SHP02	0814	09/17/2008	Chloride	1100		FQ	1080		L	950		L	6	0	Yes	No
SHP02	0814	09/17/2008	Potassium	140		FQ	130		FQ	84.6		L	6	0	Yes	No
SHP02	0814	09/17/2008	Selenium	1.9		FQ	3.3		L	2.1		FQ	7	0	Yes	No
SHP02	0814	09/17/2008	Uranium	0.1		FQ	0.281			0.12		FQ	9	0	No	No
SHP02	0815	09/18/2008	Potassium	110		F	99		FQ	67.5			6	0	Yes	No
SHP02	0815	09/18/2008	Selenium	0.048		F	0.633		L	0.054		FQ	7	0	Yes	No
SHP02	0815	09/18/2008	Sulfate	16000		F	15300			13200			9	0	Yes	No
SHP02	0815	09/18/2008	Uranium	0.38		F	0.378			0.289			9	0	Yes	No
SHP02	0816	09/17/2008	Potassium	18		F	17.8			11		FQ	8	0	Yes	No
SHP02	0818	09/10/2008	Chloride	1400		F	1300			776			16	0	No	No
SHP02	0818	09/10/2008	Manganese	2.4		F	0.977	E	JF	0.438			9	0	Yes (log)	Yes
SHP02	0818	09/10/2008	Nitrate + Nitrite as Nitrogen	990		F	1900			1400			9	0	Yes	Yes
SHP02	0818	09/10/2008	Sodium	3800		F	3300			2600			9	0	No	No

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SHP02	0818	09/10/2008	Sodium	3600		F	3300			2600			9	0	No	No
SHP02	0819	09/10/2008	Magnesium	1400		F	1770		L	1500		F	7	0	Yes	No
SHP02	0819	09/10/2008	Selenium	0.054		F	0.0132		L	0.003	B	L	9	0	Yes	Yes
SHP02	0820	09/17/2008	Chloride	8700		FQ	8150			1620		L	6	0	Yes	No
SHP02	0826	09/10/2008	Magnesium	2700		F	2500		F	2190			9	0	Yes	No
SHP02	0826	09/10/2008	Potassium	170		F	150		F	102			9	0	Yes	No
SHP02	0826	09/10/2008	Sulfate	16000		F	15078			11500		J	11	0	Yes	No
SHP02	0826	09/10/2008	Uranium	3.6		F	3.5		F	2.38			10	0	Yes	No
SHP02	0827	09/17/2008	Chloride	500		F	473		L	284		L	8	0	No	No
SHP02	0827	09/17/2008	Magnesium	1400		F	1290		L	495		L	8	0	Yes	No
SHP02	0827	09/17/2008	Strontium	11		F	10.3		L	7.75		L	8	0	Yes	No
SHP02	0827	09/17/2008	Sulfate	10000		F	9650		L	3735			12	0	Yes	Yes
SHP02	0827	09/17/2008	Uranium	1		F	0.873		L	0.273			13	0	Yes	No
SHP02	0830	09/11/2008	Nitrate + Nitrite as Nitrogen	240		F	130		F	21		F	8	0	Yes (log)	No
SHP02	0830	09/11/2008	Sulfate	1900		F	1810		L	1444			15	0	Yes	No
SHP02	0833	09/17/2008	Potassium	42		F	41		FQ	12.4	E	J	6	0	Yes (log)	No
SHP02	0835	09/11/2008	Manganese	0.052		F	0.033			0.0001	U	JF	22	11	Yes (log)	Yes
SHP02	0837	09/16/2008	Chloride	52		F	38		F	16.5			8	0	No	No

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SHP02	0837	09/16/2008	Potassium	9		F	8.2		F	5.03			8	0	Yes	No
SHP02	0837	09/16/2008	Selenium	0.11		F	0.099		F	0.0099			9	0	No	No
SHP02	0837	09/16/2008	Sodium	240		F	230		F	143			8	0	Yes	No
SHP02	0837	09/16/2008	Sulfate	2100		F	2000		F	1190			10	0	Yes	No
SHP02	0838	09/16/2008	Chloride	200		F	170		F	12.8			20	0	Yes (log)	Yes
SHP02	0838	09/16/2008	Manganese	0.04		F	0.035		F	0.00035	B		22	6	Yes (log)	Yes
SHP02	0838	09/16/2008	Nitrate + Nitrite as Nitrogen	170		F	130		F	32		F	10	0	Yes	No
SHP02	0838	09/16/2008	Selenium	0.51		F	0.5		F	0.0272			22	0	Yes (log)	Yes
SHP02	0838	09/16/2008	Sodium	480		F	460		F	91.9			20	0	Yes (log)	Yes
SHP02	0838	09/16/2008	Sulfate	3400		F	3100		F	1180			23	0	Yes (log)	Yes
SHP02	0841	09/11/2008	Nitrate + Nitrite as Nitrogen	920		F	810		F	620		F	11	0	Yes	Yes
SHP02	0841	09/11/2008	Sulfate	16000		F	15000		F	8651			28	0	No	No
SHP02	0843	09/16/2008	Calcium	400		F	570			440			7	0	Yes	No
SHP02	0843	09/16/2008	Chloride	58		F	57		FQ	24.7			7	0	No	No
SHP02	0843	09/16/2008	Magnesium	130		F	215			160		FQ	7	0	Yes	No
SHP02	0843	09/16/2008	Manganese	6		F	3.78			1.35			8	0	Yes	No
SHP02	0843	09/16/2008	Strontium	4.4		F	7.32			5.1			7	0	Yes	No
SHP02	0843	09/16/2008	Uranium	0.023		F	0.0324			0.026			9	0	Yes	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 08081803
Comparison: All Historical Data
Report Date: 2/17/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	0844	09/16/2008	Calcium	520		F	510		FQ	448			8	0	Yes	No
SHP02	0844	09/16/2008	Chloride	900		F	780		FQ	54.5			8	0	No	No
SHP02	0844	09/16/2008	Magnesium	1600		F	1500		FQ	355			8	0	No	No
SHP02	0844	09/16/2008	Potassium	59		F	51		FQ	9.7			8	0	No	No
SHP02	0844	09/16/2008	Sodium	2200		F	1900		FQ	397			8	0	No	No
SHP02	0844	09/16/2008	Strontium	12		F	11		FQ	6.23			8	0	No	No
SHP02	0844	09/16/2008	Sulfate	9700		F	8400		FQ	2670			10	0	No	Yes
SHP02	0846	09/11/2008	Nitrate + Nitrite as Nitrogen	47		FQ	33		FQ	15		F	12	0	Yes	Yes
SHP02	0848	09/16/2008	Chloride	1100		FQ	1000		F	218			6	0	No	No
SHP02	0848	09/16/2008	Magnesium	570		FQ	555			445			6	0	Yes	No
SHP02	0848	09/16/2008	Potassium	54		FQ	46		F	16			6	0	No	No
SHP02	0848	09/16/2008	Sodium	5900		FQ	5500		F	1380			6	0	Yes (log)	No
SHP02	0848	09/16/2008	Strontium	20		FQ	17		F	8.07			6	0	No	No
SHP02	0848	09/16/2008	Sulfate	17000		FQ	16000		F	2990			8	0	Yes (log)	No
SHP02	1007	09/11/2008	Chloride	580		FQ	540		FQ	279		L	5	0	Yes	No
SHP02	1007	09/11/2008	Potassium	140		FQ	130		FQ	77.3		L	5	0	Yes	No
SHP02	1057	09/10/2008	Potassium	200		F	407	E	J	210		F	12	0	Yes	No
SHP02	1057	09/10/2008	Sulfate	5500		F	16700		L	6000		F	13	0	Yes	No

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 08081803
Comparison: All Historical Data
Report Date: 2/17/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	1057	09/10/2008	Uranium	0.045		F	0.11		F	0.046		F	13	0	No	No
SHP02	1059	09/10/2008	Chloride	970		FQ	820		FQ	306		L	5	0	Yes	No
SHP02	1059	09/10/2008	Potassium	32		FQ	31		FQ	25.7		L	5	0	Yes	No
SHP02	1070	09/17/2008	Uranium	0.089		F	0.14			0.0903			13	0	Yes	No
SHP02	1071	09/10/2008	Ammonia Total as N	580		F	330			7.6			10	0	Yes	Yes
SHP02	1071	09/10/2008	Magnesium	2300		F	1500			1100			7	0	Yes	Yes
SHP02	1071	09/10/2008	Potassium	250		F	220			53.3	E	J	7	0	Yes	No
SHP02	1071	09/10/2008	Strontium	13		F	11			9.1			7	0	Yes	Yes
SHP02	1078	09/10/2008	Chloride	1300		F	1200			968			15	0	Yes	No
SHP02	1088	09/10/2008	Calcium	420			410			380			8	0	No	No
SHP02	1088	09/10/2008	Chloride	1900			1700			1200			15	0	Yes	No
SHP02	1088	09/10/2008	Nitrate + Nitrite as Nitrogen	860			720			480			9	0	Yes	No
SHP02	1088	09/10/2008	Sodium	7000			6900			5500			8	0	Yes	No
SHP02	1088	09/10/2008	Strontium	11			9.6			8.3			8	0	Yes	Yes
SHP02	1088	09/10/2008	Sulfate	22000			20000			14800			17	0	Yes	No
SHP02	1091	09/10/2008	Ammonia Total as N	220		F	190	N	J	0.47			10	1	No	Yes
SHP02	1091	09/10/2008	Calcium	560		F	540			460			5	0	Yes	No
SHP02	1091	09/10/2008	Manganese	6.7		F	1.2			1.1			5	0	No	Yes

Data Validation Outliers Report - No Field Parameters
Laboratory: PARAGON (Fort Collins, CO)
RIN: 08081803
Comparison: All Historical Data
Report Date: 2/17/2009

Site Code	Location Code	Sample Date	Analyte	Current Result	Current Qualifiers Lab	Current Qualifiers Data	Historical Maximum Result	Historical Maximum Qualifiers Lab	Historical Maximum Qualifiers Data	Historical Minimum Result	Historical Minimum Qualifiers Lab	Historical Minimum Qualifiers Data	Number of Data Points N	Number of Data Points N Below Detect	Normally Distributed	Statistical Outlier
SHP02	1091	09/10/2008	Potassium	130		F	110			90			5	0	Yes	No
SHP02	1091	09/10/2008	Selenium	1.1		F	1			0.31			5	0	Yes	No
SHP02	1091	09/10/2008	Sodium	3300		F	4000			3500			5	0	No	No
SHP02	1092	09/10/2008	Ammonia Total as N	810		F	500			0.01	U		9	1	Yes (log)	No
SHP02	1092	09/10/2008	Calcium	1000		F	710			440			5	0	Yes	No
SHP02	1092	09/10/2008	Chloride	650		F	1584			850			12	0	No	Yes
SHP02	1092	09/10/2008	Magnesium	1600		F	2500			1700			5	0	Yes	No
SHP02	1092	09/10/2008	Manganese	32		F	12			0.94			5	0	No	Yes
SHP02	1092	09/10/2008	Nitrate + Nitrite as Nitrogen	2900		F	1900			890			9	0	Yes	Yes
SHP02	1092	09/10/2008	Potassium	240		F	200			88			5	0	Yes (log)	No
SHP02	1092	09/10/2008	Selenium	0.41		F	2.1			1.4			5	0	Yes (log)	Yes
SHP02	1092	09/10/2008	Sodium	1600		F	3800			3000			5	0	Yes	Yes
SHP02	1092	09/10/2008	Strontium	11		F	13			12			5	0	No	No
SHP02	1092	09/10/2008	Sulfate	5500		F	14642			9800			16	0	No	Yes
SHP02	1093	09/10/2008	Ammonia Total as N	870		F	860			72.5			11	0	No	No
SHP02	1093	09/10/2008	Manganese	35		F	28			0.46			7	0	No	No

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

STATISTICAL TESTS:

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

Anomalous Data Review Checksheet

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Anomalous Data Review Checksheet

Site: Shiprock, New Mexico **Sampling Data:** Groundwater

Reviewer: Steve Donivan (Name (print)) (Signature) 3-30-2009 (Date)

Site Hydrologist: David Miller (Name (print)) (Signature) 4/29/09 (Date)

Date of Review: February 17, 2009

Loc. No.	Analyte	Type of Anomaly	Disposition
01-0630	Manganese	High	Compare to future results
01-0735	Sodium	High	Compare to future results
01-0855	Chloride	High	Compare to future results
01-0855	Sulfate	High	Compare to future results
01-0856	Manganese	High	Compare to future results
01-1009	Sulfate	Low	Compare to future results
02-0600	Chloride	High	Compare to future results
02-0600	Magnesium	Low	Compare to future results
02-0600	Uranium	Low	Compare to future results
02-0602	Chloride	High	Compare to future results
02-0603	Calcium	High	Compare to future results
02-0725	Manganese	High	Compare to future results
02-0813	Chloride	High	Compare to future results
02-0813	Manganese	High	Compare to future results
02-0818	Manganese	High	Compare to future results
02-0818	Nitrate	Low	Compare to future results
02-0819	Selenium	High	Compare to future results
02-0827	Sulfate	High	Compare to future results
02-0835	Manganese	High	Compare to future results
02-0838	Chloride	High	Compare to future results
02-0838	Manganese	High	Compare to future results

02-0838	Selenium	High	Compare to future results
02-0838	Sodium	High	Compare to future results
02-0838	Sulfate	High	Compare to future results
02-0841	Nitrate+Nitrite as N	High	Compare to future results
02-1071	Ammonia	High	Compare to future results
02-1071	Magnesium	High	Compare to future results
02-1071	Strontium	High	Compare to future results
02-1088	Strontium	High	Compare to future results
02-1092	Nitrate+Nitrite as N	High	Compare to future results
02-1092	Selenium	Low	Compare to future results
02-1092	Sodium	Low	Compare to future results

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: 2/17/2009
Location: 0608 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	10	-	15	2.48		F	#		
Ammonia Total as N	mg/L	09/09/2008	N001	10	-	15	180		F	#	20	
Calcium	mg/L	09/09/2008	N001	10	-	15	350		F	#	0.072	
Chloride	mg/L	09/09/2008	N001	10	-	15	210		F	#	40	
Magnesium	mg/L	09/09/2008	N001	10	-	15	750		F	#	0.045	
Manganese	mg/L	09/09/2008	N001	10	-	15	2.9		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	10	-	15	220		F	#	2	
Oxidation Reduction Potential	mV	09/09/2008	N001	10	-	15	70.8		F	#		
pH	s.u.	09/09/2008	N001	10	-	15	6.89		F	#		
Potassium	mg/L	09/09/2008	N001	10	-	15	100		F	#	0.13	
Selenium	mg/L	09/09/2008	N001	10	-	15	0.0051		F	#	0.000024	
Sodium	mg/L	09/09/2008	N001	10	-	15	1200		F	#	0.018	
Specific Conductance	umhos /cm	09/09/2008	N001	10	-	15	8908		F	#		
Strontium	mg/L	09/09/2008	N001	10	-	15	8.1		F	#	0.00052	
Sulfate	mg/L	09/09/2008	N001	10	-	15	6200		F	#	100	
Temperature	C	09/09/2008	N001	10	-	15	19.99		F	#		
Turbidity	NTU	09/09/2008	N001	10	-	15	4.46		F	#		
Uranium	mg/L	09/09/2008	N001	10	-	15	0.97		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0610 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	4	-	9	356		FQ	#		
Ammonia Total as N	mg/L	09/09/2008	N001	4	-	9	12		FQ	#	1	
Calcium	mg/L	09/09/2008	N001	4	-	9	480		FQ	#	0.14	
Chloride	mg/L	09/09/2008	N001	4	-	9	330		FQ	#	40	
Magnesium	mg/L	09/09/2008	N001	4	-	9	1600		FQ	#	0.089	
Manganese	mg/L	09/09/2008	N001	4	-	9	0.52		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	4	-	9	660		FQ	#	5	
Oxidation Reduction Potential	mV	09/09/2008	N001	4	-	9	71.5		FQ	#		
pH	s.u.	09/09/2008	N001	4	-	9	7.32		FQ	#		
Potassium	mg/L	09/09/2008	N001	4	-	9	170		FQ	#	0.26	
Selenium	mg/L	09/09/2008	N001	4	-	9	0.042		FQ	#	0.00024	
Sodium	mg/L	09/09/2008	N001	4	-	9	1800		FQ	#	0.018	
Specific Conductance	umhos /cm	09/09/2008	N001	4	-	9	50		FQ	#		
Strontium	mg/L	09/09/2008	N001	4	-	9	10		FQ	#	0.001	
Sulfate	mg/L	09/09/2008	N001	4	-	9	9100		FQ	#	100	
Temperature	C	09/09/2008	N001	4	-	9	24.14		FQ	#		
Turbidity	NTU	09/09/2008	N001	4	-	9	2.22		FQ	#		
Uranium	mg/L	09/09/2008	N001	4	-	9	1.7		FQ	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0612 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	5	-	10	264		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	5	-	10	0.1	U	F	#	0.1	
Calcium	mg/L	09/10/2008	N001	5	-	10	120		F	#	0.014	
Chloride	mg/L	09/10/2008	N001	5	-	10	42		F	#	4	
Magnesium	mg/L	09/10/2008	N001	5	-	10	56		F	#	0.0089	
Manganese	mg/L	09/10/2008	N001	5	-	10	1.8		F	#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	5	-	10	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/10/2008	N001	5	-	10	-150.2		F	#		
pH	s.u.	09/10/2008	N001	5	-	10	7.19		F	#		
Potassium	mg/L	09/10/2008	N001	5	-	10	6.4		F	#	0.026	
Selenium	mg/L	09/10/2008	N001	5	-	10	0.00095		F	#	0.000024	
Sodium	mg/L	09/10/2008	N001	5	-	10	150		F	#	0.0018	
Specific Conductance	umhos /cm	09/10/2008	N001	5	-	10	1554		F	#		
Strontium	mg/L	09/10/2008	N001	5	-	10	1.5		F	#	0.0001	
Sulfate	mg/L	09/10/2008	N001	5	-	10	580		F	#	10	
Temperature	C	09/10/2008	N001	5	-	10	19.26		F	#		
Turbidity	NTU	09/10/2008	N001	5	-	10	1.04		F	#		
Uranium	mg/L	09/10/2008	N001	5	-	10	0.13		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0614 WELL SE part of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	10	-	15	1006		F	#		
Ammonia Total as N	mg/L	09/09/2008	N001	10	-	15	37		F	#	5	
Calcium	mg/L	09/09/2008	N001	10	-	15	420		F	#	0.14	
Chloride	mg/L	09/09/2008	N001	10	-	15	580		F	#	40	
Magnesium	mg/L	09/09/2008	N001	10	-	15	2200		F	#	0.089	
Manganese	mg/L	09/09/2008	N001	10	-	15	3.2		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	10	-	15	610		F	#	5	
Oxidation Reduction Potential	mV	09/09/2008	N001	10	-	15	177.8		F	#		
pH	s.u.	09/09/2008	N001	10	-	15	6.85		F	#		
Potassium	mg/L	09/09/2008	N001	10	-	15	180		F	#	0.26	
Selenium	mg/L	09/09/2008	N001	10	-	15	0.11		F	#	0.00047	
Sodium	mg/L	09/09/2008	N001	10	-	15	2300		F	#	0.018	
Specific Conductance	umhos /cm	09/09/2008	N001	10	-	15	19600		F	#		
Strontium	mg/L	09/09/2008	N001	10	-	15	13		F	#	0.001	
Sulfate	mg/L	09/09/2008	N001	10	-	15	15000		F	#	100	
Temperature	C	09/09/2008	N001	10	-	15	19		F	#		
Turbidity	NTU	09/09/2008	N001	10	-	15	2.57		F	#		
Uranium	mg/L	09/09/2008	N001	10	-	15	2.4		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0615 WELL S of floodplain fence, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	4.5	-	9.5	260		F	#		
Ammonia Total as N	mg/L	09/09/2008	N001	4.5	-	9.5	1.3		F	#	0.1	
Calcium	mg/L	09/09/2008	N001	4.5	-	9.5	540		F	#	0.072	
Chloride	mg/L	09/09/2008	N001	4.5	-	9.5	91		F	#	20	
Magnesium	mg/L	09/09/2008	N001	4.5	-	9.5	460		F	#	0.045	
Manganese	mg/L	09/09/2008	N001	4.5	-	9.5	0.48		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	4.5	-	9.5	14		F	#	0.1	
pH	s.u.	09/09/2008	N001	4.5	-	9.5	7.06		F	#		
Potassium	mg/L	09/09/2008	N001	4.5	-	9.5	73		F	#	0.13	
Selenium	mg/L	09/09/2008	N001	4.5	-	9.5	0.18		F	#	0.00047	
Sodium	mg/L	09/09/2008	N001	4.5	-	9.5	630		F	#	0.0092	
Specific Conductance	umhos /cm	09/09/2008	N001	4.5	-	9.5	6454		F	#		
Strontium	mg/L	09/09/2008	N001	4.5	-	9.5	6		F	#	0.00052	
Sulfate	mg/L	09/09/2008	N001	4.5	-	9.5	4300		F	#	50	
Temperature	C	09/09/2008	N001	4.5	-	9.5	23.55		F	#		
Turbidity	NTU	09/09/2008	N001	4.5	-	9.5	2.41		F	#		
Uranium	mg/L	09/09/2008	N001	4.5	-	9.5	0.93		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0618 WELL Center of floodplain, well nest, just N of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	09/09/2008	N001	11	-	16	60		F	#	10	
Calcium	mg/L	09/09/2008	N001	11	-	16	450		F	#	0.14	
Chloride	mg/L	09/09/2008	N001	11	-	16	720		F	#	40	
Magnesium	mg/L	09/09/2008	N001	11	-	16	1800		F	#	0.089	
Manganese	mg/L	09/09/2008	N001	11	-	16	9.6		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	11	-	16	290		F	#	2	
Oxidation Reduction Potential	mV	09/09/2008	N001	11	-	16	151.2		F	#		
pH	s.u.	09/09/2008	N001	11	-	16	6.82		F	#		
Potassium	mg/L	09/09/2008	N001	11	-	16	130		F	#	0.26	
Selenium	mg/L	09/09/2008	N001	11	-	16	0.16		F	#	0.00047	
Sodium	mg/L	09/09/2008	N001	11	-	16	2700		F	#	0.092	
Specific Conductance	umhos /cm	09/09/2008	N001	11	-	16	19040		F	#		
Strontium	mg/L	09/09/2008	N001	11	-	16	11		F	#	0.001	
Sulfate	mg/L	09/09/2008	N001	11	-	16	14000		F	#	100	
Temperature	C	09/09/2008	N001	11	-	16	21.19		F	#		
Turbidity	NTU	09/09/2008	N001	11	-	16	3.46		F	#		
Uranium	mg/L	09/09/2008	N001	11	-	16	2.4		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0619 WELL Center of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	8	-	13	700		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	8	-	13	0.28		F	#	0.1	
Ammonia Total as N	mg/L	09/10/2008	N002	8	-	13	0.17		F	#	0.1	
Calcium	mg/L	09/10/2008	N001	8	-	13	320		F	#	0.072	
Calcium	mg/L	09/10/2008	N002	8	-	13	320		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	8	-	13	260		F	#	40	
Chloride	mg/L	09/10/2008	N002	8	-	13	260		F	#	40	
Magnesium	mg/L	09/10/2008	N001	8	-	13	520		F	#	0.045	
Magnesium	mg/L	09/10/2008	N002	8	-	13	530		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	8	-	13	3.8		F	#	0.001	
Manganese	mg/L	09/10/2008	N002	8	-	13	3.7		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	8	-	13	0.01	U	F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N002	8	-	13	0.037		F	#	0.01	
Oxidation Reduction Potential	mV	09/10/2008	N001	8	-	13	-99.5		F	#		
pH	s.u.	09/10/2008	N001	8	-	13	7.07		F	#		
Potassium	mg/L	09/10/2008	N001	8	-	13	76		F	#	0.13	
Potassium	mg/L	09/10/2008	N002	8	-	13	70		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	8	-	13	0.0015		F	#	0.000024	
Selenium	mg/L	09/10/2008	N002	8	-	13	0.00072		F	#	0.00012	
Sodium	mg/L	09/10/2008	N001	8	-	13	2100		F	#	0.092	
Sodium	mg/L	09/10/2008	N002	8	-	13	2200		F	#	0.018	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0619 WELL Center of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Specific Conductance	umhos /cm	09/10/2008	N001	8	-	13	14775		F	#		
Strontium	mg/L	09/10/2008	N001	8	-	13	8.5		F	#	0.00052	
Strontium	mg/L	09/10/2008	N002	8	-	13	8.1		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	8	-	13	8300		F	#	100	
Sulfate	mg/L	09/10/2008	N002	8	-	13	8800		F	#	100	
Temperature	C	09/10/2008	N001	8	-	13	18.9		F	#		
Turbidity	NTU	09/10/2008	N001	8	-	13	2.13		F	#		
Uranium	mg/L	09/10/2008	N001	8	-	13	0.69		F	#	0.000045	
Uranium	mg/L	09/10/2008	N002	8	-	13	0.63		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0622 WELL Center of floodplain, well nest, N of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	5	-	10	489		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	5	-	10	0.1	UN	F	#	0.1	
Calcium	mg/L	09/10/2008	N001	5	-	10	260		F	#	0.072	
Chloride	mg/L	09/10/2008	N001	5	-	10	160		F	#	20	
Magnesium	mg/L	09/10/2008	N001	5	-	10	250		F	#	0.045	
Manganese	mg/L	09/10/2008	N001	5	-	10	1.9		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	5	-	10	0.023		F	#	0.01	
Oxidation Reduction Potential	mV	09/10/2008	N001	5	-	10	-13.4		F	#		
pH	s.u.	09/10/2008	N001	5	-	10	7.2		F	#		
Potassium	mg/L	09/10/2008	N001	5	-	10	42		F	#	0.13	
Selenium	mg/L	09/10/2008	N001	5	-	10	0.083		F	#	0.00024	
Sodium	mg/L	09/10/2008	N001	5	-	10	1300		F	#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	5	-	10	7582		F	#		
Strontium	mg/L	09/10/2008	N001	5	-	10	6.3		F	#	0.00052	
Sulfate	mg/L	09/10/2008	N001	5	-	10	4500		F	#	50	
Temperature	C	09/10/2008	N001	5	-	10	19.16		F	#		
Turbidity	NTU	09/10/2008	N001	5	-	10	1.53		F	#		
Uranium	mg/L	09/10/2008	N001	5	-	10	0.24		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0623 WELL Center of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	0001	10	-	15	488		FQ	#		
Ammonia Total as N	mg/L	09/10/2008	0001	10	-	15	0.1	U	FQ	#	0.1	
Ammonia Total as N	mg/L	09/10/2008	0002	10	-	15	0.13		FQ	#	0.1	
Calcium	mg/L	09/10/2008	0001	10	-	15	240		FQ	#	0.072	
Calcium	mg/L	09/10/2008	0002	10	-	15	240		FQ	#	0.072	
Chloride	mg/L	09/10/2008	0001	10	-	15	67		FQ	#	20	
Chloride	mg/L	09/10/2008	0002	10	-	15	88		FQ	#	20	
Magnesium	mg/L	09/10/2008	0001	10	-	15	65		FQ	#	0.045	
Magnesium	mg/L	09/10/2008	0002	10	-	15	65		FQ	#	0.045	
Manganese	mg/L	09/10/2008	0001	10	-	15	1.5		FQ	#	0.001	
Manganese	mg/L	09/10/2008	0002	10	-	15	1.5		FQ	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	0001	10	-	15	0.01	U	FQ	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	0002	10	-	15	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	09/10/2008	N001	10	-	15	-13.1		FQ	#		
pH	s.u.	09/10/2008	N001	10	-	15	7.19		FQ	#		
Potassium	mg/L	09/10/2008	0001	10	-	15	21		FQ	#	0.13	
Potassium	mg/L	09/10/2008	0002	10	-	15	22		FQ	#	0.13	
Selenium	mg/L	09/10/2008	0001	10	-	15	0.0026		FQ	#	0.000024	
Selenium	mg/L	09/10/2008	0002	10	-	15	0.0023		FQ	#	0.000024	
Sodium	mg/L	09/10/2008	0001	10	-	15	960		FQ	#	0.0092	
Sodium	mg/L	09/10/2008	0002	10	-	15	990		FQ	#	0.0092	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0623 WELL Center of floodplain, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Specific Conductance	umhos /cm	09/10/2008	N001	10	-	15	5498		FQ	#		
Strontium	mg/L	09/10/2008	0001	10	-	15	8.9		FQ	#	0.00052	
Strontium	mg/L	09/10/2008	0002	10	-	15	8.5		FQ	#	0.00052	
Sulfate	mg/L	09/10/2008	0001	10	-	15	780		FQJ	#	50	
Sulfate	mg/L	09/10/2008	0002	10	-	15	2900		FQ	#	50	
Temperature	C	09/10/2008	N001	10	-	15	19.16		FQ	#		
Turbidity	NTU	09/10/2008	N001	10	-	15	238		FQ	#		
Uranium	mg/L	09/10/2008	0001	10	-	15	0.084		FQ	#	0.0000045	
Uranium	mg/L	09/10/2008	0002	10	-	15	0.078		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0626 WELL Center of floodplain, just NE of wetland

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	9.5	-	14.5	312		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	9.5	-	14.5	0.19		F	#	0.1	
Calcium	mg/L	09/11/2008	N001	9.5	-	14.5	220		F	#	0.072	
Chloride	mg/L	09/11/2008	N001	9.5	-	14.5	110		F	#	20	
Magnesium	mg/L	09/11/2008	N001	9.5	-	14.5	49		F	#	0.045	
Manganese	mg/L	09/11/2008	N001	9.5	-	14.5	3.9		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	9.5	-	14.5	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/11/2008	N001	9.5	-	14.5	3.5		F	#		
pH	s.u.	09/11/2008	N001	9.5	-	14.5	7.66		F	#		
Potassium	mg/L	09/11/2008	N001	9.5	-	14.5	17		F	#	0.13	
Selenium	mg/L	09/11/2008	N001	9.5	-	14.5	0.0019		F	#	0.000024	
Sodium	mg/L	09/11/2008	N001	9.5	-	14.5	1100		F	#	0.0092	
Specific Conductance	umhos /cm	09/11/2008	N001	9.5	-	14.5	5722		F	#		
Strontium	mg/L	09/11/2008	N001	9.5	-	14.5	11		F	#	0.00052	
Sulfate	mg/L	09/11/2008	N001	9.5	-	14.5	3400		F	#	50	
Temperature	C	09/11/2008	N001	9.5	-	14.5	18.2		F	#		
Turbidity	NTU	09/11/2008	N001	9.5	-	14.5	4.42		F	#		
Uranium	mg/L	09/11/2008	N001	9.5	-	14.5	0.047		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0628 WELL Center of floodplain, well nest, just N of wetland

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	6	-	10	52		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	6	-	10	0.1	U	F	#	0.1	
Calcium	mg/L	09/11/2008	N001	6	-	10	230		F	#	0.072	
Chloride	mg/L	09/11/2008	N001	6	-	10	92		F	#	20	
Magnesium	mg/L	09/11/2008	N001	6	-	10	56		F	#	0.045	
Manganese	mg/L	09/11/2008	N001	6	-	10	5.3		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	6	-	10	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/11/2008	N001	6	-	10	-80.3		F	#		
pH	s.u.	09/11/2008	N001	6	-	10	7.5		F	#		
Potassium	mg/L	09/11/2008	N001	6	-	10	17		F	#	0.13	
Selenium	mg/L	09/11/2008	N001	6	-	10	0.00093		F	#	0.000024	
Sodium	mg/L	09/11/2008	N001	6	-	10	1100		F	#	0.0092	
Specific Conductance	umhos /cm	09/11/2008	N001	6	-	10	6063		F	#		
Strontium	mg/L	09/11/2008	N001	6	-	10	14		F	#	0.00052	
Sulfate	mg/L	09/11/2008	N001	6	-	10	3300		F	#	50	
Temperature	C	09/11/2008	N001	6	-	10	17.31		F	#		
Turbidity	NTU	09/11/2008	N001	6	-	10	6.55		F	#		
Uranium	mg/L	09/11/2008	N001	6	-	10	0.041		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0630 WELL Just N of mouth of Bob Lee Wash, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	5	-	10	230		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	5	-	10	0.1	U	F	#	0.1	
Calcium	mg/L	09/11/2008	N001	5	-	10	260		F	#	0.072	
Chloride	mg/L	09/11/2008	N001	5	-	10	79		F	#	20	
Magnesium	mg/L	09/11/2008	N001	5	-	10	59		F	#	0.045	
Manganese	mg/L	09/11/2008	N001	5	-	10	2.7		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	5	-	10	3.8		F	#	0.05	
Oxidation Reduction Potential	mV	09/11/2008	N001	5	-	10	-22.8		F	#		
pH	s.u.	09/11/2008	N001	5	-	10	7.46		F	#		
Potassium	mg/L	09/11/2008	N001	5	-	10	13		F	#	0.13	
Selenium	mg/L	09/11/2008	N001	5	-	10	0.057		F	#	0.00024	
Sodium	mg/L	09/11/2008	N001	5	-	10	840		F	#	0.0092	
Specific Conductance	umhos /cm	09/11/2008	N001	5	-	10	5784		F	#		
Strontium	mg/L	09/11/2008	N001	5	-	10	14		F	#	0.00052	
Sulfate	mg/L	09/11/2008	N001	5	-	10	2800		F	#	50	
Temperature	C	09/11/2008	N001	5	-	10	18.01		F	#		
Turbidity	NTU	09/11/2008	N001	5	-	10	2.88		F	#		
Uranium	mg/L	09/11/2008	N001	5	-	10	0.069		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0734 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	2	-	4	158		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	2	-	4	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/11/2008	N001	2	-	4	140		FQ	#	0.072	
Chloride	mg/L	09/11/2008	N001	2	-	4	82		FQ	#	20	
Magnesium	mg/L	09/11/2008	N001	2	-	4	110		FQ	#	0.045	
Manganese	mg/L	09/11/2008	N001	2	-	4	1.7		FQ	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	2	-	4	1.2		FQ	#	0.01	
pH	s.u.	09/11/2008	N001	2	-	4	7.53		FQ	#		
Potassium	mg/L	09/11/2008	N001	2	-	4	15		FQ	#	0.13	
Selenium	mg/L	09/11/2008	N001	2	-	4	0.0059		FQ	#	0.000024	
Sodium	mg/L	09/11/2008	N001	2	-	4	920		FQ	#	0.0092	
Specific Conductance	umhos /cm	09/11/2008	N001	2	-	4	33		FQ	#		
Strontium	mg/L	09/11/2008	N001	2	-	4	3.8		FQ	#	0.00052	
Sulfate	mg/L	09/11/2008	N001	2	-	4	2900		FQ	#	50	
Temperature	C	09/11/2008	N001	2	-	4	23.44		FQ	#		
Turbidity	NTU	09/11/2008	N001	2	-	4	4.5		FQ	#		
Uranium	mg/L	09/11/2008	N001	2	-	4	0.041		FQ	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0735 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/08/2008	N001	3	-	8	621		F	#		
Ammonia Total as N	mg/L	09/08/2008	N001	3	-	8	25		F	#	5	
Calcium	mg/L	09/08/2008	N001	3	-	8	550		F	#	0.14	
Chloride	mg/L	09/08/2008	N001	3	-	8	1000		F	#	40	
Magnesium	mg/L	09/08/2008	N001	3	-	8	1700		F	#	0.089	
Manganese	mg/L	09/08/2008	N001	3	-	8	4.3		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/08/2008	N001	3	-	8	360		F	#	2	
Oxidation Reduction Potential	mV	09/08/2008	N001	3	-	8	177.8		F	#		
pH	s.u.	09/08/2008	N001	3	-	8	7.08		F	#		
Potassium	mg/L	09/08/2008	N001	3	-	8	88		F	#	0.26	
Selenium	mg/L	09/08/2008	N001	3	-	8	0.029		F	#	0.00012	
Sodium	mg/L	09/08/2008	N001	3	-	8	4400		F	#	0.092	
Specific Conductance	umhos /cm	09/08/2008	N001	3	-	8	23413		F	#		
Strontium	mg/L	09/08/2008	N001	3	-	8	15		F	#	0.001	
Sulfate	mg/L	09/08/2008	N001	3	-	8	15000		F	#	100	
Temperature	C	09/08/2008	N001	3	-	8	17.85		F	#		
Turbidity	NTU	09/08/2008	N001	3	-	8	1.8		F	#		
Uranium	mg/L	09/08/2008	N001	3	-	8	0.54		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0736 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	3	-	5	194		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	3	-	5	0.1	U	F	#	0.1	
Calcium	mg/L	09/10/2008	N001	3	-	5	530		F	#	0.072	
Chloride	mg/L	09/10/2008	N001	3	-	5	150		F	#	20	
Magnesium	mg/L	09/10/2008	N001	3	-	5	210		F	#	0.045	
Manganese	mg/L	09/10/2008	N001	3	-	5	3.7		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	3	-	5	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/10/2008	N001	3	-	5	4.7		F	#		
pH	s.u.	09/10/2008	N001	3	-	5	7.29		F	#		
Potassium	mg/L	09/10/2008	N001	3	-	5	52		F	#	0.13	
Selenium	mg/L	09/10/2008	N001	3	-	5	0.00074		F	#	0.000024	
Sodium	mg/L	09/10/2008	N001	3	-	5	1500		F	#	0.092	
Specific Conductance	umhos /cm	09/10/2008	N001	3	-	5	9530		F	#		
Strontium	mg/L	09/10/2008	N001	3	-	5	8.6		F	#	0.00052	
Sulfate	mg/L	09/10/2008	N001	3	-	5	6400		F	#	50	
Temperature	C	09/10/2008	N001	3	-	5	20.03		F	#		
Turbidity	NTU	09/10/2008	N001	3	-	5	1.8		F	#		
Uranium	mg/L	09/10/2008	N001	3	-	5	0.16		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0782R WELL Island area NW of US Hwy 666 bridge.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	4.71	-	9.46	100		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	4.71	-	9.46	0.1	U	F	#	0.1	
Calcium	mg/L	09/16/2008	N001	4.71	-	9.46	53		F	#	0.014	
Chloride	mg/L	09/16/2008	N001	4.71	-	9.46	11		F	#	2	
Magnesium	mg/L	09/16/2008	N001	4.71	-	9.46	15		F	#	0.0089	
Manganese	mg/L	09/16/2008	N001	4.71	-	9.46	1.2		F	#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	4.71	-	9.46	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/16/2008	N001	4.71	-	9.46	-56.7		F	#		
pH	s.u.	09/16/2008	N001	4.71	-	9.46	7.83		F	#		
Potassium	mg/L	09/16/2008	N001	4.71	-	9.46	3.4		F	#	0.026	
Selenium	mg/L	09/16/2008	N001	4.71	-	9.46	0.00037		F	#	0.000024	
Sodium	mg/L	09/16/2008	N001	4.71	-	9.46	72		F	#	0.0018	
Specific Conductance	umhos /cm	09/16/2008	N001	4.71	-	9.46	643		F	#		
Strontium	mg/L	09/16/2008	N001	4.71	-	9.46	0.67		F	#	0.0001	
Sulfate	mg/L	09/16/2008	N001	4.71	-	9.46	240		F	#	5	
Temperature	C	09/16/2008	N001	4.71	-	9.46	16.53		F	#		
Turbidity	NTU	09/16/2008	N001	4.71	-	9.46	8.32		F	#		
Uranium	mg/L	09/16/2008	N001	4.71	-	9.46	0.0027		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0783R WELL Island area NW of US Hwy 666 bridge.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	4.375	-	9.375	96		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	4.375	-	9.375	0.1	U	F	#	0.1	
Calcium	mg/L	09/17/2008	N001	4.375	-	9.375	85		F	#	0.014	
Chloride	mg/L	09/17/2008	N001	4.375	-	9.375	21		F	#	4	
Magnesium	mg/L	09/17/2008	N001	4.375	-	9.375	31		F	#	0.0089	
Manganese	mg/L	09/17/2008	N001	4.375	-	9.375	0.78		F	#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	4.375	-	9.375	0.01	U	F	#	0.01	
pH	s.u.	09/17/2008	N001	4.375	-	9.375	7.52		F	#		
Potassium	mg/L	09/17/2008	N001	4.375	-	9.375	5.4		F	#	0.026	
Selenium	mg/L	09/17/2008	N001	4.375	-	9.375	0.0004		F	#	0.000024	
Sodium	mg/L	09/17/2008	N001	4.375	-	9.375	120		F	#	0.0018	
Specific Conductance	umhos /cm	09/17/2008	N001	4.375	-	9.375	1110		F	#		
Strontium	mg/L	09/17/2008	N001	4.375	-	9.375	1		F	#	0.0001	
Sulfate	mg/L	09/17/2008	N001	4.375	-	9.375	430		F	#	10	
Temperature	C	09/17/2008	N001	4.375	-	9.375	24		F	#		
Turbidity	NTU	09/17/2008	N001	4.375	-	9.375	4.02		F	#		
Uranium	mg/L	09/17/2008	N001	4.375	-	9.375	0.0082		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0784 WELL Island area NW of US Hwy 666 bridge. Well Point

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	4.5	-	7	200		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	4.5	-	7	0.1	U	F	#	0.1	
Calcium	mg/L	09/17/2008	N001	4.5	-	7	89		F	#	0.014	
Chloride	mg/L	09/17/2008	N001	4.5	-	7	18		F	#	2	
Magnesium	mg/L	09/17/2008	N001	4.5	-	7	24		F	#	0.0089	
Manganese	mg/L	09/17/2008	N001	4.5	-	7	1		F	#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	4.5	-	7	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/17/2008	N001	4.5	-	7	-133		F	#		
pH	s.u.	09/17/2008	N001	4.5	-	7	7.27		F	#		
Potassium	mg/L	09/17/2008	N001	4.5	-	7	3.2		F	#	0.026	
Selenium	mg/L	09/17/2008	N001	4.5	-	7	0.00026		F	#	0.000024	
Sodium	mg/L	09/17/2008	N001	4.5	-	7	71		F	#	0.0018	
Specific Conductance	umhos /cm	09/17/2008	N001	4.5	-	7	1000		F	#		
Strontium	mg/L	09/17/2008	N001	4.5	-	7	0.95		F	#	0.0001	
Sulfate	mg/L	09/17/2008	N001	4.5	-	7	270		F	#	5	
Temperature	C	09/17/2008	N001	4.5	-	7	23.1		F	#		
Turbidity	NTU	09/17/2008	N001	4.5	-	7	3.88		F	#		
Uranium	mg/L	09/17/2008	N001	4.5	-	7	0.0024		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0792 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/15/2008	N001	6	-	8	1420		F	#		
Ammonia Total as N	mg/L	09/15/2008	N001	6	-	8	0.1	U	F	#	0.1	
Calcium	mg/L	09/15/2008	N001	6	-	8	430		F	#	0.14	
Chloride	mg/L	09/15/2008	N001	6	-	8	1000		F	#	100	
Magnesium	mg/L	09/15/2008	N001	6	-	8	2100		F	#	0.089	
Manganese	mg/L	09/15/2008	N001	6	-	8	7.6		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/15/2008	N001	6	-	8	0.029		F	#	0.01	
Oxidation Reduction Potential	mV	09/15/2008	N001	6	-	8	-77.1		F	#		
pH	s.u.	09/15/2008	N001	6	-	8	7.27		F	#		
Potassium	mg/L	09/15/2008	N001	6	-	8	230		F	#	0.26	
Selenium	mg/L	09/15/2008	N001	6	-	8	0.017		F	#	0.000024	
Sodium	mg/L	09/15/2008	N001	6	-	8	6500		F	#	0.092	
Specific Conductance	umhos /cm	09/15/2008	N001	6	-	8	28162		F	#		
Strontium	mg/L	09/15/2008	N001	6	-	8	21		F	#	0.001	
Sulfate	mg/L	09/15/2008	N001	6	-	8	27000		F	#	250	
Temperature	C	09/15/2008	N001	6	-	8	21.41		F	#		
Turbidity	NTU	09/15/2008	N001	6	-	8	4.32		F	#		
Uranium	mg/L	09/15/2008	N001	6	-	8	3.1		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0793 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	5.2	-	7.2	384		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	5.2	-	7.2	10		F	#	2	
Calcium	mg/L	09/16/2008	N001	5.2	-	7.2	290		F	#	0.072	
Chloride	mg/L	09/16/2008	N001	5.2	-	7.2	100		F	#	20	
Magnesium	mg/L	09/16/2008	N001	5.2	-	7.2	400		F	#	0.045	
Manganese	mg/L	09/16/2008	N001	5.2	-	7.2	0.39		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	5.2	-	7.2	9		F	#	0.05	
Oxidation Reduction Potential	mV	09/16/2008	N001	5.2	-	7.2	154.2		F	#		
pH	s.u.	09/16/2008	N001	5.2	-	7.2	7.25		F	#		
Potassium	mg/L	09/16/2008	N001	5.2	-	7.2	47		F	#	0.13	
Selenium	mg/L	09/16/2008	N001	5.2	-	7.2	0.23		F	#	0.00047	
Sodium	mg/L	09/16/2008	N001	5.2	-	7.2	660		F	#	0.0092	
Specific Conductance	umhos /cm	09/16/2008	N001	5.2	-	7.2	5625		F	#		
Strontium	mg/L	09/16/2008	N001	5.2	-	7.2	3.8		F	#	0.00052	
Sulfate	mg/L	09/16/2008	N001	5.2	-	7.2	3700		F	#	50	
Temperature	C	09/16/2008	N001	5.2	-	7.2	19.75		F	#		
Turbidity	NTU	09/16/2008	N001	5.2	-	7.2	1.48		F	#		
Uranium	mg/L	09/16/2008	N001	5.2	-	7.2	0.96		F	#	0.00009	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0797 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	09/18/2008	N001	7.3	-	9.3	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/18/2008	N001	7.3	-	9.3	620		FQ	#	0.072	
Chloride	mg/L	09/18/2008	N001	7.3	-	9.3	310		FQ	#	20	
Magnesium	mg/L	09/18/2008	N001	7.3	-	9.3	140		FQ	#	0.045	
Manganese	mg/L	09/18/2008	N001	7.3	-	9.3	3.5		FQ	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	7.3	-	9.3	0.018		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/18/2008	N001	7.3	-	9.3	81.1		FQ	#		
pH	s.u.	09/18/2008	N001	7.3	-	9.3	7.5		FQ	#		
Potassium	mg/L	09/18/2008	N001	7.3	-	9.3	14		FQ	#	0.13	
Selenium	mg/L	09/18/2008	N001	7.3	-	9.3	0.00065		FQ	#	0.000024	
Sodium	mg/L	09/18/2008	N001	7.3	-	9.3	1500		FQ	#	0.092	
Specific Conductance	umhos /cm	09/18/2008	N001	7.3	-	9.3	6783		FQ	#		
Strontium	mg/L	09/18/2008	N001	7.3	-	9.3	10		FQ	#	0.00052	
Sulfate	mg/L	09/18/2008	N001	7.3	-	9.3	5200		FQ	#	50	
Temperature	C	09/18/2008	N001	7.3	-	9.3	21.19		FQ	#		
Turbidity	NTU	09/18/2008	N001	7.3	-	9.3	49.7		FQ	#		
Uranium	mg/L	09/18/2008	N001	7.3	-	9.3	0.032		FQ	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0798 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	7.1	-	9.1	1160		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	7.1	-	9.1	0.6		F	#	0.1	
Calcium	mg/L	09/10/2008	N001	7.1	-	9.1	470		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	7.1	-	9.1	610		F	#	40	
Magnesium	mg/L	09/10/2008	N001	7.1	-	9.1	1600		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	7.1	-	9.1	5.2		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	7.1	-	9.1	0.9		F	#	0.01	
Oxidation Reduction Potential	mV	09/10/2008	N001	7.1	-	9.1	34		F	#		
pH	s.u.	09/10/2008	N001	7.1	-	9.1	7.21		F	#		
Potassium	mg/L	09/10/2008	N001	7.1	-	9.1	170		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	7.1	-	9.1	0.07		F	#	0.00024	
Sodium	mg/L	09/10/2008	N001	7.1	-	9.1	4800		F	#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	7.1	-	9.1	23408		F	#		
Strontium	mg/L	09/10/2008	N001	7.1	-	9.1	15		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	7.1	-	9.1	15000		F	#	100	
Temperature	C	09/10/2008	N001	7.1	-	9.1	20.63		F	#		
Turbidity	NTU	09/10/2008	N001	7.1	-	9.1	2.78		F	#		
Uranium	mg/L	09/10/2008	N001	7.1	-	9.1	1.6		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0850 WELL Background area 1 mi E of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	5.6 - 15.4	340		FQ	#		
Ammonia Total as N	mg/L	09/17/2008	N001	5.6 - 15.4	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/17/2008	N001	5.6 - 15.4	310		FQ	#	0.072	
Chloride	mg/L	09/17/2008	N001	5.6 - 15.4	150		FQ	#	20	
Magnesium	mg/L	09/17/2008	N001	5.6 - 15.4	68		FQ	#	0.045	
Manganese	mg/L	09/17/2008	N001	5.6 - 15.4	1.4		FQ	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	5.6 - 15.4	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	09/17/2008	N001	5.6 - 15.4	-96.7		FQ	#		
pH	s.u.	09/17/2008	N001	5.6 - 15.4	7.38		FQ	#		
Potassium	mg/L	09/17/2008	N001	5.6 - 15.4	10		FQ	#	0.13	
Selenium	mg/L	09/17/2008	N001	5.6 - 15.4	0.00059		FQ	#	0.000024	
Sodium	mg/L	09/17/2008	N001	5.6 - 15.4	1000		FQ	#	0.0092	
Specific Conductance	umhos /cm	09/17/2008	N001	5.6 - 15.4	5186		FQ	#		
Strontium	mg/L	09/17/2008	N001	5.6 - 15.4	4.3		FQ	#	0.00052	
Sulfate	mg/L	09/17/2008	N001	5.6 - 15.4	3000		FQ	#	50	
Temperature	C	09/17/2008	N001	5.6 - 15.4	20.4		FQ	#		
Turbidity	NTU	09/17/2008	N001	5.6 - 15.4	30		FQ	#		
Uranium	mg/L	09/17/2008	N001	5.6 - 15.4	0.12		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0852 WELL Background area 1 mi E of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	6.4	-	11.4	564		FQ	#		
Ammonia Total as N	mg/L	09/17/2008	N001	6.4	-	11.4	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/17/2008	N001	6.4	-	11.4	180		FQ	#	0.072	
Chloride	mg/L	09/17/2008	N001	6.4	-	11.4	160		FQ	#	20	
Magnesium	mg/L	09/17/2008	N001	6.4	-	11.4	38		FQ	#	0.045	
Manganese	mg/L	09/17/2008	N001	6.4	-	11.4	0.67		FQ	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	6.4	-	11.4	0.014		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/17/2008	N001	6.4	-	11.4	-9		FQ	#		
pH	s.u.	09/17/2008	N001	6.4	-	11.4	7.39		FQ	#		
Potassium	mg/L	09/17/2008	N001	6.4	-	11.4	6.6		FQ	#	0.13	
Selenium	mg/L	09/17/2008	N001	6.4	-	11.4	0.0022		FQ	#	0.000024	
Sodium	mg/L	09/17/2008	N001	6.4	-	11.4	1100		FQ	#	0.0092	
Specific Conductance	umhos /cm	09/17/2008	N001	6.4	-	11.4	5135		FQ	#		
Strontium	mg/L	09/17/2008	N001	6.4	-	11.4	2.5		FQ	#	0.00052	
Sulfate	mg/L	09/17/2008	N001	6.4	-	11.4	2700		FQ	#	50	
Temperature	C	09/17/2008	N001	6.4	-	11.4	22.33		FQ	#		
Turbidity	NTU	09/17/2008	N001	6.4	-	11.4	34.3		FQ	#		
Uranium	mg/L	09/17/2008	N001	6.4	-	11.4	0.087		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0853 WELL S of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	10	-	15	192		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	10	-	15	18		F	#	1	
Calcium	mg/L	09/10/2008	N001	10	-	15	100		F	#	0.014	
Chloride	mg/L	09/10/2008	N001	10	-	15	14		F	#	4	
Magnesium	mg/L	09/10/2008	N001	10	-	15	31		F	#	0.0089	
Manganese	mg/L	09/10/2008	N001	10	-	15	0.47		F	#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	10	-	15	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	09/10/2008	N001	10	-	15	-45.9		F	#		
pH	s.u.	09/10/2008	N001	10	-	15	7.42		F	#		
Potassium	mg/L	09/10/2008	N001	10	-	15	13		F	#	0.026	
Selenium	mg/L	09/10/2008	N001	10	-	15	0.00041		UF	#	0.000024	
Sodium	mg/L	09/10/2008	N001	10	-	15	77		F	#	0.0018	
Specific Conductance	umhos /cm	09/10/2008	N001	10	-	15	970		F	#		
Strontium	mg/L	09/10/2008	N001	10	-	15	1.2		F	#	0.0001	
Sulfate	mg/L	09/10/2008	N001	10	-	15	420		F	#	10	
Temperature	C	09/10/2008	N001	10	-	15	22.08		F	#		
Turbidity	NTU	09/10/2008	N001	10	-	15	0.71		F	#		
Uranium	mg/L	09/10/2008	N001	10	-	15	0.041		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0855 WELL NW part of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	4.9	-	14.9	134		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	4.9	-	14.9	0.1	U	F	#	0.1	
Calcium	mg/L	09/11/2008	N001	4.9	-	14.9	380		F	#	0.072	
Chloride	mg/L	09/11/2008	N001	4.9	-	14.9	160		F	#	20	
Magnesium	mg/L	09/11/2008	N001	4.9	-	14.9	110		F	#	0.045	
Manganese	mg/L	09/11/2008	N001	4.9	-	14.9	2.3		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	4.9	-	14.9	0.51		F	#	0.01	
pH	s.u.	09/11/2008	N001	4.9	-	14.9	7.49		F	#		
Potassium	mg/L	09/11/2008	N001	4.9	-	14.9	26		F	#	0.13	
Selenium	mg/L	09/11/2008	N001	4.9	-	14.9	0.044		F	#	0.00024	
Sodium	mg/L	09/11/2008	N001	4.9	-	14.9	1600		F	#	0.092	
Specific Conductance	umhos /cm	09/11/2008	N001	4.9	-	14.9	7739		F	#		
Strontium	mg/L	09/11/2008	N001	4.9	-	14.9	11		F	#	0.00052	
Sulfate	mg/L	09/11/2008	N001	4.9	-	14.9	5300		F	#	50	
Temperature	C	09/11/2008	N001	4.9	-	14.9	15.9		F	#		
Turbidity	NTU	09/11/2008	N001	4.9	-	14.9	3.06		F	#		
Uranium	mg/L	09/11/2008	N001	4.9	-	14.9	0.15		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0856 WELL NW part of floodplain

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	18.8	-	23.8	22		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	18.8	-	23.8	0.1	U	F	#	0.1	
Calcium	mg/L	09/11/2008	N001	18.8	-	23.8	190		F	#	0.072	
Chloride	mg/L	09/11/2008	N001	18.8	-	23.8	93		F	#	20	
Magnesium	mg/L	09/11/2008	N001	18.8	-	23.8	71		F	#	0.045	
Manganese	mg/L	09/11/2008	N001	18.8	-	23.8	1.7		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	18.8	-	23.8	0.01	U	F	#	0.01	
pH	s.u.	09/11/2008	N001	18.8	-	23.8	7.69		F	#		
Potassium	mg/L	09/11/2008	N001	18.8	-	23.8	20		F	#	0.13	
Selenium	mg/L	09/11/2008	N001	18.8	-	23.8	0.00066		F	#	0.000024	
Sodium	mg/L	09/11/2008	N001	18.8	-	23.8	1000		F	#	0.0092	
Specific Conductance	umhos /cm	09/11/2008	N001	18.8	-	23.8	5675		F	#		
Strontium	mg/L	09/11/2008	N001	18.8	-	23.8	5.1		F	#	0.00052	
Sulfate	mg/L	09/11/2008	N001	18.8	-	23.8	3200		F	#	50	
Temperature	C	09/11/2008	N001	18.8	-	23.8	14.87		F	#		
Turbidity	NTU	09/11/2008	N001	18.8	-	23.8	1.37		F	#		
Uranium	mg/L	09/11/2008	N001	18.8	-	23.8	0.064		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0857 WELL Near E end of floodplain fence

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Ammonia Total as N	mg/L	09/09/2008	N001	13.2	-	18.2	11		FQ	#	2	
Calcium	mg/L	09/09/2008	N001	13.2	-	18.2	150		FQ	#	0.029	
Chloride	mg/L	09/09/2008	N001	13.2	-	18.2	59		FQ	#	10	
Magnesium	mg/L	09/09/2008	N001	13.2	-	18.2	110		FQ	#	0.018	
Manganese	mg/L	09/09/2008	N001	13.2	-	18.2	1.5		FQ	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	13.2	-	18.2	0.01	U	FQ	#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	13.2	-	18.2	-23.3		FQ	#		
pH	s.u.	09/09/2008	N001	13.2	-	18.2	7.31		FQ	#		
Potassium	mg/L	09/09/2008	N001	13.2	-	18.2	18		FQ	#	0.053	
Selenium	mg/L	09/09/2008	N001	13.2	-	18.2	0.00055		FQ	#	0.000024	
Sodium	mg/L	09/09/2008	N001	13.2	-	18.2	270		FQ	#	0.0037	
Specific Conductance	umhos /cm	09/09/2008	N001	13.2	-	18.2	6750		FQ	#		
Strontium	mg/L	09/09/2008	N001	13.2	-	18.2	1.8		FQ	#	0.00021	
Sulfate	mg/L	09/09/2008	N001	13.2	-	18.2	1400		FQ	#	25	
Temperature	C	09/09/2008	N001	13.2	-	18.2	19.77		FQ	#		
Turbidity	NTU	09/09/2008	N001	13.2	-	18.2	3.19		FQ	#		
Uranium	mg/L	09/09/2008	N001	13.2	-	18.2	0.15		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1009 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	7.4	-	17.4	134		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	7.4	-	17.4	25		F	#	2	
Calcium	mg/L	09/10/2008	N001	7.4	-	17.4	480		F	#	0.072	
Chloride	mg/L	09/10/2008	N001	7.4	-	17.4	71		F	#	20	
Magnesium	mg/L	09/10/2008	N001	7.4	-	17.4	410		F	#	0.045	
Manganese	mg/L	09/10/2008	N001	7.4	-	17.4	2.1		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	7.4	-	17.4	27		F	#	0.2	
Oxidation Reduction Potential	mV	09/10/2008	N001	7.4	-	17.4	198.7		F	#		
pH	s.u.	09/10/2008	N001	7.4	-	17.4	6.93		F	#		
Potassium	mg/L	09/10/2008	N001	7.4	-	17.4	40		F	#	0.13	
Selenium	mg/L	09/10/2008	N001	7.4	-	17.4	0.21		F	#	0.00047	
Sodium	mg/L	09/10/2008	N001	7.4	-	17.4	470		F	#	0.0092	
Specific Conductance	umhos /cm	09/10/2008	N001	7.4	-	17.4	5693		F	#		
Strontium	mg/L	09/10/2008	N001	7.4	-	17.4	5.3		F	#	0.00052	
Sulfate	mg/L	09/10/2008	N001	7.4	-	17.4	2900		F	#	50	
Temperature	C	09/10/2008	N001	7.4	-	17.4	20.21		F	#		
Turbidity	NTU	09/10/2008	N001	7.4	-	17.4	1.02		F	#		
Uranium	mg/L	09/10/2008	N001	7.4	-	17.4	0.38		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1089 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	4.8	-	14.8	390		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	4.8	-	14.8	1.1		F	#	0.1	
Calcium	mg/L	09/10/2008	N001	4.8	-	14.8	490		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	4.8	-	14.8	270		F	#	40	
Magnesium	mg/L	09/10/2008	N001	4.8	-	14.8	780		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	4.8	-	14.8	2.2		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	4.8	-	14.8	30		F	#	0.2	
Oxidation Reduction Potential	mV	09/10/2008	N001	4.8	-	14.8	-9.5		F	#		
pH	s.u.	09/10/2008	N001	4.8	-	14.8	7.21		F	#		
Potassium	mg/L	09/10/2008	N001	4.8	-	14.8	86		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	4.8	-	14.8	0.026		F	#	0.00012	
Sodium	mg/L	09/10/2008	N001	4.8	-	14.8	2100		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	4.8	-	14.8	12705		F	#		
Strontium	mg/L	09/10/2008	N001	4.8	-	14.8	8.4		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	4.8	-	14.8	7000		F	#	100	
Temperature	C	09/10/2008	N001	4.8	-	14.8	22.24		F	#		
Turbidity	NTU	09/10/2008	N001	4.8	-	14.8	1.49		F	#		
Uranium	mg/L	09/10/2008	N001	4.8	-	14.8	0.94		F	#	0.00009	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1104 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	-	298		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	-	3.4		F	#	0.1	
Calcium	mg/L	09/11/2008	N001	-	390		F	#	0.14	
Chloride	mg/L	09/11/2008	N001	-	250		F	#	40	
Magnesium	mg/L	09/11/2008	N001	-	850		F	#	0.089	
Manganese	mg/L	09/11/2008	N001	-	2.9		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	-	84		F	#	0.5	
Oxidation Reduction Potential	mV	09/11/2008	N001	-	196.6		F	#		
pH	s.u.	09/11/2008	N001	-	7.27		F	#		
Potassium	mg/L	09/11/2008	N001	-	72		F	#	0.26	
Selenium	mg/L	09/11/2008	N001	-	0.018		F	#	0.000024	
Sodium	mg/L	09/11/2008	N001	-	1600		F	#	0.018	
Specific Conductance	umhos /cm	09/11/2008	N001	-	11448		F	#		
Strontium	mg/L	09/11/2008	N001	-	6.9		F	#	0.001	
Sulfate	mg/L	09/11/2008	N001	-	6100		F	#	100	
Temperature	C	09/11/2008	N001	-	20.23		F	#		
Turbidity	NTU	09/11/2008	N001	-	1.83		F	#		
Uranium	mg/L	09/11/2008	N001	-	0.97		F	#	0.00009	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1105 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	4.5	-	14.5	800		F	#		
Ammonia Total as N	mg/L	09/09/2008	N001	4.5	-	14.5	42		F	#	10	
Calcium	mg/L	09/09/2008	N001	4.5	-	14.5	450		F	#	0.14	
Chloride	mg/L	09/09/2008	N001	4.5	-	14.5	610		F	#	40	
Magnesium	mg/L	09/09/2008	N001	4.5	-	14.5	2700		F	#	0.089	
Manganese	mg/L	09/09/2008	N001	4.5	-	14.5	6.6		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	4.5	-	14.5	730		F	#	5	
Oxidation Reduction Potential	mV	09/09/2008	N001	4.5	-	14.5	61.5		F	#		
pH	s.u.	09/09/2008	N001	4.5	-	14.5	6.95		F	#		
Potassium	mg/L	09/09/2008	N001	4.5	-	14.5	170		F	#	0.26	
Selenium	mg/L	09/09/2008	N001	4.5	-	14.5	0.047		F	#	0.00024	
Sodium	mg/L	09/09/2008	N001	4.5	-	14.5	3300		F	#	0.092	
Specific Conductance	umhos /cm	09/09/2008	N001	4.5	-	14.5	24150		F	#		
Strontium	mg/L	09/09/2008	N001	4.5	-	14.5	14		F	#	0.001	
Sulfate	mg/L	09/09/2008	N001	4.5	-	14.5	14000		F	#	100	
Temperature	C	09/09/2008	N001	4.5	-	14.5	20.88		F	#		
Turbidity	NTU	09/09/2008	N001	4.5	-	14.5	1.9		F	#		
Uranium	mg/L	09/09/2008	N001	4.5	-	14.5	3.2		F	#	0.00022	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1109 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	0	-	0	246			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0	-	0	50			#	2	
Calcium	mg/L	09/09/2008	N001	0	-	0	100			#	0.029	
Chloride	mg/L	09/09/2008	N001	0	-	0	58			#	10	
Magnesium	mg/L	09/09/2008	N001	0	-	0	150			#	0.018	
Manganese	mg/L	09/09/2008	N001	0	-	0	0.61			#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0	-	0	41			#	0.5	
Oxidation Reduction Potential	mV	09/09/2008	N001	0	-	0	54.1			#		
pH	s.u.	09/09/2008	N001	0	-	0	7.6			#		
Potassium	mg/L	09/09/2008	N001	0	-	0	20			#	0.053	
Selenium	mg/L	09/09/2008	N001	0	-	0	0.0095			#	0.000024	
Sodium	mg/L	09/09/2008	N001	0	-	0	190			#	0.0037	
Specific Conductance	umhos /cm	09/09/2008	N001	0	-	0	2519			#		
Strontium	mg/L	09/09/2008	N001	0	-	0	1.5			#	0.00021	
Sulfate	mg/L	09/09/2008	N001	0	-	0	1100			#	25	
Temperature	C	09/09/2008	N001	0	-	0	18.15			#		
Turbidity	NTU	09/09/2008	N001	0	-	0	0.92			#		
Uranium	mg/L	09/09/2008	N001	0	-	0	0.16			#	0.000022	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1110 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	0	-	0	552			#		
Ammonia Total as N	mg/L	09/11/2008	N001	0	-	0	13			#	2	
Ammonia Total as N	mg/L	09/11/2008	N002	0	-	0	13			#	1	
Calcium	mg/L	09/11/2008	N001	0	-	0	440			#	0.14	
Calcium	mg/L	09/11/2008	N002	0	-	0	420			#	0.14	
Chloride	mg/L	09/11/2008	N001	0	-	0	510			#	40	
Chloride	mg/L	09/11/2008	N002	0	-	0	490			#	40	
Magnesium	mg/L	09/11/2008	N001	0	-	0	1500			#	0.089	
Magnesium	mg/L	09/11/2008	N002	0	-	0	1500			#	0.089	
Manganese	mg/L	09/11/2008	N001	0	-	0	2.5			#	0.002	
Manganese	mg/L	09/11/2008	N002	0	-	0	2.4			#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	0	-	0	300		J	#	2	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N002	0	-	0	180			#	2	
Oxidation Reduction Potential	mV	09/11/2008	N001	0	-	0	194.4			#		
pH	s.u.	09/11/2008	N001	0	-	0	7.01			#		
Potassium	mg/L	09/11/2008	N001	0	-	0	130			#	0.26	
Potassium	mg/L	09/11/2008	N002	0	-	0	120			#	0.26	
Selenium	mg/L	09/11/2008	N001	0	-	0	0.42			#	0.0012	
Selenium	mg/L	09/11/2008	N002	0	-	0	0.42			#	0.0012	
Sodium	mg/L	09/11/2008	N001	0	-	0	2600			#	0.046	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1110 TREATMENT SYSTEM

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Sodium	mg/L	09/11/2008	N002	0	-	0	2500			#	0.018	
Specific Conductance	umhos /cm	09/11/2008	N001	0	-	0	15485			#		
Strontium	mg/L	09/11/2008	N001	0	-	0	11			#	0.001	
Strontium	mg/L	09/11/2008	N002	0	-	0	11			#	0.001	
Sulfate	mg/L	09/11/2008	N001	0	-	0	12000			#	100	
Sulfate	mg/L	09/11/2008	N002	0	-	0	12000			#	100	
Temperature	C	09/11/2008	N001	0	-	0	25.35			#		
Turbidity	NTU	09/11/2008	N001	0	-	0	3.44			#		
Uranium	mg/L	09/11/2008	N001	0	-	0	1.5			#	0.00022	
Uranium	mg/L	09/11/2008	N002	0	-	0	1.5			#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1114 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	7	-	12	90		F	#		
Ammonia Total as N	mg/L	09/09/2008	N001	7	-	12	82		F	#	10	
Calcium	mg/L	09/09/2008	N001	7	-	12	120		F	#	0.029	
Chloride	mg/L	09/09/2008	N001	7	-	12	51		F	#	10	
Magnesium	mg/L	09/09/2008	N001	7	-	12	190		F	#	0.018	
Manganese	mg/L	09/09/2008	N001	7	-	12	1.3		F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	7	-	12	47		F	#	0.5	
Oxidation Reduction Potential	mV	09/09/2008	N001	7	-	12	52.9		F	#		
pH	s.u.	09/09/2008	N001	7	-	12	7.38		F	#		
Potassium	mg/L	09/09/2008	N001	7	-	12	39		F	#	0.053	
Selenium	mg/L	09/09/2008	N001	7	-	12	0.0054		F	#	0.000024	
Sodium	mg/L	09/09/2008	N001	7	-	12	210		F	#	0.0037	
Specific Conductance	umhos /cm	09/09/2008	N001	7	-	12	3491		F	#		
Strontium	mg/L	09/09/2008	N001	7	-	12	2.1		F	#	0.00021	
Sulfate	mg/L	09/09/2008	N001	7	-	12	1500		F	#	25	
Temperature	C	09/09/2008	N001	7	-	12	21.04		F	#		
Turbidity	NTU	09/09/2008	N001	7	-	12	3.02		F	#		
Uranium	mg/L	09/09/2008	N001	7	-	12	0.24		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1115 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	7	-	12	222		F	#		
Ammonia Total as N	mg/L	09/09/2008	N001	7	-	12	150		F	#	10	
Calcium	mg/L	09/09/2008	N001	7	-	12	230		F	#	0.072	
Chloride	mg/L	09/09/2008	N001	7	-	12	160		F	#	20	
Magnesium	mg/L	09/09/2008	N001	7	-	12	400		F	#	0.045	
Manganese	mg/L	09/09/2008	N001	7	-	12	1.6		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	7	-	12	150		F	#	1	
Oxidation Reduction Potential	mV	09/09/2008	N001	7	-	12	60.9		F	#		
pH	s.u.	09/09/2008	N001	7	-	12	6.89		F	#		
Potassium	mg/L	09/09/2008	N001	7	-	12	75		F	#	0.13	
Selenium	mg/L	09/09/2008	N001	7	-	12	0.12		F	#	0.00047	
Sodium	mg/L	09/09/2008	N001	7	-	12	690		F	#	0.0092	
Specific Conductance	umhos /cm	09/09/2008	N001	7	-	12	6857		F	#		
Strontium	mg/L	09/09/2008	N001	7	-	12	4.1		F	#	0.00052	
Sulfate	mg/L	09/09/2008	N001	7	-	12	3300		F	#	50	
Temperature	C	09/09/2008	N001	7	-	12	19.68		F	#		
Turbidity	NTU	09/09/2008	N001	7	-	12	8.14		F	#		
Uranium	mg/L	09/09/2008	N001	7	-	12	0.58		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1117 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	7	-	12	144		F	#		
Ammonia Total as N	mg/L	09/09/2008	N001	7	-	12	0.29		F	#	0.1	
Calcium	mg/L	09/09/2008	N001	7	-	12	56		F	#	0.014	
Chloride	mg/L	09/09/2008	N001	7	-	12	14		F	#	2	
Magnesium	mg/L	09/09/2008	N001	7	-	12	11		F	#	0.0089	
Manganese	mg/L	09/09/2008	N001	7	-	12	0.54		F	#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	7	-	12	0.033		F	#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	7	-	12	-20.4		F	#		
pH	s.u.	09/09/2008	N001	7	-	12	7.19		F	#		
Potassium	mg/L	09/09/2008	N001	7	-	12	2.5		F	#	0.026	
Selenium	mg/L	09/09/2008	N001	7	-	12	0.00048		F	#	0.000024	
Sodium	mg/L	09/09/2008	N001	7	-	12	38		F	#	0.0018	
Specific Conductance	umhos /cm	09/09/2008	N001	7	-	12	560		F	#		
Strontium	mg/L	09/09/2008	N001	7	-	12	0.65		F	#	0.0001	
Sulfate	mg/L	09/09/2008	N001	7	-	12	150		F	#	5	
Temperature	C	09/09/2008	N001	7	-	12	17.93		F	#		
Turbidity	NTU	09/09/2008	N001	7	-	12	5.93		F	#		
Uranium	mg/L	09/09/2008	N001	7	-	12	0.0054		F	#	0.0000045	

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: 2/17/2009
Location: 0600 WELL Just N of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	29	-	48.8	1320		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	29	-	48.8	49		F	#	10	
Calcium	mg/L	09/17/2008	N001	29	-	48.8	260		F	#	0.14	
Chloride	mg/L	09/17/2008	N001	29	-	48.8	1500		F	#	40	
Magnesium	mg/L	09/17/2008	N001	29	-	48.8	290		F	#	0.089	
Manganese	mg/L	09/17/2008	N001	29	-	48.8	0.24		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	29	-	48.8	100		F	#	1	
Oxidation Reduction Potential	mV	09/17/2008	N001	29	-	48.8	73		F	#		
pH	s.u.	09/17/2008	N001	29	-	48.8	6.79		F	#		
Potassium	mg/L	09/17/2008	N001	29	-	48.8	59		F	#	0.26	
Selenium	mg/L	09/17/2008	N001	29	-	48.8	0.0019		F	#	0.000024	
Sodium	mg/L	09/17/2008	N001	29	-	48.8	4400		F	#	0.18	
Specific Conductance	umhos /cm	09/17/2008	N001	29	-	48.8	19970		F	#		
Strontium	mg/L	09/17/2008	N001	29	-	48.8	7.9		F	#	0.001	
Sulfate	mg/L	09/17/2008	N001	29	-	48.8	11000		F	#	100	
Temperature	C	09/17/2008	N001	29	-	48.8	17.5		F	#		
Turbidity	NTU	09/17/2008	N001	29	-	48.8	1.99		F	#		
Uranium	mg/L	09/17/2008	N001	29	-	48.8	0.71		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0602 WELL Just W of Disposal Cell; NECA yard

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	27	-	47	2002		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	27	-	47	380		F	#	10	
Calcium	mg/L	09/10/2008	N001	27	-	47	410		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	27	-	47	1100		F	#	40	
Magnesium	mg/L	09/10/2008	N001	27	-	47	2400		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	27	-	47	1.6		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	27	-	47	28		F	#	0.2	
Oxidation Reduction Potential	mV	09/10/2008	N001	27	-	47	242		F	#		
pH	s.u.	09/10/2008	N001	27	-	47	6.49		F	#		
Potassium	mg/L	09/10/2008	N001	27	-	47	220		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	27	-	47	0.009		F	#	0.000024	
Sodium	mg/L	09/10/2008	N001	27	-	47	3400		F	#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	27	-	47	24435		F	#		
Strontium	mg/L	09/10/2008	N001	27	-	47	12		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	27	-	47	18000		F	#	100	
Temperature	C	09/10/2008	N001	27	-	47	17.3		F	#		
Turbidity	NTU	09/10/2008	N001	27	-	47	4.96		F	#		
Uranium	mg/L	09/10/2008	N001	27	-	47	0.66		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0603 WELL Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	N001	25.9	-	35.9	166		F	#		
Ammonia Total as N	mg/L	09/18/2008	N001	25.9	-	35.9	880		F	#	50	
Calcium	mg/L	09/18/2008	N001	25.9	-	35.9	760		F	#	0.14	
Chloride	mg/L	09/18/2008	N001	25.9	-	35.9	150		F	#	40	
Magnesium	mg/L	09/18/2008	N001	25.9	-	35.9	510		F	#	0.089	
Manganese	mg/L	09/18/2008	N001	25.9	-	35.9	27		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	25.9	-	35.9	1500		F	#	10	
Oxidation Reduction Potential	mV	09/18/2008	N001	25.9	-	35.9	178		F	#		
pH	s.u.	09/18/2008	N001	25.9	-	35.9	6.22		F	#		
Potassium	mg/L	09/18/2008	N001	25.9	-	35.9	120		F	#	0.26	
Selenium	mg/L	09/18/2008	N001	25.9	-	35.9	0.09		F	#	0.00024	
Sodium	mg/L	09/18/2008	N001	25.9	-	35.9	520		F	#	0.018	
Specific Conductance	umhos /cm	09/18/2008	N001	25.9	-	35.9	13860		F	#		
Strontium	mg/L	09/18/2008	N001	25.9	-	35.9	3.2		F	#	0.001	
Sulfate	mg/L	09/18/2008	N001	25.9	-	35.9	3000		F	#	100	
Temperature	C	09/18/2008	N001	25.9	-	35.9	16.9		F	#		
Turbidity	NTU	09/18/2008	N001	25.9	-	35.9	2.26		F	#		
Uranium	mg/L	09/18/2008	N001	25.9	-	35.9	0.0073		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0725 WELL West side, lower Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	7.5	-	17.5	288		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	7.5	-	17.5	0.1	U	F	#	0.1	
Calcium	mg/L	09/17/2008	N001	7.5	-	17.5	340		F	#	0.072	
Chloride	mg/L	09/17/2008	N001	7.5	-	17.5	110		F	#	20	
Magnesium	mg/L	09/17/2008	N001	7.5	-	17.5	150		F	#	0.045	
Manganese	mg/L	09/17/2008	N001	7.5	-	17.5	0.61		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	7.5	-	17.5	4.9		F	#	0.05	
pH	s.u.	09/17/2008	N001	7.5	-	17.5	6.57		F	#		
Potassium	mg/L	09/17/2008	N001	7.5	-	17.5	18		F	#	0.13	
Selenium	mg/L	09/17/2008	N001	7.5	-	17.5	0.0063		F	#	0.000024	
Sodium	mg/L	09/17/2008	N001	7.5	-	17.5	1100		F	#	0.0092	
Specific Conductance	umhos /cm	09/17/2008	N001	7.5	-	17.5	7729		F	#		
Strontium	mg/L	09/17/2008	N001	7.5	-	17.5	9.8		F	#	0.00052	
Sulfate	mg/L	09/17/2008	N001	7.5	-	17.5	3800		F	#	50	
Temperature	C	09/17/2008	N001	7.5	-	17.5	21.27		F	#		
Turbidity	NTU	09/17/2008	N001	7.5	-	17.5	1.3		F	#		
Uranium	mg/L	09/17/2008	N001	7.5	-	17.5	0.082		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0726 WELL West side, upper Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	N001	27.2	-	37.2	650		F	#		
Ammonia Total as N	mg/L	09/18/2008	N001	27.2	-	37.2	0.83		F	#	0.1	
Calcium	mg/L	09/18/2008	N001	27.2	-	37.2	330		F	#	0.072	
Chloride	mg/L	09/18/2008	N001	27.2	-	37.2	340		F	#	20	
Magnesium	mg/L	09/18/2008	N001	27.2	-	37.2	280		F	#	0.045	
Manganese	mg/L	09/18/2008	N001	27.2	-	37.2	0.32		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	27.2	-	37.2	7.1		F	#	0.05	
Oxidation Reduction Potential	mV	09/18/2008	N001	27.2	-	37.2	-22		F	#		
pH	s.u.	09/18/2008	N001	27.2	-	37.2	7.11		F	#		
Potassium	mg/L	09/18/2008	N001	27.2	-	37.2	41		F	#	0.13	
Selenium	mg/L	09/18/2008	N001	27.2	-	37.2	0.013		F	#	0.000024	
Sodium	mg/L	09/18/2008	N001	27.2	-	37.2	1400		F	#	0.092	
Specific Conductance	umhos /cm	09/18/2008	N001	27.2	-	37.2	9250		F	#		
Strontium	mg/L	09/18/2008	N001	27.2	-	37.2	6.8		F	#	0.00052	
Sulfate	mg/L	09/18/2008	N001	27.2	-	37.2	5600		F	#	50	
Temperature	C	09/18/2008	N001	27.2	-	37.2	17		F	#		
Turbidity	NTU	09/18/2008	N001	27.2	-	37.2	4.27		F	#		
Uranium	mg/L	09/18/2008	N001	27.2	-	37.2	0.02		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0727 WELL West side, upper Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	N001	6.7	-	16.7	776		F	#		
Ammonia Total as N	mg/L	09/18/2008	N001	6.7	-	16.7	12		F	#	2	
Calcium	mg/L	09/18/2008	N001	6.7	-	16.7	430		F	#	0.14	
Chloride	mg/L	09/18/2008	N001	6.7	-	16.7	320		F	#	40	
Magnesium	mg/L	09/18/2008	N001	6.7	-	16.7	1800		F	#	0.089	
Manganese	mg/L	09/18/2008	N001	6.7	-	16.7	1.4		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	6.7	-	16.7	180		F	#	1	
Oxidation Reduction Potential	mV	09/18/2008	N001	6.7	-	16.7	153.2		F	#		
pH	s.u.	09/18/2008	N001	6.7	-	16.7	6.59		F	#		
Potassium	mg/L	09/18/2008	N001	6.7	-	16.7	100		F	#	0.26	
Selenium	mg/L	09/18/2008	N001	6.7	-	16.7	0.002		F	#	0.000024	
Sodium	mg/L	09/18/2008	N001	6.7	-	16.7	1900		F	#	0.018	
Specific Conductance	umhos /cm	09/18/2008	N001	6.7	-	16.7	10150		F	#		
Strontium	mg/L	09/18/2008	N001	6.7	-	16.7	11		F	#	0.001	
Sulfate	mg/L	09/18/2008	N001	6.7	-	16.7	12000		F	#	100	
Temperature	C	09/18/2008	N001	6.7	-	16.7	20.1		F	#		
Turbidity	NTU	09/18/2008	N001	6.7	-	16.7	3.19		F	#		
Uranium	mg/L	09/18/2008	N001	6.7	-	16.7	0.29		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0728 WELL W of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	17	-	27	814		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	17	-	27	220		F	#	10	
Calcium	mg/L	09/17/2008	N001	17	-	27	470		F	#	0.14	
Chloride	mg/L	09/17/2008	N001	17	-	27	180		F	#	40	
Magnesium	mg/L	09/17/2008	N001	17	-	27	1400		F	#	0.089	
Manganese	mg/L	09/17/2008	N001	17	-	27	1.8		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	17	-	27	500		F	#	5	
Oxidation Reduction Potential	mV	09/17/2008	N001	17	-	27	130		F	#		
pH	s.u.	09/17/2008	N001	17	-	27	6.7		F	#		
Potassium	mg/L	09/17/2008	N001	17	-	27	150		F	#	0.26	
Selenium	mg/L	09/17/2008	N001	17	-	27	0.0027		F	#	0.000024	
Sodium	mg/L	09/17/2008	N001	17	-	27	1400		F	#	0.018	
Specific Conductance	umhos /cm	09/17/2008	N001	17	-	27	13430		F	#		
Strontium	mg/L	09/17/2008	N001	17	-	27	9.9		F	#	0.001	
Sulfate	mg/L	09/17/2008	N001	17	-	27	8600		F	#	100	
Temperature	C	09/17/2008	N001	17	-	27	16.6		F	#		
Turbidity	NTU	09/17/2008	N001	17	-	27	3.01		F	#		
Uranium	mg/L	09/17/2008	N001	17	-	27	0.38		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0730 WELL Just SW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	0001	26.93	-	36.93	0		FQ	#		
Ammonia Total as N	mg/L	09/10/2008	0001	26.93	-	36.93	83		FQ	#	10	
Calcium	mg/L	09/10/2008	0001	26.93	-	36.93	650		FQ	#	0.072	
Chloride	mg/L	09/10/2008	0001	26.93	-	36.93	16		FQ	#	2	
Magnesium	mg/L	09/10/2008	0001	26.93	-	36.93	140		FQ	#	0.045	
Manganese	mg/L	09/10/2008	0001	26.93	-	36.93	21		FQ	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	0001	26.93	-	36.93	190		FQ	#	2	
Oxidation Reduction Potential	mV	09/10/2008	N001	26.93	-	36.93	349		FQ	#		
pH	s.u.	09/10/2008	N001	26.93	-	36.93	4.23		FQ	#		
Potassium	mg/L	09/10/2008	0001	26.93	-	36.93	19		FQ	#	0.13	
Selenium	mg/L	09/10/2008	0001	26.93	-	36.93	0.0086		FQ	#	0.000024	
Sodium	mg/L	09/10/2008	0001	26.93	-	36.93	81		FQ	#	0.0092	
Specific Conductance	umhos /cm	09/10/2008	N001	26.93	-	36.93	4214		FQ	#		
Strontium	mg/L	09/10/2008	0001	26.93	-	36.93	3.1		FQ	#	0.00052	
Sulfate	mg/L	09/10/2008	0001	26.93	-	36.93	2100		FQ	#	50	
Temperature	C	09/10/2008	N001	26.93	-	36.93	20		FQ	#		
Turbidity	NTU	09/10/2008	N001	26.93	-	36.93	16		FQ	#		
Uranium	mg/L	09/10/2008	0001	26.93	-	36.93	0.0063		FQ	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0731 WELL SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	N001	17	-	27	348		F	#		
Ammonia Total as N	mg/L	09/18/2008	N001	17	-	27	46		F	#	10	
Calcium	mg/L	09/18/2008	N001	17	-	27	450		F	#	0.072	
Chloride	mg/L	09/18/2008	N001	17	-	27	190		F	#	20	
Magnesium	mg/L	09/18/2008	N001	17	-	27	490		F	#	0.045	
Manganese	mg/L	09/18/2008	N001	17	-	27	0.14		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	17	-	27	120	N	FJ	#	1	
Oxidation Reduction Potential	mV	09/18/2008	N001	17	-	27	117		F	#		
pH	s.u.	09/18/2008	N001	17	-	27	7.02		F	#		
Potassium	mg/L	09/18/2008	N001	17	-	27	52		F	#	0.13	
Selenium	mg/L	09/18/2008	N001	17	-	27	0.021		F	#	0.00024	
Sodium	mg/L	09/18/2008	N001	17	-	27	960		F	#	0.0092	
Specific Conductance	umhos /cm	09/18/2008	N001	17	-	27	8063		F	#		
Strontium	mg/L	09/18/2008	N001	17	-	27	8.2		F	#	0.00052	
Sulfate	mg/L	09/18/2008	N001	17	-	27	5100		F	#	50	
Temperature	C	09/18/2008	N001	17	-	27	16.3		F	#		
Turbidity	NTU	09/18/2008	N001	17	-	27	8.62		F	#		
Uranium	mg/L	09/18/2008	N001	17	-	27	0.035		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0812 WELL W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	51.3	-	61.3	676		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	51.3	-	61.3	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/11/2008	N001	51.3	-	61.3	470		FQ	#	0.14	
Chloride	mg/L	09/11/2008	N001	51.3	-	61.3	2700		FQ	#	100	
Magnesium	mg/L	09/11/2008	N001	51.3	-	61.3	2100		FQ	#	0.089	
Manganese	mg/L	09/11/2008	N001	51.3	-	61.3	0.29		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	51.3	-	61.3	1500		FQ	#	10	
Oxidation Reduction Potential	mV	09/11/2008	N001	51.3	-	61.3	230		FQ	#		
pH	s.u.	09/11/2008	N001	51.3	-	61.3	7.01		FQ	#		
Potassium	mg/L	09/11/2008	N001	51.3	-	61.3	100		FQ	#	0.26	
Selenium	mg/L	09/11/2008	N001	51.3	-	61.3	5.3		FQ	#	0.012	
Sodium	mg/L	09/11/2008	N001	51.3	-	61.3	5000		FQ	#	0.18	
Specific Conductance	umhos /cm	09/11/2008	N001	51.3	-	61.3	30460		FQ	#		
Strontium	mg/L	09/11/2008	N001	51.3	-	61.3	14		FQ	#	0.001	
Sulfate	mg/L	09/11/2008	N001	51.3	-	61.3	17000		FQ	#	250	
Temperature	C	09/11/2008	N001	51.3	-	61.3	17.7		FQ	#		
Turbidity	NTU	09/11/2008	N001	51.3	-	61.3	6.53		FQ	#		
Uranium	mg/L	09/11/2008	N001	51.3	-	61.3	0.14		FQ	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0813 WELL W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	40.8	-	50.8	980		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	40.8	-	50.8	56		F	#	10	
Calcium	mg/L	09/11/2008	N001	40.8	-	50.8	570		F	#	0.14	
Chloride	mg/L	09/11/2008	N001	40.8	-	50.8	880		F	#	40	
Magnesium	mg/L	09/11/2008	N001	40.8	-	50.8	3000		F	#	0.089	
Manganese	mg/L	09/11/2008	N001	40.8	-	50.8	0.85		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	40.8	-	50.8	2500		F	#	20	
Oxidation Reduction Potential	mV	09/11/2008	N001	40.8	-	50.8	172		F	#		
pH	s.u.	09/11/2008	N001	40.8	-	50.8	6.47		F	#		
Potassium	mg/L	09/11/2008	N001	40.8	-	50.8	140		F	#	0.26	
Selenium	mg/L	09/11/2008	N001	40.8	-	50.8	0.058		F	#	0.00012	
Sodium	mg/L	09/11/2008	N001	40.8	-	50.8	3000		F	#	0.046	
Specific Conductance	umhos /cm	09/11/2008	N001	40.8	-	50.8	26080		F	#		
Strontium	mg/L	09/11/2008	N001	40.8	-	50.8	17		F	#	0.001	
Sulfate	mg/L	09/11/2008	N001	40.8	-	50.8	11000		F	#	100	
Temperature	C	09/11/2008	N001	40.8	-	50.8	18.1		F	#		
Turbidity	NTU	09/11/2008	N001	40.8	-	50.8	6.14		F	#		
Uranium	mg/L	09/11/2008	N001	40.8	-	50.8	0.12		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0814 WELL South edge of fairgrounds, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	23.8	-	33.8	792		FQ	#		
Ammonia Total as N	mg/L	09/17/2008	N001	23.8	-	33.8	59		FQ	#	10	
Calcium	mg/L	09/17/2008	N001	23.8	-	33.8	440		FQ	#	0.14	
Chloride	mg/L	09/17/2008	N001	23.8	-	33.8	1100		FQ	#	40	
Magnesium	mg/L	09/17/2008	N001	23.8	-	33.8	2200		FQ	#	0.089	
Manganese	mg/L	09/17/2008	N001	23.8	-	33.8	1.3		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	23.8	-	33.8	980		FQ	#	10	
Oxidation Reduction Potential	mV	09/17/2008	N001	23.8	-	33.8	116		FQ	#		
pH	s.u.	09/17/2008	N001	23.8	-	33.8	6.94		FQ	#		
Potassium	mg/L	09/17/2008	N001	23.8	-	33.8	140		FQ	#	0.26	
Selenium	mg/L	09/17/2008	N001	23.8	-	33.8	1.9		FQ	#	0.0047	
Sodium	mg/L	09/17/2008	N001	23.8	-	33.8	3100		FQ	#	0.092	
Specific Conductance	umhos /cm	09/17/2008	N001	23.8	-	33.8	22430		FQ	#		
Strontium	mg/L	09/17/2008	N001	23.8	-	33.8	13		FQ	#	0.001	
Sulfate	mg/L	09/17/2008	N001	23.8	-	33.8	14000		FQ	#	100	
Temperature	C	09/17/2008	N001	23.8	-	33.8	20.6		FQ	#		
Turbidity	NTU	09/17/2008	N001	23.8	-	33.8	238		FQ	#		
Uranium	mg/L	09/17/2008	N001	23.8	-	33.8	0.1		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0815 WELL Fairgrounds, just N of Uranium Blvd., flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	N001	22.3	-	32.3	1434		F	#		
Ammonia Total as N	mg/L	09/18/2008	N001	22.3	-	32.3	0.1	U	F	#	0.1	
Calcium	mg/L	09/18/2008	N001	22.3	-	32.3	440		F	#	0.14	
Chloride	mg/L	09/18/2008	N001	22.3	-	32.3	660		F	#	40	
Magnesium	mg/L	09/18/2008	N001	22.3	-	32.3	2600		F	#	0.089	
Manganese	mg/L	09/18/2008	N001	22.3	-	32.3	1.4		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	22.3	-	32.3	800		F	#	5	
Oxidation Reduction Potential	mV	09/18/2008	N001	22.3	-	32.3	154		F	#		
pH	s.u.	09/18/2008	N001	22.3	-	32.3	6.56		F	#		
Potassium	mg/L	09/18/2008	N001	22.3	-	32.3	110		F	#	0.26	
Selenium	mg/L	09/18/2008	N001	22.3	-	32.3	0.048		F	#	0.00024	
Sodium	mg/L	09/18/2008	N001	22.3	-	32.3	3200		F	#	0.092	
Specific Conductance	umhos /cm	09/18/2008	N001	22.3	-	32.3	22200		F	#		
Strontium	mg/L	09/18/2008	N001	22.3	-	32.3	12		F	#	0.001	
Sulfate	mg/L	09/18/2008	N001	22.3	-	32.3	16000		F	#	100	
Temperature	C	09/18/2008	N001	22.3	-	32.3	18.2		F	#		
Turbidity	NTU	09/18/2008	N001	22.3	-	32.3	6.51		F	#		
Uranium	mg/L	09/18/2008	N001	22.3	-	32.3	0.38		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0816 WELL N of artesian well 648

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	20.1 - 25.1	320		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	20.1 - 25.1	0.1	U	F	#	0.1	
Calcium	mg/L	09/17/2008	N001	20.1 - 25.1	190		F	#	0.072	
Chloride	mg/L	09/17/2008	N001	20.1 - 25.1	110		F	#	20	
Magnesium	mg/L	09/17/2008	N001	20.1 - 25.1	280		F	#	0.045	
Manganese	mg/L	09/17/2008	N001	20.1 - 25.1	0.001	U	F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	20.1 - 25.1	61		F	#	0.5	
Oxidation Reduction Potential	mV	09/17/2008	N001	20.1 - 25.1	48		F	#		
pH	s.u.	09/17/2008	N001	20.1 - 25.1	7.47		F	#		
Potassium	mg/L	09/17/2008	N001	20.1 - 25.1	18		F	#	0.13	
Selenium	mg/L	09/17/2008	N001	20.1 - 25.1	0.026		F	#	0.00024	
Sodium	mg/L	09/17/2008	N001	20.1 - 25.1	710		F	#	0.0092	
Specific Conductance	umhos /cm	09/17/2008	N001	20.1 - 25.1	5270		F	#		
Strontium	mg/L	09/17/2008	N001	20.1 - 25.1	3.9		F	#	0.00052	
Sulfate	mg/L	09/17/2008	N001	20.1 - 25.1	3000		F	#	50	
Temperature	C	09/17/2008	N001	20.1 - 25.1	20.5		F	#		
Turbidity	NTU	09/17/2008	N001	20.1 - 25.1	3.82		F	#		
Uranium	mg/L	09/17/2008	N001	20.1 - 25.1	0.033		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0817 WELL Just W of Disposal Cell, NECA yard

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	21.6	-	31.62	1900		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	21.6	-	31.62	860		F	#	50	
Calcium	mg/L	09/10/2008	N001	21.6	-	31.62	430		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	21.6	-	31.62	580		F	#	40	
Magnesium	mg/L	09/10/2008	N001	21.6	-	31.62	2100		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	21.6	-	31.62	2.1		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	21.6	-	31.62	390		F	#	2	
Oxidation Reduction Potential	mV	09/10/2008	N001	21.6	-	31.62	250		F	#		
pH	s.u.	09/10/2008	N001	21.6	-	31.62	6.46		F	#		
Potassium	mg/L	09/10/2008	N001	21.6	-	31.62	280		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	21.6	-	31.62	0.0046		F	#	0.000024	
Sodium	mg/L	09/10/2008	N001	21.6	-	31.62	1800		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	21.6	-	31.62	21240		F	#		
Strontium	mg/L	09/10/2008	N001	21.6	-	31.62	11		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	21.6	-	31.62	15000		F	#	100	
Temperature	C	09/10/2008	N001	21.6	-	31.62	17.6		F	#		
Turbidity	NTU	09/10/2008	N001	21.6	-	31.62	9.61		F	#		
Uranium	mg/L	09/10/2008	N001	21.6	-	31.62	3.9		F	#	0.00045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0818 WELL Just W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	52	-	61.5	728		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	52	-	61.5	91		F	#	10	
Ammonia Total as N	mg/L	09/10/2008	N002	52	-	61.5	81		F	#	10	
Calcium	mg/L	09/10/2008	N001	52	-	61.5	490		F	#	0.14	
Calcium	mg/L	09/10/2008	N002	52	-	61.5	500		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	52	-	61.5	1400		F	#	40	
Chloride	mg/L	09/10/2008	N002	52	-	61.5	1400		F	#	40	
Magnesium	mg/L	09/10/2008	N001	52	-	61.5	2200		F	#	0.089	
Magnesium	mg/L	09/10/2008	N002	52	-	61.5	2200		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	52	-	61.5	2.4		F	#	0.002	
Manganese	mg/L	09/10/2008	N002	52	-	61.5	2.4		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	52	-	61.5	990		F	#	10	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N002	52	-	61.5	1000		F	#	10	
Oxidation Reduction Potential	mV	09/10/2008	N001	52	-	61.5	154		F	#		
pH	s.u.	09/10/2008	N001	52	-	61.5	7.23		F	#		
Potassium	mg/L	09/10/2008	N001	52	-	61.5	120		F	#	0.26	
Potassium	mg/L	09/10/2008	N002	52	-	61.5	120		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	52	-	61.5	2.1		FJ	#	0.0047	
Selenium	mg/L	09/10/2008	N002	52	-	61.5	2.6		F	#	0.047	
Sodium	mg/L	09/10/2008	N001	52	-	61.5	3800		F	#	0.092	
Sodium	mg/L	09/10/2008	N002	52	-	61.5	3600		F	#	0.18	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0818 WELL Just W of radon cover borrow pit

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Specific Conductance	umhos /cm	09/10/2008	N001	52	-	61.5	24090		F	#		
Strontium	mg/L	09/10/2008	N001	52	-	61.5	13		F	#	0.001	
Strontium	mg/L	09/10/2008	N002	52	-	61.5	13		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	52	-	61.5	14000		F	#	100	
Sulfate	mg/L	09/10/2008	N002	52	-	61.5	14000		F	#	100	
Temperature	C	09/10/2008	N001	52	-	61.5	18.5		F	#		
Turbidity	NTU	09/10/2008	N001	52	-	61.5	5.88		F	#		
Uranium	mg/L	09/10/2008	N001	52	-	61.5	0.13		F	#	0.000022	
Uranium	mg/L	09/10/2008	N002	52	-	61.5	0.14		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0819 WELL Just W of Disposal Cell, NECA yard, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	15.67	-	25.67	1606		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	15.67	-	25.67	620		F	#	50	
Calcium	mg/L	09/10/2008	N001	15.67	-	25.67	420		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	15.67	-	25.67	770		F	#	40	
Magnesium	mg/L	09/10/2008	N001	15.67	-	25.67	1400		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	15.67	-	25.67	1.5		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	15.67	-	25.67	77		F	#	0.5	
Oxidation Reduction Potential	mV	09/10/2008	N001	15.67	-	25.67	229		F	#		
pH	s.u.	09/10/2008	N001	15.67	-	25.67	6.45		F	#		
Potassium	mg/L	09/10/2008	N001	15.67	-	25.67	210		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	15.67	-	25.67	0.054		F	#	0.00024	
Sodium	mg/L	09/10/2008	N001	15.67	-	25.67	2200		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	15.67	-	25.67	17000		F	#		
Strontium	mg/L	09/10/2008	N001	15.67	-	25.67	8.9		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	15.67	-	25.67	12000		F	#	100	
Temperature	C	09/10/2008	N001	15.67	-	25.67	18.8		F	#		
Turbidity	NTU	09/10/2008	N001	15.67	-	25.67	4.05		F	#		
Uranium	mg/L	09/10/2008	N001	15.67	-	25.67	0.98		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0820 WELL Just N of Disposal Cell, well nest

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	149	-	151.5	480		FQ	#		
Ammonia Total as N	mg/L	09/17/2008	0001	149	-	151.5	2.4		FQ	#	0.1	
Calcium	mg/L	09/17/2008	0001	149	-	151.5	230		FQ	#	0.36	
Chloride	mg/L	09/17/2008	0001	149	-	151.5	8700		FQ	#	100	
Magnesium	mg/L	09/17/2008	0001	149	-	151.5	88		FQ	#	0.22	
Manganese	mg/L	09/17/2008	0001	149	-	151.5	0.65		FQ	#	0.0051	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	0001	149	-	151.5	1.9		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/17/2008	N001	149	-	151.5	-50		FQ	#		
pH	s.u.	09/17/2008	N001	149	-	151.5	7.17		FQ	#		
Potassium	mg/L	09/17/2008	0001	149	-	151.5	38		FQ	#	0.66	
Selenium	mg/L	09/17/2008	0001	149	-	151.5	0.0014		FQ	#	0.000024	
Sodium	mg/L	09/17/2008	0001	149	-	151.5	6100		FQ	#	0.092	
Specific Conductance	umhos /cm	09/17/2008	N001	149	-	151.5	28500		FQ	#		
Strontium	mg/L	09/17/2008	0001	149	-	151.5	23		FQ	#	0.0026	
Sulfate	mg/L	09/17/2008	0001	149	-	151.5	6200		FQ	#	250	
Temperature	C	09/17/2008	N001	149	-	151.5	17.6		FQ	#		
Turbidity	NTU	09/17/2008	N001	149	-	151.5	26.1		FQ	#		
Uranium	mg/L	09/17/2008	0001	149	-	151.5	0.093		FQ	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0826 WELL Just West of Disposal Cell, NECA yard, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	10	-	20	1816		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	10	-	20	130		F	#	10	
Calcium	mg/L	09/10/2008	N001	10	-	20	410		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	10	-	20	640		F	#	40	
Magnesium	mg/L	09/10/2008	N001	10	-	20	2700		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	10	-	20	2.7		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	10	-	20	63		F	#	0.5	
Oxidation Reduction Potential	mV	09/10/2008	N001	10	-	20	234		F	#		
pH	s.u.	09/10/2008	N001	10	-	20	6.51		F	#		
Potassium	mg/L	09/10/2008	N001	10	-	20	170		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	10	-	20	0.0042		F	#	0.000024	
Sodium	mg/L	09/10/2008	N001	10	-	20	2100		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	10	-	20	19060		F	#		
Strontium	mg/L	09/10/2008	N001	10	-	20	12		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	10	-	20	16000		F	#	100	
Temperature	C	09/10/2008	N001	10	-	20	19.6		F	#		
Turbidity	NTU	09/10/2008	N001	10	-	20	2.59		F	#		
Uranium	mg/L	09/10/2008	N001	10	-	20	3.6		F	#	0.00045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0827 WELL Just NW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	19.9	-	29.9	1646		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	19.9	-	29.9	12		F	#	2	
Calcium	mg/L	09/17/2008	N001	19.9	-	29.9	470		F	#	0.14	
Chloride	mg/L	09/17/2008	N001	19.9	-	29.9	500		F	#	40	
Magnesium	mg/L	09/17/2008	N001	19.9	-	29.9	1400		F	#	0.089	
Manganese	mg/L	09/17/2008	N001	19.9	-	29.9	0.76		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	19.9	-	29.9	19		F	#	0.1	
Oxidation Reduction Potential	mV	09/17/2008	N001	19.9	-	29.9	49		F	#		
pH	s.u.	09/17/2008	N001	19.9	-	29.9	6.79		F	#		
Potassium	mg/L	09/17/2008	N001	19.9	-	29.9	73		F	#	0.26	
Selenium	mg/L	09/17/2008	N001	19.9	-	29.9	0.018		F	#	0.000024	
Sodium	mg/L	09/17/2008	N001	19.9	-	29.9	1900		F	#	0.018	
Specific Conductance	umhos /cm	09/17/2008	N001	19.9	-	29.9	14010		F	#		
Strontium	mg/L	09/17/2008	N001	19.9	-	29.9	11		F	#	0.001	
Sulfate	mg/L	09/17/2008	N001	19.9	-	29.9	10000		F	#	100	
Temperature	C	09/17/2008	N001	19.9	-	29.9	17.9		F	#		
Turbidity	NTU	09/17/2008	N001	19.9	-	29.9	4.36		F	#		
Uranium	mg/L	09/17/2008	N001	19.9	-	29.9	1		F	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0830 WELL Just SE of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	7.7	-	17.7	0		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	7.7	-	17.7	11		F	#	2	
Calcium	mg/L	09/11/2008	N001	7.7	-	17.7	660		F	#	0.029	
Chloride	mg/L	09/11/2008	N001	7.7	-	17.7	78		F	#	10	
Magnesium	mg/L	09/11/2008	N001	7.7	-	17.7	56		F	#	0.018	
Manganese	mg/L	09/11/2008	N001	7.7	-	17.7	4.1		F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	7.7	-	17.7	240		F	#	2	
Oxidation Reduction Potential	mV	09/11/2008	N001	7.7	-	17.7	356		F	#		
pH	s.u.	09/11/2008	N001	7.7	-	17.7	4.01		F	#		
Potassium	mg/L	09/11/2008	N001	7.7	-	17.7	7.3		F	#	0.053	
Selenium	mg/L	09/11/2008	N001	7.7	-	17.7	0.029		F	#	0.00024	
Sodium	mg/L	09/11/2008	N001	7.7	-	17.7	170		F	#	0.0037	
Specific Conductance	umhos /cm	09/11/2008	N001	7.7	-	17.7	3593		F	#		
Strontium	mg/L	09/11/2008	N001	7.7	-	17.7	0.32		F	#	0.00021	
Sulfate	mg/L	09/11/2008	N001	7.7	-	17.7	1900		F	#	25	
Temperature	C	09/11/2008	N001	7.7	-	17.7	22.7		F	#		
Turbidity	NTU	09/11/2008	N001	7.7	-	17.7	0.98		F	#		
Uranium	mg/L	09/11/2008	N001	7.7	-	17.7	0.0065		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0833 WELL Just NE of Dine College tract

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	24.9	-	34.9	552		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	24.9	-	34.9	0.1	U	F	#	0.1	
Calcium	mg/L	09/17/2008	N001	24.9	-	34.9	450		F	#	0.14	
Chloride	mg/L	09/17/2008	N001	24.9	-	34.9	600		F	#	40	
Magnesium	mg/L	09/17/2008	N001	24.9	-	34.9	1400		F	#	0.089	
Manganese	mg/L	09/17/2008	N001	24.9	-	34.9	0.032	B	F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	24.9	-	34.9	490		F	#	5	
Oxidation Reduction Potential	mV	09/17/2008	N001	24.9	-	34.9	232		F	#		
pH	s.u.	09/17/2008	N001	24.9	-	34.9	7.01		F	#		
Potassium	mg/L	09/17/2008	N001	24.9	-	34.9	42		F	#	0.26	
Selenium	mg/L	09/17/2008	N001	24.9	-	34.9	0.43		F	#	0.0012	
Sodium	mg/L	09/17/2008	N001	24.9	-	34.9	1900		F	#	0.018	
Specific Conductance	umhos /cm	09/17/2008	N001	24.9	-	34.9	14275		F	#		
Strontium	mg/L	09/17/2008	N001	24.9	-	34.9	10		F	#	0.001	
Sulfate	mg/L	09/17/2008	N001	24.9	-	34.9	9100		F	#	100	
Temperature	C	09/17/2008	N001	24.9	-	34.9	16.1		F	#		
Turbidity	NTU	09/17/2008	N001	24.9	-	34.9	9.66		F	#		
Uranium	mg/L	09/17/2008	N001	24.9	-	34.9	0.23		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0835 WELL Housing area between 2nd Wash and 3rd Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	21.9	-	31.9	445		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	21.9	-	31.9	0.1	U	F	#	0.1	
Calcium	mg/L	09/11/2008	N001	21.9	-	31.9	490		F	#	0.072	
Chloride	mg/L	09/11/2008	N001	21.9	-	31.9	230		F	#	20	
Magnesium	mg/L	09/11/2008	N001	21.9	-	31.9	400		F	#	0.045	
Manganese	mg/L	09/11/2008	N001	21.9	-	31.9	0.052		F	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	21.9	-	31.9	97		F	#	1	
Oxidation Reduction Potential	mV	09/11/2008	N001	21.9	-	31.9	178		F	#		
pH	s.u.	09/11/2008	N001	21.9	-	31.9	6.97		F	#		
Potassium	mg/L	09/11/2008	N001	21.9	-	31.9	17		F	#	0.13	
Selenium	mg/L	09/11/2008	N001	21.9	-	31.9	0.3		F	#	0.0012	
Sodium	mg/L	09/11/2008	N001	21.9	-	31.9	820		F	#	0.0092	
Specific Conductance	umhos /cm	09/11/2008	N001	21.9	-	31.9	7112		F	#		
Strontium	mg/L	09/11/2008	N001	21.9	-	31.9	5.9		F	#	0.00052	
Sulfate	mg/L	09/11/2008	N001	21.9	-	31.9	4100		F	#	50	
Temperature	C	09/11/2008	N001	21.9	-	31.9	20.8		F	#		
Turbidity	NTU	09/11/2008	N001	21.9	-	31.9	6.99		F	#		
Uranium	mg/L	09/11/2008	N001	21.9	-	31.9	0.08		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0836 WELL SW part of Blueeyes Ranch, N of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	26.8	-	36.8	352		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	26.8	-	36.8	0.1	U	F	#	0.1	
Calcium	mg/L	09/17/2008	N001	26.8	-	36.8	510		F	#	0.029	
Chloride	mg/L	09/17/2008	N001	26.8	-	36.8	32		F	#	10	
Magnesium	mg/L	09/17/2008	N001	26.8	-	36.8	260		F	#	0.018	
Manganese	mg/L	09/17/2008	N001	26.8	-	36.8	1.8		F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	26.8	-	36.8	15		F	#	0.1	
Oxidation Reduction Potential	mV	09/17/2008	N001	26.8	-	36.8	228		F	#		
pH	s.u.	09/17/2008	N001	26.8	-	36.8	7.03		F	#		
Potassium	mg/L	09/17/2008	N001	26.8	-	36.8	7.2		F	#	0.053	
Selenium	mg/L	09/17/2008	N001	26.8	-	36.8	0.11		F	#	0.00024	
Sodium	mg/L	09/17/2008	N001	26.8	-	36.8	350		F	#	0.0037	
Specific Conductance	umhos /cm	09/17/2008	N001	26.8	-	36.8	4290		F	#		
Strontium	mg/L	09/17/2008	N001	26.8	-	36.8	5.9		F	#	0.00021	
Sulfate	mg/L	09/17/2008	N001	26.8	-	36.8	2900		F	#	25	
Temperature	C	09/17/2008	N001	26.8	-	36.8	15.2		F	#		
Turbidity	NTU	09/17/2008	N001	26.8	-	36.8	9.32		F	#		
Uranium	mg/L	09/17/2008	N001	26.8	-	36.8	0.044		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0837 WELL Center of Blueeyes Ranch, N of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	17	-	27.1	275		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	17	-	27.1	0.1	U	F	#	0.1	
Calcium	mg/L	09/16/2008	N001	17	-	27.1	550		F	#	0.029	
Chloride	mg/L	09/16/2008	N001	17	-	27.1	52		F	#	10	
Magnesium	mg/L	09/16/2008	N001	17	-	27.1	190		F	#	0.018	
Manganese	mg/L	09/16/2008	N001	17	-	27.1	3.7		F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	17	-	27.1	5.3		F	#	0.05	
Oxidation Reduction Potential	mV	09/16/2008	N001	17	-	27.1	-100		F	#		
pH	s.u.	09/16/2008	N001	17	-	27.1	6.79		F	#		
Potassium	mg/L	09/16/2008	N001	17	-	27.1	9		F	#	0.053	
Selenium	mg/L	09/16/2008	N001	17	-	27.1	0.11		F	#	0.00024	
Sodium	mg/L	09/16/2008	N001	17	-	27.1	240		F	#	0.0037	
Specific Conductance	umhos /cm	09/16/2008	N001	17	-	27.1	3640		F	#		
Strontium	mg/L	09/16/2008	N001	17	-	27.1	5.1		F	#	0.00021	
Sulfate	mg/L	09/16/2008	N001	17	-	27.1	2100		F	#	25	
Temperature	C	09/16/2008	N001	17	-	27.1	16.8		F	#		
Turbidity	NTU	09/16/2008	N001	17	-	27.1	5.78		F	#		
Uranium	mg/L	09/16/2008	N001	17	-	27.1	0.04		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0838 WELL W part of Dine College tract

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	21.9	-	31.9	310		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	21.9	-	31.9	0.1	U	F	#	0.1	
Calcium	mg/L	09/16/2008	N001	21.9	-	31.9	790		F	#	0.029	
Chloride	mg/L	09/16/2008	N001	21.9	-	31.9	200		F	#	20	
Magnesium	mg/L	09/16/2008	N001	21.9	-	31.9	240		F	#	0.018	
Manganese	mg/L	09/16/2008	N001	21.9	-	31.9	0.04		F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	21.9	-	31.9	170		F	#	1	
Oxidation Reduction Potential	mV	09/16/2008	N001	21.9	-	31.9	143		F	#		
pH	s.u.	09/16/2008	N001	21.9	-	31.9	6.89		F	#		
Potassium	mg/L	09/16/2008	N001	21.9	-	31.9	16		F	#	0.053	
Selenium	mg/L	09/16/2008	N001	21.9	-	31.9	0.51		F	#	0.0012	
Sodium	mg/L	09/16/2008	N001	21.9	-	31.9	480		F	#	0.0037	
Specific Conductance	umhos /cm	09/16/2008	N001	21.9	-	31.9	5720		F	#		
Strontium	mg/L	09/16/2008	N001	21.9	-	31.9	7.7		F	#	0.00021	
Sulfate	mg/L	09/16/2008	N001	21.9	-	31.9	3400		F	#	50	
Temperature	C	09/16/2008	N001	21.9	-	31.9	18.3		F	#		
Turbidity	NTU	09/16/2008	N001	21.9	-	31.9	8.75		F	#		
Uranium	mg/L	09/16/2008	N001	21.9	-	31.9	0.042		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0841 WELL S of Multipurpose Center tract, W of US Hwy 666

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	42	-	52	770		F	#		
Ammonia Total as N	mg/L	09/11/2008	N001	42	-	52	0.1	U	F	#	0.1	
Calcium	mg/L	09/11/2008	N001	42	-	52	380		F	#	0.14	
Chloride	mg/L	09/11/2008	N001	42	-	52	990		F	#	40	
Magnesium	mg/L	09/11/2008	N001	42	-	52	790		F	#	0.089	
Manganese	mg/L	09/11/2008	N001	42	-	52	0.015	B	F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	42	-	52	920		F	#	5	
Oxidation Reduction Potential	mV	09/11/2008	N001	42	-	52	157		F	#		
pH	s.u.	09/11/2008	N001	42	-	52	7.21		F	#		
Potassium	mg/L	09/11/2008	N001	42	-	52	84		F	#	0.26	
Selenium	mg/L	09/11/2008	N001	42	-	52	3.3		F	#	0.012	
Sodium	mg/L	09/11/2008	N001	42	-	52	5300		F	#	0.18	
Specific Conductance	umhos /cm	09/11/2008	N001	42	-	52	25800		F	#		
Strontium	mg/L	09/11/2008	N001	42	-	52	8.5		F	#	0.001	
Sulfate	mg/L	09/11/2008	N001	42	-	52	16000		F	#	100	
Temperature	C	09/11/2008	N001	42	-	52	19.9		F	#		
Turbidity	NTU	09/11/2008	N001	42	-	52	5.41		F	#		
Uranium	mg/L	09/11/2008	N001	42	-	52	0.14		F	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0843 WELL E part of Blueeyes Ranch, N of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	11.9	-	21.9	344		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	11.9	-	21.9	0.1	U	F	#	0.1	
Calcium	mg/L	09/16/2008	N001	11.9	-	21.9	400		F	#	0.029	
Chloride	mg/L	09/16/2008	N001	11.9	-	21.9	58		F	#	10	
Magnesium	mg/L	09/16/2008	N001	11.9	-	21.9	130		F	#	0.018	
Manganese	mg/L	09/16/2008	N001	11.9	-	21.9	6		F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	11.9	-	21.9	27		F	#	0.2	
Oxidation Reduction Potential	mV	09/16/2008	N001	11.9	-	21.9	227		F	#		
pH	s.u.	09/16/2008	N001	11.9	-	21.9	6.86		F	#		
Potassium	mg/L	09/16/2008	N001	11.9	-	21.9	13		F	#	0.053	
Selenium	mg/L	09/16/2008	N001	11.9	-	21.9	0.21		F	#	0.0012	
Sodium	mg/L	09/16/2008	N001	11.9	-	21.9	290		F	#	0.0037	
Specific Conductance	umhos /cm	09/16/2008	N001	11.9	-	21.9	3350		F	#		
Strontium	mg/L	09/16/2008	N001	11.9	-	21.9	4.4		F	#	0.00021	
Sulfate	mg/L	09/16/2008	N001	11.9	-	21.9	1800		F	#	25	
Temperature	C	09/16/2008	N001	11.9	-	21.9	16.8		F	#		
Turbidity	NTU	09/16/2008	N001	11.9	-	21.9	8.43		F	#		
Uranium	mg/L	09/16/2008	N001	11.9	-	21.9	0.023		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0844 WELL W part of Multipurpose Center tract, W of US Hwy 666, flush mount.

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	28.91	-	38.91	698		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	28.91	-	38.91	0.1	U	F	#	0.1	
Calcium	mg/L	09/16/2008	N001	28.91	-	38.91	520		F	#	0.14	
Chloride	mg/L	09/16/2008	N001	28.91	-	38.91	900		F	#	40	
Magnesium	mg/L	09/16/2008	N001	28.91	-	38.91	1600		F	#	0.089	
Manganese	mg/L	09/16/2008	N001	28.91	-	38.91	0.002	U	F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	28.91	-	38.91	710		F	#	5	
Oxidation Reduction Potential	mV	09/16/2008	N001	28.91	-	38.91	97		F	#		
pH	s.u.	09/16/2008	N001	28.91	-	38.91	7.26		F	#		
Potassium	mg/L	09/16/2008	N001	28.91	-	38.91	59		F	#	0.26	
Selenium	mg/L	09/16/2008	N001	28.91	-	38.91	1.8		F	#	0.0047	
Sodium	mg/L	09/16/2008	N001	28.91	-	38.91	2200		F	#	0.018	
Specific Conductance	umhos /cm	09/16/2008	N001	28.91	-	38.91	16825		F	#		
Strontium	mg/L	09/16/2008	N001	28.91	-	38.91	12		F	#	0.001	
Sulfate	mg/L	09/16/2008	N001	28.91	-	38.91	9700		F	#	100	
Temperature	C	09/16/2008	N001	28.91	-	38.91	16.7		F	#		
Turbidity	NTU	09/16/2008	N001	28.91	-	38.91	5.45		F	#		
Uranium	mg/L	09/16/2008	N001	28.91	-	38.91	0.15		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0846 WELL Just W of elementary school, S of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	17.9 - 27.9	321		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	17.9 - 27.9	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/11/2008	N001	17.9 - 27.9	570		FQ	#	0.029	
Chloride	mg/L	09/11/2008	N001	17.9 - 27.9	65		FQ	#	10	
Magnesium	mg/L	09/11/2008	N001	17.9 - 27.9	170		FQ	#	0.018	
Manganese	mg/L	09/11/2008	N001	17.9 - 27.9	0.018		FQ	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	17.9 - 27.9	47		FQ	#	0.5	
Oxidation Reduction Potential	mV	09/11/2008	N001	17.9 - 27.9	157		FQ	#		
pH	s.u.	09/11/2008	N001	17.9 - 27.9	7		FQ	#		
Potassium	mg/L	09/11/2008	N001	17.9 - 27.9	8.5	EN	FQJ	#	0.053	
Selenium	mg/L	09/11/2008	N001	17.9 - 27.9	0.34		FQ	#	0.0012	
Sodium	mg/L	09/11/2008	N001	17.9 - 27.9	270		FQ	#	0.0037	
Specific Conductance	umhos /cm	09/11/2008	N001	17.9 - 27.9	4183		FQ	#		
Strontium	mg/L	09/11/2008	N001	17.9 - 27.9	4.6		FQ	#	0.00021	
Sulfate	mg/L	09/11/2008	N001	17.9 - 27.9	2300		FQ	#	25	
Temperature	C	09/11/2008	N001	17.9 - 27.9	21.2		FQ	#		
Turbidity	NTU	09/11/2008	N001	17.9 - 27.9	6.89		FQ	#		
Uranium	mg/L	09/11/2008	N001	17.9 - 27.9	0.035		FQ	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0848 WELL Just W of Shiprock High School track, S of US Hwy 64

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	0001	45	-	142.58	1790		FQ	#		
Ammonia Total as N	mg/L	09/16/2008	0001	45	-	142.58	13		FQ	#	2	
Calcium	mg/L	09/16/2008	0001	45	-	142.58	390		FQ	#	0.14	
Chloride	mg/L	09/16/2008	0001	45	-	142.58	1100		FQ	#	40	
Magnesium	mg/L	09/16/2008	0001	45	-	142.58	570		FQ	#	0.089	
Manganese	mg/L	09/16/2008	0001	45	-	142.58	3.1		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	0001	45	-	142.58	0.037		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/16/2008	N001	45	-	142.58	-25		FQ	#		
pH	s.u.	09/16/2008	N001	45	-	142.58	6.67		FQ	#		
Potassium	mg/L	09/16/2008	0001	45	-	142.58	54		FQ	#	0.26	
Selenium	mg/L	09/16/2008	0001	45	-	142.58	0.044		FQ	#	0.00012	
Sodium	mg/L	09/16/2008	0001	45	-	142.58	5900		FQ	#	0.18	
Specific Conductance	umhos /cm	09/16/2008	N001	45	-	142.58	25380		FQ	#		
Strontium	mg/L	09/16/2008	0001	45	-	142.58	20		FQ	#	0.001	
Sulfate	mg/L	09/16/2008	0001	45	-	142.58	17000		FQ	#	100	
Temperature	C	09/16/2008	N001	45	-	142.58	17.3		FQ	#		
Turbidity	NTU	09/16/2008	N001	45	-	142.58	11.1		FQ	#		
Uranium	mg/L	09/16/2008	0001	45	-	142.58	0.024		FQ	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1007 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	36.8	-	46.3	1492		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	36.8	-	46.3	24		FQ	#	2	
Calcium	mg/L	09/11/2008	N001	36.8	-	46.3	430		FQ	#	0.14	
Chloride	mg/L	09/11/2008	N001	36.8	-	46.3	580		FQ	#	40	
Magnesium	mg/L	09/11/2008	N001	36.8	-	46.3	2200		FQ	#	0.089	
Manganese	mg/L	09/11/2008	N001	36.8	-	46.3	1.5		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	36.8	-	46.3	740		FQ	#	5	
Oxidation Reduction Potential	mV	09/11/2008	N001	36.8	-	46.3	210		FQ	#		
pH	s.u.	09/11/2008	N001	36.8	-	46.3	6.52		FQ	#		
Potassium	mg/L	09/11/2008	N001	36.8	-	46.3	140		FQ	#	0.26	
Selenium	mg/L	09/11/2008	N001	36.8	-	46.3	0.1		FQ	#	0.00024	
Sodium	mg/L	09/11/2008	N001	36.8	-	46.3	2400		FQ	#	0.018	
Specific Conductance	umhos /cm	09/11/2008	N001	36.8	-	46.3	19780		FQ	#		
Strontium	mg/L	09/11/2008	N001	36.8	-	46.3	11		FQ	#	0.001	
Sulfate	mg/L	09/11/2008	N001	36.8	-	46.3	13000		FQ	#	100	
Temperature	C	09/11/2008	N001	36.8	-	46.3	17.2		FQ	#		
Turbidity	NTU	09/11/2008	N001	36.8	-	46.3	4.39		FQ	#		
Uranium	mg/L	09/11/2008	N001	36.8	-	46.3	2.4		FQ	#	0.00045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1057 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	36.66	-	41.66	374		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	36.66	-	41.66	640		F	#	50	
Calcium	mg/L	09/10/2008	N001	36.66	-	41.66	700		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	36.66	-	41.66	400		F	#	40	
Magnesium	mg/L	09/10/2008	N001	36.66	-	41.66	1400		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	36.66	-	41.66	14		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	36.66	-	41.66	1800		F	#	10	
Oxidation Reduction Potential	mV	09/10/2008	N001	36.66	-	41.66	276		F	#		
pH	s.u.	09/10/2008	N001	36.66	-	41.66	6.53		F	#		
Potassium	mg/L	09/10/2008	N001	36.66	-	41.66	200		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	36.66	-	41.66	0.24		F	#	0.0012	
Sodium	mg/L	09/10/2008	N001	36.66	-	41.66	1200		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	36.66	-	41.66	18175		F	#		
Strontium	mg/L	09/10/2008	N001	36.66	-	41.66	8.6		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	36.66	-	41.66	5500		F	#	100	
Temperature	C	09/10/2008	N001	36.66	-	41.66	17.2		F	#		
Turbidity	NTU	09/10/2008	N001	36.66	-	41.66	2.67		F	#		
Uranium	mg/L	09/10/2008	N001	36.66	-	41.66	0.045		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1058 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	41.7	-	51.2	476		FQ	#		
Ammonia Total as N	mg/L	09/17/2008	0001	41.7	-	51.2	3		FQ	#	0.1	
Calcium	mg/L	09/17/2008	0001	41.7	-	51.2	170		FQ	#	0.14	
Chloride	mg/L	09/17/2008	0001	41.7	-	51.2	1700		FQ	#	40	
Magnesium	mg/L	09/17/2008	0001	41.7	-	51.2	100		FQ	#	0.089	
Manganese	mg/L	09/17/2008	0001	41.7	-	51.2	0.25		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	0001	41.7	-	51.2	0.017		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/17/2008	N001	41.7	-	51.2	-90		FQ	#		
pH	s.u.	09/17/2008	N001	41.7	-	51.2	7.32		FQ	#		
Potassium	mg/L	09/17/2008	0001	41.7	-	51.2	19		FQ	#	0.26	
Selenium	mg/L	09/17/2008	0001	41.7	-	51.2	0.00029		UFQ	#	0.000024	
Sodium	mg/L	09/17/2008	0001	41.7	-	51.2	2300		FQ	#	0.018	
Specific Conductance	umhos /cm	09/17/2008	N001	41.7	-	51.2	11680		FQ	#		
Strontium	mg/L	09/17/2008	0001	41.7	-	51.2	7.7		FQ	#	0.001	
Sulfate	mg/L	09/17/2008	0001	41.7	-	51.2	4100		FQ	#	100	
Temperature	C	09/17/2008	N001	41.7	-	51.2	16.3		FQ	#		
Turbidity	NTU	09/17/2008	N001	41.7	-	51.2	25.6		FQ	#		
Uranium	mg/L	09/17/2008	0001	41.7	-	51.2	0.0031		FQ	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1059 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	39.5	-	49	576		FQ	#		
Ammonia Total as N	mg/L	09/10/2008	N001	39.5	-	49	0.64		FQ	#	0.1	
Calcium	mg/L	09/10/2008	N001	39.5	-	49	310		FQ	#	0.14	
Chloride	mg/L	09/10/2008	N001	39.5	-	49	970		FQ	#	40	
Magnesium	mg/L	09/10/2008	N001	39.5	-	49	320		FQ	#	0.089	
Manganese	mg/L	09/10/2008	N001	39.5	-	49	0.054		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	39.5	-	49	370		FQ	#	5	
Oxidation Reduction Potential	mV	09/10/2008	N001	39.5	-	49	180		FQ	#		
pH	s.u.	09/10/2008	N001	39.5	-	49	7.12		FQ	#		
Potassium	mg/L	09/10/2008	N001	39.5	-	49	32		FQ	#	0.26	
Selenium	mg/L	09/10/2008	N001	39.5	-	49	0.027		FQ	#	0.00012	
Sodium	mg/L	09/10/2008	N001	39.5	-	49	3500		FQ	#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	39.5	-	49	17600		FQ	#		
Strontium	mg/L	09/10/2008	N001	39.5	-	49	16		FQ	#	0.001	
Sulfate	mg/L	09/10/2008	N001	39.5	-	49	9300		FQ	#	100	
Temperature	C	09/10/2008	N001	39.5	-	49	16.9		FQ	#		
Turbidity	NTU	09/10/2008	N001	39.5	-	49	8.39		FQ	#		
Uranium	mg/L	09/10/2008	N001	39.5	-	49	0.059		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1060 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	27.2	-	36.7	640		FQ	#		
Ammonia Total as N	mg/L	09/17/2008	N001	27.2	-	36.7	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/17/2008	N001	27.2	-	36.7	180		FQ	#	0.14	
Chloride	mg/L	09/17/2008	N001	27.2	-	36.7	350		FQ	#	40	
Magnesium	mg/L	09/17/2008	N001	27.2	-	36.7	440		FQ	#	0.089	
Manganese	mg/L	09/17/2008	N001	27.2	-	36.7	0.0024	B	FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	27.2	-	36.7	320		FQ	#	2	
Oxidation Reduction Potential	mV	09/17/2008	N001	27.2	-	36.7	206		FQ	#		
pH	s.u.	09/17/2008	N001	27.2	-	36.7	7.66		FQ	#		
Potassium	mg/L	09/17/2008	N001	27.2	-	36.7	28		FQ	#	0.26	
Selenium	mg/L	09/17/2008	N001	27.2	-	36.7	1.7		FQ	#	0.0047	
Sodium	mg/L	09/17/2008	N001	27.2	-	36.7	2100		FQ	#	0.018	
Specific Conductance	umhos /cm	09/17/2008	N001	27.2	-	36.7	10900		FQ	#		
Strontium	mg/L	09/17/2008	N001	27.2	-	36.7	4.1		FQ	#	0.001	
Sulfate	mg/L	09/17/2008	N001	27.2	-	36.7	6900		FQ	#	100	
Temperature	C	09/17/2008	N001	27.2	-	36.7	20.2		FQ	#		
Turbidity	NTU	09/17/2008	N001	27.2	-	36.7	7.02		FQ	#		
Uranium	mg/L	09/17/2008	N001	27.2	-	36.7	0.096		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1068 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	0001	6.95	-	8.95	226		FQ	#		
Ammonia Total as N	mg/L	09/18/2008	N001	6.95	-	8.95	52		FQ	#	10	
Calcium	mg/L	09/18/2008	N001	6.95	-	8.95	480		FQ	#	0.072	
Chloride	mg/L	09/18/2008	N001	6.95	-	8.95	260		FQ	#	20	
Magnesium	mg/L	09/18/2008	N001	6.95	-	8.95	860		FQ	#	0.045	
Manganese	mg/L	09/18/2008	N001	6.95	-	8.95	1.3		FQ	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	6.95	-	8.95	270		FQ	#	2	
Oxidation Reduction Potential	mV	09/18/2008	N001	6.95	-	8.95	130.1		FQ	#		
pH	s.u.	09/18/2008	N001	6.95	-	8.95	7.09		FQ	#		
Potassium	mg/L	09/18/2008	N001	6.95	-	8.95	68		FQ	#	0.13	
Selenium	mg/L	09/18/2008	N001	6.95	-	8.95	0.014		FQ	#	0.00012	
Sodium	mg/L	09/18/2008	N001	6.95	-	8.95	970		FQ	#	0.0092	
Specific Conductance	umhos /cm	09/18/2008	N001	6.95	-	8.95	7621		FQ	#		
Strontium	mg/L	09/18/2008	N001	6.95	-	8.95	9.4		FQ	#	0.00052	
Sulfate	mg/L	09/18/2008	N001	6.95	-	8.95	5900		FQ	#	50	
Temperature	C	09/18/2008	N001	6.95	-	8.95	23.86		FQ	#		
Turbidity	NTU	09/18/2008	N001	6.95	-	8.95	773		FQ	#		
Uranium	mg/L	09/18/2008	N001	6.95	-	8.95	0.69		FQ	#	0.000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1070 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	52.5	-	62	744		F	#		
Ammonia Total as N	mg/L	09/17/2008	N001	52.5	-	62	8.9		F	#	2	
Calcium	mg/L	09/17/2008	N001	52.5	-	62	400		F	#	0.14	
Chloride	mg/L	09/17/2008	N001	52.5	-	62	1500		F	#	100	
Magnesium	mg/L	09/17/2008	N001	52.5	-	62	1300		F	#	0.089	
Manganese	mg/L	09/17/2008	N001	52.5	-	62	0.4		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	52.5	-	62	780		F	#	5	
Oxidation Reduction Potential	mV	09/17/2008	N001	52.5	-	62	96		F	#		
pH	s.u.	09/17/2008	N001	52.5	-	62	7.04		F	#		
Potassium	mg/L	09/17/2008	N001	52.5	-	62	100		F	#	0.26	
Selenium	mg/L	09/17/2008	N001	52.5	-	62	2.6		F	#	0.0047	
Sodium	mg/L	09/17/2008	N001	52.5	-	62	5700		F	#	0.18	
Specific Conductance	umhos /cm	09/17/2008	N001	52.5	-	62	27300		F	#		
Strontium	mg/L	09/17/2008	N001	52.5	-	62	10		F	#	0.001	
Sulfate	mg/L	09/17/2008	N001	52.5	-	62	17000		F	#	250	
Temperature	C	09/17/2008	N001	52.5	-	62	21.8		F	#		
Turbidity	NTU	09/17/2008	N001	52.5	-	62	9.99		F	#		
Uranium	mg/L	09/17/2008	N001	52.5	-	62	0.089		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1071 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	36.5	-	46	680		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	36.5	-	46	580		F	#	50	
Calcium	mg/L	09/10/2008	N001	36.5	-	46	520		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	36.5	-	46	810		F	#	40	
Magnesium	mg/L	09/10/2008	N001	36.5	-	46	2300		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	36.5	-	46	2		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	36.5	-	46	1700		F	#	10	
Oxidation Reduction Potential	mV	09/10/2008	N001	36.5	-	46	173		F	#		
pH	s.u.	09/10/2008	N001	36.5	-	46	6.72		F	#		
Potassium	mg/L	09/10/2008	N001	36.5	-	46	250		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	36.5	-	46	1		F	#	0.0047	
Sodium	mg/L	09/10/2008	N001	36.5	-	46	2700		F	#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	36.5	-	46	24470		F	#		
Strontium	mg/L	09/10/2008	N001	36.5	-	46	13		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	36.5	-	46	13000	N	F	#	100	
Temperature	C	09/10/2008	N001	36.5	-	46	20.3		F	#		
Turbidity	NTU	09/10/2008	N001	36.5	-	46	5.22		F	#		
Uranium	mg/L	09/10/2008	N001	36.5	-	46	0.15		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1072 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	39	-	48.5	1416		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	39	-	48.5	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/11/2008	N001	39	-	48.5	500		FQ	#	0.14	
Chloride	mg/L	09/11/2008	N001	39	-	48.5	1100		FQ	#	40	
Magnesium	mg/L	09/11/2008	N001	39	-	48.5	2800		FQ	#	0.089	
Manganese	mg/L	09/11/2008	N001	39	-	48.5	1.3		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	39	-	48.5	1500		FQ	#	10	
Oxidation Reduction Potential	mV	09/11/2008	N001	39	-	48.5	137		FQ	#		
pH	s.u.	09/11/2008	N001	39	-	48.5	6.67		FQ	#		
Potassium	mg/L	09/11/2008	N001	39	-	48.5	92		FQ	#	0.26	
Selenium	mg/L	09/11/2008	N001	39	-	48.5	0.0024		FQ	#	0.000024	
Sodium	mg/L	09/11/2008	N001	39	-	48.5	2900		FQ	#	0.18	
Specific Conductance	umhos /cm	09/11/2008	N001	39	-	48.5	24400		FQ	#		
Strontium	mg/L	09/11/2008	N001	39	-	48.5	15		FQ	#	0.001	
Sulfate	mg/L	09/11/2008	N001	39	-	48.5	14000		FQ	#	100	
Temperature	C	09/11/2008	N001	39	-	48.5	18.2		FQ	#		
Turbidity	NTU	09/11/2008	N001	39	-	48.5	6.53		FQ	#		
Uranium	mg/L	09/11/2008	N001	39	-	48.5	0.14		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1073 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	40.5	-	50	560		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	40.5	-	50	200		FQ	#	10	
Calcium	mg/L	09/11/2008	N001	40.5	-	50	550		FQ	#	0.14	
Chloride	mg/L	09/11/2008	N001	40.5	-	50	1200		FQ	#	40	
Magnesium	mg/L	09/11/2008	N001	40.5	-	50	1800		FQ	#	0.089	
Manganese	mg/L	09/11/2008	N001	40.5	-	50	1.2		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	40.5	-	50	1500		FQ	#	10	
Oxidation Reduction Potential	mV	09/11/2008	N001	40.5	-	50	248		FQ	#		
pH	s.u.	09/11/2008	N001	40.5	-	50	6.85		FQ	#		
Potassium	mg/L	09/11/2008	N001	40.5	-	50	160		FQ	#	0.26	
Selenium	mg/L	09/11/2008	N001	40.5	-	50	2.3		FQ	#	0.0047	
Sodium	mg/L	09/11/2008	N001	40.5	-	50	2600		FQ	#	0.18	
Specific Conductance	umhos /cm	09/11/2008	N001	40.5	-	50	22280		FQ	#		
Strontium	mg/L	09/11/2008	N001	40.5	-	50	10		FQ	#	0.001	
Sulfate	mg/L	09/11/2008	N001	40.5	-	50	9700		FQ	#	100	
Temperature	C	09/11/2008	N001	40.5	-	50	18.3		FQ	#		
Turbidity	NTU	09/11/2008	N001	40.5	-	50	6.42		FQ	#		
Uranium	mg/L	09/11/2008	N001	40.5	-	50	0.068		FQ	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1074 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	27	-	36.5	1086		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	27	-	36.5	2.7		FQ	#	0.1	
Calcium	mg/L	09/11/2008	N001	27	-	36.5	570		FQ	#	0.14	
Chloride	mg/L	09/11/2008	N001	27	-	36.5	1100		FQ	#	40	
Magnesium	mg/L	09/11/2008	N001	27	-	36.5	2200		FQ	#	0.089	
Manganese	mg/L	09/11/2008	N001	27	-	36.5	1.5		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	27	-	36.5	1500		FQ	#	10	
Oxidation Reduction Potential	mV	09/11/2008	N001	27	-	36.5	256		FQ	#		
pH	s.u.	09/11/2008	N001	27	-	36.5	6.69		FQ	#		
Potassium	mg/L	09/11/2008	N001	27	-	36.5	67		FQ	#	0.26	
Selenium	mg/L	09/11/2008	N001	27	-	36.5	0.27		FQ	#	0.0012	
Sodium	mg/L	09/11/2008	N001	27	-	36.5	2100		FQ	#	0.018	
Specific Conductance	umhos /cm	09/11/2008	N001	27	-	36.5	19950		FQ	#		
Strontium	mg/L	09/11/2008	N001	27	-	36.5	11		FQ	#	0.001	
Sulfate	mg/L	09/11/2008	N001	27	-	36.5	8900		FQ	#	100	
Temperature	C	09/11/2008	N001	27	-	36.5	18.9		FQ	#		
Turbidity	NTU	09/11/2008	N001	27	-	36.5	2.39		FQ	#		
Uranium	mg/L	09/11/2008	N001	27	-	36.5	1.9		FQ	#	0.00022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1078 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	35.5	-	45	583		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	35.5	-	45	3.6		F	#	0.1	
Calcium	mg/L	09/10/2008	N001	35.5	-	45	420		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	35.5	-	45	1300		F	#	40	
Magnesium	mg/L	09/10/2008	N001	35.5	-	45	1200		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	35.5	-	45	0.099		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	35.5	-	45	810		F	#	5	
Oxidation Reduction Potential	mV	09/10/2008	N001	35.5	-	45	193		F	#		
pH	s.u.	09/10/2008	N001	35.5	-	45	7.39		F	#		
Potassium	mg/L	09/10/2008	N001	35.5	-	45	87		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	35.5	-	45	3		F	#	0.0047	
Sodium	mg/L	09/10/2008	N001	35.5	-	45	4700		F	#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	35.5	-	45	25270		F	#		
Strontium	mg/L	09/10/2008	N001	35.5	-	45	10		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	35.5	-	45	15000		F	#	100	
Temperature	C	09/10/2008	N001	35.5	-	45	17.8		F	#		
Turbidity	NTU	09/10/2008	N001	35.5	-	45	5.02		F	#		
Uranium	mg/L	09/10/2008	N001	35.5	-	45	0.14		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1079 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	10.5	-	20	326		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	10.5	-	20	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	09/16/2008	N002	10.5	-	20	0.1	U	F	#	0.1	
Calcium	mg/L	09/16/2008	N001	10.5	-	20	530		F	#	0.029	
Calcium	mg/L	09/16/2008	N002	10.5	-	20	550		F	#	0.029	
Chloride	mg/L	09/16/2008	N001	10.5	-	20	82		F	#	10	
Chloride	mg/L	09/16/2008	N002	10.5	-	20	81		F	#	10	
Magnesium	mg/L	09/16/2008	N001	10.5	-	20	120		F	#	0.018	
Magnesium	mg/L	09/16/2008	N002	10.5	-	20	120		F	#	0.018	
Manganese	mg/L	09/16/2008	N001	10.5	-	20	0.0018	B	F	#	0.00041	
Manganese	mg/L	09/16/2008	N002	10.5	-	20	0.0039	B	F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	10.5	-	20	67		F	#	0.5	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N002	10.5	-	20	61		F	#	0.5	
Oxidation Reduction Potential	mV	09/16/2008	N001	10.5	-	20	122		F	#		
pH	s.u.	09/16/2008	N001	10.5	-	20	6.83		F	#		
Potassium	mg/L	09/16/2008	N001	10.5	-	20	9.5		F	#	0.053	
Potassium	mg/L	09/16/2008	N002	10.5	-	20	9.6		F	#	0.053	
Selenium	mg/L	09/16/2008	N001	10.5	-	20	0.26		F	#	0.0012	
Selenium	mg/L	09/16/2008	N002	10.5	-	20	0.25		F	#	0.0012	
Sodium	mg/L	09/16/2008	N001	10.5	-	20	270		F	#	0.0037	
Sodium	mg/L	09/16/2008	N002	10.5	-	20	270		F	#	0.0037	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1079 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Specific Conductance	umhos /cm	09/16/2008	N001	10.5	-	20	3715		F	#		
Strontium	mg/L	09/16/2008	N001	10.5	-	20	4.9		F	#	0.00021	
Strontium	mg/L	09/16/2008	N002	10.5	-	20	4.9		F	#	0.00021	
Sulfate	mg/L	09/16/2008	N001	10.5	-	20	2000		F	#	25	
Sulfate	mg/L	09/16/2008	N002	10.5	-	20	2000		F	#	25	
Temperature	C	09/16/2008	N001	10.5	-	20	17.8		F	#		
Turbidity	NTU	09/16/2008	N001	10.5	-	20	7.05		F	#		
Uranium	mg/L	09/16/2008	N001	10.5	-	20	0.026		F	#	0.0000045	
Uranium	mg/L	09/16/2008	N002	10.5	-	20	0.026		F	#	0.0000045	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1087 TREATMENT SYSTEM Sump from interceptor trenches in Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	N001	0	-	0	528			#		
Ammonia Total as N	mg/L	09/17/2008	N001	0	-	0	220			#	10	
Ammonia Total as N	mg/L	09/17/2008	N002	0	-	0	200			#	10	
Calcium	mg/L	09/17/2008	N001	0	-	0	440			#	0.14	
Calcium	mg/L	09/17/2008	N002	0	-	0	430			#	0.14	
Chloride	mg/L	09/17/2008	N001	0	-	0	380			#	40	
Chloride	mg/L	09/17/2008	N002	0	-	0	370			#	40	
Magnesium	mg/L	09/17/2008	N001	0	-	0	1500			#	0.089	
Magnesium	mg/L	09/17/2008	N002	0	-	0	1500			#	0.089	
Manganese	mg/L	09/17/2008	N001	0	-	0	1.4			#	0.002	
Manganese	mg/L	09/17/2008	N002	0	-	0	1.4			#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	0	-	0	440			#	5	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N002	0	-	0	460			#	5	
Oxidation Reduction Potential	mV	09/17/2008	N001	0	-	0	130.8			#		
pH	s.u.	09/17/2008	N001	0	-	0	6.56			#		
Potassium	mg/L	09/17/2008	N001	0	-	0	170			#	0.26	
Potassium	mg/L	09/17/2008	N002	0	-	0	170			#	0.26	
Selenium	mg/L	09/17/2008	N001	0	-	0	0.03			#	0.00012	
Selenium	mg/L	09/17/2008	N002	0	-	0	0.031			#	0.00012	
Sodium	mg/L	09/17/2008	N001	0	-	0	1400			#	0.018	
Sodium	mg/L	09/17/2008	N002	0	-	0	1400			#	0.018	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1087 TREATMENT SYSTEM Sump from interceptor trenches in Bob Lee Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Specific Conductance	umhos /cm	09/17/2008	N001	0	-	0	8323			#		
Strontium	mg/L	09/17/2008	N001	0	-	0	9.6			#	0.001	
Strontium	mg/L	09/17/2008	N002	0	-	0	9.8			#	0.001	
Sulfate	mg/L	09/17/2008	N001	0	-	0	9500			#	100	
Sulfate	mg/L	09/17/2008	N002	0	-	0	9400			#	100	
Temperature	C	09/17/2008	N001	0	-	0	24.91			#		
Turbidity	NTU	09/17/2008	N001	0	-	0	2.44			#		
Uranium	mg/L	09/17/2008	N001	0	-	0	0.62			#	0.000045	
Uranium	mg/L	09/17/2008	N002	0	-	0	0.52			#	0.000045	

General Water Quality Data by Location (USEE105) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1088 TREATMENT SYSTEM Sump from interceptor trenches in Many Devils Wash

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	0	-	0	770			#		
Ammonia Total as N	mg/L	09/10/2008	N001	0	-	0	0.1	U		#	0.1	
Calcium	mg/L	09/10/2008	N001	0	-	0	420			#	0.36	
Chloride	mg/L	09/10/2008	N001	0	-	0	1900			#	100	
Magnesium	mg/L	09/10/2008	N001	0	-	0	1300			#	0.22	
Manganese	mg/L	09/10/2008	N001	0	-	0	0.037	B		#	0.0051	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	0	-	0	860			#	5	
Oxidation Reduction Potential	mV	09/10/2008	N001	0	-	0	197			#		
pH	s.u.	09/10/2008	N001	0	-	0	7.43			#		
Potassium	mg/L	09/10/2008	N001	0	-	0	78			#	0.66	
Selenium	mg/L	09/10/2008	N001	0	-	0	1.7			#	0.0047	
Sodium	mg/L	09/10/2008	N001	0	-	0	7000			#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	0	-	0	32030			#		
Strontium	mg/L	09/10/2008	N001	0	-	0	11			#	0.0026	
Sulfate	mg/L	09/10/2008	N001	0	-	0	22000			#	250	
Temperature	C	09/10/2008	N001	0	-	0	21			#		
Turbidity	NTU	09/10/2008	N001	0	-	0	8.95			#		
Uranium	mg/L	09/10/2008	N001	0	-	0	0.18			#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1091 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	33	-	43	640		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	33	-	43	220		F	#	10	
Calcium	mg/L	09/10/2008	N001	33	-	43	560		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	33	-	43	1200		F	#	40	
Magnesium	mg/L	09/10/2008	N001	33	-	43	2200		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	33	-	43	6.7		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	33	-	43	1700		F	#	20	
Oxidation Reduction Potential	mV	09/10/2008	N001	33	-	43	238		F	#		
pH	s.u.	09/10/2008	N001	33	-	43	6.81		F	#		
Potassium	mg/L	09/10/2008	N001	33	-	43	130		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	33	-	43	1.1		F	#	0.0047	
Sodium	mg/L	09/10/2008	N001	33	-	43	3300		F	#	0.18	
Specific Conductance	umhos /cm	09/10/2008	N001	33	-	43	24580		F	#		
Strontium	mg/L	09/10/2008	N001	33	-	43	13		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	33	-	43	12000		F	#	100	
Temperature	C	09/10/2008	N001	33	-	43	22.8		F	#		
Turbidity	NTU	09/10/2008	N001	33	-	43	6.03		F	#		
Uranium	mg/L	09/10/2008	N001	33	-	43	0.11		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1092 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	33	-	43	530		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	33	-	43	810		F	#	50	
Calcium	mg/L	09/10/2008	N001	33	-	43	1000		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	33	-	43	650		F	#	40	
Magnesium	mg/L	09/10/2008	N001	33	-	43	1600		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	33	-	43	32		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	33	-	43	2900		F	#	20	
Oxidation Reduction Potential	mV	09/10/2008	N001	33	-	43	227		F	#		
pH	s.u.	09/10/2008	N001	33	-	43	6.7		F	#		
Potassium	mg/L	09/10/2008	N001	33	-	43	240		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	33	-	43	0.41		F	#	0.0012	
Sodium	mg/L	09/10/2008	N001	33	-	43	1600		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	33	-	43	24065		F	#		
Strontium	mg/L	09/10/2008	N001	33	-	43	11		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	33	-	43	5500		F	#	100	
Temperature	C	09/10/2008	N001	33	-	43	23.3		F	#		
Turbidity	NTU	09/10/2008	N001	33	-	43	9.02		F	#		
Uranium	mg/L	09/10/2008	N001	33	-	43	0.098		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1093 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	31.17	-	34.5	489		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	31.17	-	34.5	870		F	#	50	
Calcium	mg/L	09/10/2008	N001	31.17	-	34.5	1100		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	31.17	-	34.5	580		F	#	40	
Magnesium	mg/L	09/10/2008	N001	31.17	-	34.5	1700		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	31.17	-	34.5	35		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	31.17	-	34.5	2900		F	#	20	
Oxidation Reduction Potential	mV	09/10/2008	N001	31.17	-	34.5	252		F	#		
pH	s.u.	09/10/2008	N001	31.17	-	34.5	6.65		F	#		
Potassium	mg/L	09/10/2008	N001	31.17	-	34.5	240		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	31.17	-	34.5	0.42		F	#	0.0012	
Sodium	mg/L	09/10/2008	N001	31.17	-	34.5	1600		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	31.17	-	34.5	24170		F	#		
Strontium	mg/L	09/10/2008	N001	31.17	-	34.5	11		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	31.17	-	34.5	5000		F	#	100	
Temperature	C	09/10/2008	N001	31.17	-	34.5	21.8		F	#		
Turbidity	NTU	09/10/2008	N001	31.17	-	34.5	3.27		F	#		
Uranium	mg/L	09/10/2008	N001	31.17	-	34.5	0.11		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1095 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	39	-	49	444		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	39	-	49	820		F	#	50	
Calcium	mg/L	09/10/2008	N001	39	-	49	710		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	39	-	49	440		F	#	40	
Magnesium	mg/L	09/10/2008	N001	39	-	49	1500		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	39	-	49	26		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	39	-	49	1900		F	#	20	
Oxidation Reduction Potential	mV	09/10/2008	N001	39	-	49	249		F	#		
pH	s.u.	09/10/2008	N001	39	-	49	7.02		F	#		
Potassium	mg/L	09/10/2008	N001	39	-	49	190		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	39	-	49	0.27		F	#	0.0012	
Sodium	mg/L	09/10/2008	N001	39	-	49	1300		F	#	0.018	
Specific Conductance	umhos /cm	09/10/2008	N001	39	-	49	19730		F	#		
Strontium	mg/L	09/10/2008	N001	39	-	49	8.2		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	39	-	49	6800		F	#	100	
Temperature	C	09/10/2008	N001	39	-	49	18.7		F	#		
Turbidity	NTU	09/10/2008	N001	39	-	49	2.67		F	#		
Uranium	mg/L	09/10/2008	N001	39	-	49	0.066		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1096 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	57.5	-	66.5	610		F	#		
Ammonia Total as N	mg/L	09/10/2008	N001	57.5	-	66.5	23		F	#	1	
Ammonia Total as N	mg/L	09/10/2008	N002	57.5	-	66.5	23		F	#	1	
Calcium	mg/L	09/10/2008	N001	57.5	-	66.5	420		F	#	0.14	
Calcium	mg/L	09/10/2008	N002	57.5	-	66.5	410		F	#	0.14	
Chloride	mg/L	09/10/2008	N001	57.5	-	66.5	1200		F	#	40	
Chloride	mg/L	09/10/2008	N002	57.5	-	66.5	1100		F	#	40	
Magnesium	mg/L	09/10/2008	N001	57.5	-	66.5	1300		F	#	0.089	
Magnesium	mg/L	09/10/2008	N002	57.5	-	66.5	1300		F	#	0.089	
Manganese	mg/L	09/10/2008	N001	57.5	-	66.5	0.2		F	#	0.002	
Manganese	mg/L	09/10/2008	N002	57.5	-	66.5	0.18		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	57.5	-	66.5	630		FJ	#	5	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N002	57.5	-	66.5	780		F	#	5	
Oxidation Reduction Potential	mV	09/10/2008	N001	57.5	-	66.5	157		F	#		
pH	s.u.	09/10/2008	N001	57.5	-	66.5	7.25		F	#		
Potassium	mg/L	09/10/2008	N001	57.5	-	66.5	90		F	#	0.26	
Potassium	mg/L	09/10/2008	N002	57.5	-	66.5	88		F	#	0.26	
Selenium	mg/L	09/10/2008	N001	57.5	-	66.5	2.3		F	#	0.0047	
Selenium	mg/L	09/10/2008	N002	57.5	-	66.5	2.7		F	#	0.047	
Sodium	mg/L	09/10/2008	N001	57.5	-	66.5	4100		F	#	0.18	
Sodium	mg/L	09/10/2008	N002	57.5	-	66.5	4100		F	#	0.18	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1096 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Specific Conductance	umhos /cm	09/10/2008	N001	57.5	-	66.5	23525		F	#		
Strontium	mg/L	09/10/2008	N001	57.5	-	66.5	10		F	#	0.001	
Strontium	mg/L	09/10/2008	N002	57.5	-	66.5	9.9		F	#	0.001	
Sulfate	mg/L	09/10/2008	N001	57.5	-	66.5	15000		F	#	100	
Sulfate	mg/L	09/10/2008	N002	57.5	-	66.5	15000		F	#	100	
Temperature	C	09/10/2008	N001	57.5	-	66.5	18.2		F	#		
Turbidity	NTU	09/10/2008	N001	57.5	-	66.5	3.84		F	#		
Uranium	mg/L	09/10/2008	N001	57.5	-	66.5	0.094		F	#	0.0000045	
Uranium	mg/L	09/10/2008	N002	57.5	-	66.5	0.11		F	#	0.000022	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1120 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	17.5	-	22.5	798		FQ	#		
Ammonia Total as N	mg/L	09/16/2008	N001	17.5	-	22.5	0.1	U	FQ	#	0.1	
Calcium	mg/L	09/16/2008	N001	17.5	-	22.5	490		FQ	#	0.029	
Chloride	mg/L	09/16/2008	N001	17.5	-	22.5	32		FQ	#	10	
Magnesium	mg/L	09/16/2008	N001	17.5	-	22.5	220		FQ	#	0.018	
Manganese	mg/L	09/16/2008	N001	17.5	-	22.5	0.015		FQ	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	17.5	-	22.5	0.21		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/16/2008	N001	17.5	-	22.5	-16		FQ	#		
pH	s.u.	09/16/2008	N001	17.5	-	22.5	7.07		FQ	#		
Potassium	mg/L	09/16/2008	N001	17.5	-	22.5	7.6		FQ	#	0.053	
Selenium	mg/L	09/16/2008	N001	17.5	-	22.5	0.027		FQ	#	0.00012	
Sodium	mg/L	09/16/2008	N001	17.5	-	22.5	260		FQ	#	0.0037	
Specific Conductance	umhos /cm	09/16/2008	N001	17.5	-	22.5	3975		FQ	#		
Strontium	mg/L	09/16/2008	N001	17.5	-	22.5	5.1		FQ	#	0.00021	
Sulfate	mg/L	09/16/2008	N001	17.5	-	22.5	2300		FQ	#	25	
Temperature	C	09/16/2008	N001	17.5	-	22.5	21.4		FQ	#		
Turbidity	NTU	09/16/2008	N001	17.5	-	22.5	309		FQ	#		
Uranium	mg/L	09/16/2008	N001	17.5	-	22.5	0.052		FQ	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1122 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/16/2008	N001	17.5	-	22.5	406		F	#		
Ammonia Total as N	mg/L	09/16/2008	N001	17.5	-	22.5	0.1	U	F	#	0.1	
Calcium	mg/L	09/16/2008	N001	17.5	-	22.5	400		F	#	0.029	
Chloride	mg/L	09/16/2008	N001	17.5	-	22.5	30		F	#	10	
Magnesium	mg/L	09/16/2008	N001	17.5	-	22.5	200		F	#	0.018	
Manganese	mg/L	09/16/2008	N001	17.5	-	22.5	0.9	E	F	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/16/2008	N001	17.5	-	22.5	6.7		F	#	0.05	
Oxidation Reduction Potential	mV	09/16/2008	N001	17.5	-	22.5	74		F	#		
pH	s.u.	09/16/2008	N001	17.5	-	22.5	6.98		F	#		
Potassium	mg/L	09/16/2008	N001	17.5	-	22.5	6.8	EN	FJ	#	0.053	
Selenium	mg/L	09/16/2008	N001	17.5	-	22.5	0.072		F	#	0.00024	
Sodium	mg/L	09/16/2008	N001	17.5	-	22.5	280		F	#	0.0037	
Specific Conductance	umhos /cm	09/16/2008	N001	17.5	-	22.5	3700		F	#		
Strontium	mg/L	09/16/2008	N001	17.5	-	22.5	4.5		F	#	0.00021	
Sulfate	mg/L	09/16/2008	N001	17.5	-	22.5	2200		F	#	25	
Temperature	C	09/16/2008	N001	17.5	-	22.5	16.6		F	#		
Turbidity	NTU	09/16/2008	N001	17.5	-	22.5	9.32		F	#		
Uranium	mg/L	09/16/2008	N001	17.5	-	22.5	0.046		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: DM7 WELL Just SW of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	N001	38	-	53	374		F	#		
Ammonia Total as N	mg/L	09/18/2008	N001	38	-	53	0.57		F	#	0.1	
Calcium	mg/L	09/18/2008	N001	38	-	53	400		F	#	0.14	
Chloride	mg/L	09/18/2008	N001	38	-	53	1600		F	#	40	
Magnesium	mg/L	09/18/2008	N001	38	-	53	380		F	#	0.089	
Manganese	mg/L	09/18/2008	N001	38	-	53	0.092		F	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	38	-	53	240		F	#	2	
Oxidation Reduction Potential	mV	09/18/2008	N001	38	-	53	154		F	#		
pH	s.u.	09/18/2008	N001	38	-	53	7.17		F	#		
Potassium	mg/L	09/18/2008	N001	38	-	53	38		F	#	0.26	
Selenium	mg/L	09/18/2008	N001	38	-	53	0.0072		F	#	0.00012	
Sodium	mg/L	09/18/2008	N001	38	-	53	3900		F	#	0.18	
Specific Conductance	umhos /cm	09/18/2008	N001	38	-	53	18800		F	#		
Strontium	mg/L	09/18/2008	N001	38	-	53	16		F	#	0.001	
Sulfate	mg/L	09/18/2008	N001	38	-	53	11000		F	#	100	
Temperature	C	09/18/2008	N001	38	-	53	16.2		F	#		
Turbidity	NTU	09/18/2008	N001	38	-	53	7.21		F	#		
Uranium	mg/L	09/18/2008	N001	38	-	53	0.046		F	#	0.0000045	

Groundwater Quality Data by Location (USEE100) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: MW1 WELL Just N of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	-	1836		FQ	#		
Ammonia Total as N	mg/L	09/11/2008	N001	-	1.4		FQ	#	0.1	
Calcium	mg/L	09/11/2008	N001	-	64		FQ	#	0.14	
Chloride	mg/L	09/11/2008	N001	-	4900		FQ	#	100	
Magnesium	mg/L	09/11/2008	N001	-	32		FQ	#	0.089	
Manganese	mg/L	09/11/2008	N001	-	0.083		FQ	#	0.002	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	-	0.13		FQ	#	0.01	
Oxidation Reduction Potential	mV	09/11/2008	N001	-	16		FQ	#		
pH	s.u.	09/11/2008	N001	-	7.04		FQ	#		
Potassium	mg/L	09/11/2008	N001	-	24		FQ	#	0.26	
Selenium	mg/L	09/11/2008	N001	-	0.00003	B	UFQ	#	0.000024	
Sodium	mg/L	09/11/2008	N001	-	3600		FQ	#	0.18	
Specific Conductance	umhos /cm	09/11/2008	N001	-	17400		FQ	#		
Strontium	mg/L	09/11/2008	N001	-	7.1		FQ	#	0.001	
Sulfate	mg/L	09/11/2008	N001	-	1900		FQ	#	100	
Temperature	C	09/11/2008	N001	-	17.8		FQ	#		
Turbidity	NTU	09/11/2008	N001	-	6.53		FQ	#		
Uranium	mg/L	09/11/2008	N001	-	0.00058		FQ	#	0.0000045	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

Surface Water Quality Data
Floodplain Locations

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Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0501 SURFACE LOCATION S. bank San Juan River just E of Disposal Cell

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	137			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	59			#	0.014	
Chloride	mg/L	09/09/2008	N001	13			#	1	
Magnesium	mg/L	09/09/2008	N001	11			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.079			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.38			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	182			#		
pH	s.u.	09/09/2008	N001	8.38			#		
Potassium	mg/L	09/09/2008	N001	3.2			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.00069			#	0.000024	
Sodium	mg/L	09/09/2008	N001	27			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	508			#		
Strontium	mg/L	09/09/2008	N001	0.75			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	130			#	2.5	
Temperature	C	09/09/2008	N001	20			#		
Turbidity	NTU	09/09/2008	N001	113			#		
Uranium	mg/L	09/09/2008	N001	0.0018			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0887 SURFACE LOCATION Distributary channel of San Juan River; Adjusted 33 Ft. North of GPS Location

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	135			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	62			#	0.014	
Chloride	mg/L	09/09/2008	N001	13			#	1	
Magnesium	mg/L	09/09/2008	N001	9.9			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.018			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.13			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	200			#		
pH	s.u.	09/09/2008	N001	8.15			#		
Potassium	mg/L	09/09/2008	N001	2.8			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.00088			#	0.000024	
Sodium	mg/L	09/09/2008	N001	27			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	506			#		
Strontium	mg/L	09/09/2008	N001	0.74			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	120			#	2.5	
Temperature	C	09/09/2008	N001	17.9			#		
Turbidity	NTU	09/09/2008	N001	90			#		
Uranium	mg/L	09/09/2008	N001	0.0017			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0897 SURFACE LOCATION S. bank San Juan River, just below Many Devils Wash confluence

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	140			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	61			#	0.014	
Chloride	mg/L	09/09/2008	N001	19			#	1	
Magnesium	mg/L	09/09/2008	N001	15			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.091			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	2			#	0.02	
Oxidation Reduction Potential	mV	09/09/2008	N001	144			#		
pH	s.u.	09/09/2008	N001	8.49			#		
Potassium	mg/L	09/09/2008	N001	3.7			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.0047			#	0.000024	
Sodium	mg/L	09/09/2008	N001	50			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	620			#		
Strontium	mg/L	09/09/2008	N001	0.74			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	190			#	2.5	
Temperature	C	09/09/2008	N001	19.3			#		
Turbidity	NTU	09/09/2008	N001	114			#		
Uranium	mg/L	09/09/2008	N001	0.0023			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0898 SURFACE LOCATION S. bank San Juan River, N of floodplain background area

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	120			#		
Ammonia Total as N	mg/L	09/17/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/17/2008	N001	58			#	0.014	
Chloride	mg/L	09/17/2008	N001	12			#	1	
Magnesium	mg/L	09/17/2008	N001	9.8			#	0.0089	
Manganese	mg/L	09/17/2008	N001	0.012			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	0.2			#	0.01	
Oxidation Reduction Potential	mV	09/17/2008	N001	-18.1			#		
pH	s.u.	09/17/2008	N001	8.54			#		
Potassium	mg/L	09/17/2008	N001	2.6			#	0.026	
Selenium	mg/L	09/17/2008	N001	0.00071			#	0.000024	
Sodium	mg/L	09/17/2008	N001	26			#	0.0018	
Specific Conductance	umhos/cm	09/17/2008	N001	418			#		
Strontium	mg/L	09/17/2008	N001	0.66			#	0.0001	
Sulfate	mg/L	09/17/2008	N001	110			#	2.5	
Temperature	C	09/17/2008	N001	18.59			#		
Turbidity	NTU	09/17/2008	N001	24.7			#		
Uranium	mg/L	09/17/2008	N001	0.0015			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0939 SURFACE LOCATION Distributary channel of San Juan River

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	135			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	69			#	0.014	
Chloride	mg/L	09/09/2008	N001	14			#	1	
Magnesium	mg/L	09/09/2008	N001	13			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.071			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.18			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	227			#		
pH	s.u.	09/09/2008	N001	7.49			#		
Potassium	mg/L	09/09/2008	N001	3.1			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.0011			#	0.000024	
Sodium	mg/L	09/09/2008	N001	32			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	673			#		
Strontium	mg/L	09/09/2008	N001	0.81			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	150			#	2.5	
Temperature	C	09/09/2008	N001	17.5			#		
Turbidity	NTU	09/09/2008	N001	36			#		
Uranium	mg/L	09/09/2008	N001	0.0021			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0940 SURFACE LOCATION S. bank San Juan River about 2500 ft E of US Hwy 666 bridge

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	132			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	62			#	0.014	
Chloride	mg/L	09/09/2008	N001	13			#	1	
Magnesium	mg/L	09/09/2008	N001	11			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.073			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.29			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	139			#		
pH	s.u.	09/09/2008	N001	8.54			#		
Potassium	mg/L	09/09/2008	N001	3.1			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.00079			#	0.000024	
Sodium	mg/L	09/09/2008	N001	28			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	486			#		
Strontium	mg/L	09/09/2008	N001	0.73			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	130			#	2.5	
Temperature	C	09/09/2008	N001	19.8			#		
Turbidity	NTU	09/09/2008	N001	115			#		
Uranium	mg/L	09/09/2008	N001	0.0017			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0956 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	134			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	63			#	0.014	
Chloride	mg/L	09/09/2008	N001	13			#	1	
Magnesium	mg/L	09/09/2008	N001	11			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.091			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.23			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	127			#		
pH	s.u.	09/09/2008	N001	8.44			#		
Potassium	mg/L	09/09/2008	N001	3.2			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.00074			#	0.000024	
Sodium	mg/L	09/09/2008	N001	27			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	638			#		
Strontium	mg/L	09/09/2008	N001	0.73			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	120			#	2.5	
Temperature	C	09/09/2008	N001	18.4			#		
Turbidity	NTU	09/09/2008	N001	99.1			#		
Uranium	mg/L	09/09/2008	N001	0.0017			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 0965 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	129			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	61			#	0.014	
Chloride	mg/L	09/09/2008	N001	12			#	1	
Magnesium	mg/L	09/09/2008	N001	11			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.094			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.25			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	150			#		
pH	s.u.	09/09/2008	N001	8.4			#		
Potassium	mg/L	09/09/2008	N001	3.2			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.00071			#	0.000024	
Sodium	mg/L	09/09/2008	N001	27			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	526			#		
Strontium	mg/L	09/09/2008	N001	0.73			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	120			#	2.5	
Temperature	C	09/09/2008	N001	19			#		
Turbidity	NTU	09/09/2008	N001	110			#		
Uranium	mg/L	09/09/2008	N001	0.0017			#	0.0000045	

General Water Quality Data by Location (USEE105) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1118 TREATMENT SYSTEM Sump - seep vault

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/11/2008	N001	0	-	0	524			#		
Ammonia Total as N	mg/L	09/11/2008	N001	0	-	0	0.1	U		#	0.1	
Calcium	mg/L	09/11/2008	N001	0	-	0	420			#	0.072	
Chloride	mg/L	09/11/2008	N001	0	-	0	240			#	20	
Magnesium	mg/L	09/11/2008	N001	0	-	0	520			#	0.045	
Manganese	mg/L	09/11/2008	N001	0	-	0	0.012	B	U	#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/11/2008	N001	0	-	0	40			#	0.5	
Oxidation Reduction Potential	mV	09/11/2008	N001	0	-	0	165.6			#		
pH	s.u.	09/11/2008	N001	0	-	0	7.65			#		
Potassium	mg/L	09/11/2008	N001	0	-	0	39			#	0.13	
Selenium	mg/L	09/11/2008	N001	0	-	0	0.11			#	0.00024	
Sodium	mg/L	09/11/2008	N001	0	-	0	1200			#	0.046	
Specific Conductance	umhos /cm	09/11/2008	N001	0	-	0	9048			#		
Strontium	mg/L	09/11/2008	N001	0	-	0	9.5			#	0.00052	
Sulfate	mg/L	09/11/2008	N001	0	-	0	5900			#	50	
Temperature	C	09/11/2008	N001	0	-	0	17.09			#		
Turbidity	NTU	09/11/2008	N001	0	-	0	1.65			#		
Uranium	mg/L	09/11/2008	N001	0	-	0	0.45			#	0.000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1203 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	115			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	60			#	0.014	
Chloride	mg/L	09/09/2008	N001	14			#	0.4	
Magnesium	mg/L	09/09/2008	N001	11			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.076			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.4			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	174			#		
pH	s.u.	09/09/2008	N001	8.45			#		
Potassium	mg/L	09/09/2008	N001	3.4			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.00072			#	0.000024	
Sodium	mg/L	09/09/2008	N001	27			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	493			#		
Strontium	mg/L	09/09/2008	N001	0.72			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	130			#	1	
Temperature	C	09/09/2008	N001	20.3			#		
Turbidity	NTU	09/09/2008	N001	125			#		
Uranium	mg/L	09/09/2008	N001	0.0016			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009
Location: 1205 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	123			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	58			#	0.014	
Chloride	mg/L	09/09/2008	N001	12			#	1	
Magnesium	mg/L	09/09/2008	N001	10			#	0.0089	
Manganese	mg/L	09/09/2008	N001	0.083			#	0.0002	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	0.31			#	0.01	
Oxidation Reduction Potential	mV	09/09/2008	N001	138			#		
pH	s.u.	09/09/2008	N001	8.46			#		
Potassium	mg/L	09/09/2008	N001	3.1			#	0.026	
Selenium	mg/L	09/09/2008	N001	0.00068			#	0.000024	
Sodium	mg/L	09/09/2008	N001	27			#	0.0018	
Specific Conductance	umhos/cm	09/09/2008	N001	492			#		
Strontium	mg/L	09/09/2008	N001	0.71			#	0.0001	
Sulfate	mg/L	09/09/2008	N001	120			#	2.5	
Temperature	C	09/09/2008	N001	20			#		
Turbidity	NTU	09/09/2008	N001	127			#		
Uranium	mg/L	09/09/2008	N001	0.0016			#	0.0000045	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

Surface Water Quality Data
Terrace Locations

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Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0662 SURFACE LOCATION Bob Lee Wash, just below outflow ditch confluence

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/17/2008	0001	16			#		
Ammonia Total as N	mg/L	09/17/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/17/2008	N001	110			#	0.029	
Chloride	mg/L	09/17/2008	N001	62			#	10	
Magnesium	mg/L	09/17/2008	N001	13			#	0.018	
Manganese	mg/L	09/17/2008	N001	0.011		U	#	0.00041	
Nitrate + Nitrite as Nitrogen	mg/L	09/17/2008	N001	0.18			#	0.01	
Oxidation Reduction Potential	mV	09/17/2008	N001	94.3			#		
pH	s.u.	09/17/2008	N001	7.82			#		
Potassium	mg/L	09/17/2008	N001	13			#	0.053	
Selenium	mg/L	09/17/2008	N001	0.00034		U	#	0.000024	
Sodium	mg/L	09/17/2008	N001	660			#	0.046	
Specific Conductance	umhos/cm	09/17/2008	N001	3468			#		
Strontium	mg/L	09/17/2008	N001	11			#	0.00021	
Sulfate	mg/L	09/17/2008	N001	2200			#	25	
Temperature	C	09/17/2008	N001	23.57			#		
Turbidity	NTU	09/17/2008	N001	17			#		
Uranium	mg/L	09/17/2008	N001	0.00039			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0889 SURFACE LOCATION Many Devils Wash, just below knickpoint

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/10/2008	N001	575			#		
Ammonia Total as N	mg/L	09/10/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/10/2008	N001	440			#	0.36	
Chloride	mg/L	09/10/2008	N001	2200			#	100	
Magnesium	mg/L	09/10/2008	N001	1800			#	0.22	
Manganese	mg/L	09/10/2008	N001	0.013	B		#	0.0051	
Nitrate + Nitrite as Nitrogen	mg/L	09/10/2008	N001	810			#	10	
Oxidation Reduction Potential	mV	09/10/2008	N001	196			#		
pH	s.u.	09/10/2008	N001	8.3			#		
Potassium	mg/L	09/10/2008	N001	95			#	0.66	
Selenium	mg/L	09/10/2008	N001	2.2			#	0.0047	
Sodium	mg/L	09/10/2008	N001	8300			#	0.18	
Specific Conductance	umhos/cm	09/10/2008	N001	37340			#		
Strontium	mg/L	09/10/2008	N001	9.6			#	0.0026	
Sulfate	mg/L	09/10/2008	N001	26000			#	250	
Temperature	C	09/10/2008	N001	24			#		
Turbidity	NTU	09/10/2008	N001	5.3			#		
Uranium	mg/L	09/10/2008	N001	0.22			#	0.000022	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 0949 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/09/2008	N001	328			#		
Ammonia Total as N	mg/L	09/09/2008	N001	0.1	U		#	0.1	
Calcium	mg/L	09/09/2008	N001	550			#	0.072	
Chloride	mg/L	09/09/2008	N001	89			#	10	
Magnesium	mg/L	09/09/2008	N001	200			#	0.045	
Manganese	mg/L	09/09/2008	N001	0.089			#	0.001	
Nitrate + Nitrite as Nitrogen	mg/L	09/09/2008	N001	71			#	0.5	
Oxidation Reduction Potential	mV	09/09/2008	N001	-20			#		
pH	s.u.	09/09/2008	N001	7.61			#		
Potassium	mg/L	09/09/2008	N001	12			#	0.13	
Selenium	mg/L	09/09/2008	N001	0.37			#	0.0012	
Sodium	mg/L	09/09/2008	N001	480			#	0.0092	
Specific Conductance	umhos/cm	09/09/2008	N001	4718			#		
Strontium	mg/L	09/09/2008	N001	5.8			#	0.00052	
Sulfate	mg/L	09/09/2008	N001	2800			#	25	
Temperature	C	09/09/2008	N001	17.6			#		
Turbidity	NTU	09/09/2008	N001	67.3			#		
Uranium	mg/L	09/09/2008	N001	0.036			#	0.0000045	

Surface Water Quality Data by Location (USEE102) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009
Location: 1215 SURFACE LOCATION Evaporation Pond

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	09/18/2008	N001	594			#		
Ammonia Total as N	mg/L	09/18/2008	N001	35			#	2	
Calcium	mg/L	09/18/2008	N001	540			#	0.36	
Chloride	mg/L	09/18/2008	N001	1900			#	100	
Magnesium	mg/L	09/18/2008	N001	4900			#	0.22	
Manganese	mg/L	09/18/2008	N001	0.1	B		#	0.0051	
Nitrate + Nitrite as Nitrogen	mg/L	09/18/2008	N001	1400			#	10	
Oxidation Reduction Potential	mV	09/18/2008	N001	139			#		
pH	s.u.	09/18/2008	N001	8.11			#		
Potassium	mg/L	09/18/2008	N001	480			#	0.66	
Selenium	mg/L	09/18/2008	N001	1.7			#	0.0047	
Sodium	mg/L	09/18/2008	N001	10000			#	0.18	
Specific Conductance	umhos/cm	09/18/2008	N001	42650			#		
Strontium	mg/L	09/18/2008	N001	11			#	0.0026	
Sulfate	mg/L	09/18/2008	N001	35000			#	250	
Temperature	C	09/18/2008	N001	19.99			#		
Turbidity	NTU	09/18/2008	N001	1.7			#		
Uranium	mg/L	09/18/2008	N001	3			#	0.00045	

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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Static Water Level Data
Floodplain Locations

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STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009

Location Code	Top of Casing Elevation (Ft)	Measurement Time	Date	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0608	4893.35	09/09/2008	11:31:53	7.12	4886.23	
0610	4895.7	09/09/2008	12:08:40	10.82	4884.88	
0612	4893.35	09/10/2008	11:03:34	8.04	4885.31	
0614	4892.79	09/09/2008	14:08:05	8.85	4883.94	
0615	4892.23	09/09/2008	17:30:33	9.45	4882.78	
0618	4891.51	09/09/2008	14:51:28	8.31	4883.2	
0619	4892.19	09/10/2008	14:36:01	9.33	4882.86	
0622	4890.06	09/10/2008	11:42:27	6.61	4883.45	E
0623	4891.19	09/10/2008	15:48:26	8.23	4882.96	
0626	4891.4	09/11/2008	09:54:40	7.91	4883.49	
0628	4889.87	09/11/2008	10:24:27	6.41	4883.46	
0630	4887.62	09/11/2008	10:52:22	3.83	4883.79	
0734	4886.55	09/11/2008	12:06:31	6.8	4879.75	
0735	4895.85	09/08/2008	17:56:15	7.04	4888.81	
0736	4887.99	09/10/2008	17:42:59	6.9	4881.09	
0782	4885.68	09/16/2008	17:42:37	7.84	4877.84	
0784	4882.21	09/17/2008	12:00:48	7.94	4874.27	
0792	4891.52	09/15/2008	16:29:50	8.62	4882.9	
0793	4891.05	09/16/2008	08:28:09	8.01	4883.04	
0797	4908.04	09/18/2008	11:37:20	9.82	4898.22	
0798	4891.55	09/10/2008	12:34:18	8.9	4882.65	E
0850	4907.51	09/17/2008	13:11:19	9.61	4897.9	
0852	4907.37	09/17/2008	12:36:46	9.39	4897.98	
0853	4891.41	09/10/2008	09:56:32	8.08	4883.33	
0855	4888.18	09/11/2008	14:45:15	7.18	4881	
0856	4887.57	09/11/2008	11:26:45	7.51	4880.06	
0857	4894.02	09/09/2008	15:15:46	10.87	4883.15	
1009	4892.1	09/10/2008	09:10:33	8.99	4883.11	
1114	4892.86	09/09/2008	23:00:41	6.65	4886.21	

STATIC WATER LEVELS (USEE700) FOR SITE SHP01, Shiprock Disposal Site (Floodplain)
REPORT DATE: 2/17/2009

Location Code	Top of Casing Elevation (Ft)	Measurement Time	Date	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
1115	4895.59	09/09/2008	10:17:32	10.41	4885.18	
1117	4896.7	09/09/2008	09:50:36	10.2	4886.5	

WATER LEVEL FLAGS: E Water elevation may not be comparable to other water elevations at this site because the water level was below the top of the pup
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Static Water Level Data
Terrace Locations

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STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009

Location Code	Top of Casing Elevation (Ft)	Measurement Time	Date	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0600	4955.87	09/17/2008	17:50:38	33.83	4922.04	
0602	4956.89	09/10/2008	09:00:50	22.84	4934.05	
0603	4978.62	09/18/2008	09:35:15	30.33	4948.29	
0725	4908.58	09/17/2008	17:05:58	14.62	4893.96	
0726	4939.95	09/18/2008	12:30:23	26.06	4913.89	
0727	4940.65	09/18/2008	09:02:44	7.26	4933.39	
0728	4964.46	09/17/2008	14:45:33	24.98	4939.48	
0731	4972.15	09/18/2008	09:05:11	25.11	4947.04	
0812	5004.98	09/11/2008	15:00:33	61.59	4943.39	
0813	4984.37	09/11/2008	13:20:04	43.92	4940.45	
0814	4968.12	09/17/2008	13:00:30	32.38	4935.74	
0815	4953.67	09/18/2008	10:50:41	26.05	4927.62	
0816	4937.92	09/17/2008	16:15:46			E
0817	4957.34	09/10/2008	09:30:52	19.59	4937.75	
0819	4955.76	09/10/2008	10:55:45	20.83	4934.93	
0820	4954.95	09/17/2008	17:25:10	139.74	4815.21	
0826	4950.73	09/10/2008	11:25:52	18.49	4932.24	
0827	4946.92	09/17/2008	17:00:40			E
0830	4960.77	09/11/2008	09:10:04	15.85	4944.92	
0833	4940.52	09/17/2008	10:30:18	30.97	4909.55	
0835	4930.48	09/11/2008	15:50:13	21.51	4908.97	
0836	4901.74	09/17/2008	09:45:20	25.62	4876.12	
0837	4889.54	09/16/2008	11:10:48	17.55	4871.99	
0838	4937.7	09/16/2008	17:15:40	28.63	4909.07	
0841	4984.05	09/11/2008	17:25:24	46.07	4937.98	
0843	4883.56	09/16/2008	09:40:15	11.47	4872.09	
0844	4948.46	09/16/2008	16:50:51	32.11	4916.35	
0846	4934.57	09/11/2008	18:00:10	26.01	4908.56	
0848	4949.91	09/16/2008	13:00:14	40.4	4909.51	
1007	4962.01	09/11/2008	10:30:29	44.71	4917.3	

STATIC WATER LEVELS (USEE700) FOR SITE SHP02, Shiprock Disposal Site (Terrace)
REPORT DATE: 2/17/2009

Location Code	Top of Casing Elevation (Ft)	Measurement Time	Date	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
1057	4984.83	09/10/2008	15:25:52	39.31	4945.52	
1058	4973.58	09/17/2008	18:15:08	27.32	4946.26	
1059	4970.52	09/10/2008	12:40:19	23.78	4946.74	
1060	4970.62	09/17/2008	11:00:23			E
1068	4927.97	09/18/2008	09:54:46	7.44	4920.53	
1072	4985.3	09/11/2008	12:45:15	45.05	4940.25	
1073	4991.43	09/11/2008	14:20:20	50.32	4941.11	
1074	4959.52	09/11/2008	09:30:54	35.2	4924.32	
1079	4925.22	09/16/2008	18:00:33	17.88	4907.34	
1120		09/16/2008	15:15:30	22.46	-22.46	*
1122		09/16/2008	14:40:26	22.1	-22.1	*
DM7	4974.44	09/18/2008	08:35:57	49	4925.44	
MW1	4955.64	09/11/2008	11:15:14	52.52	4903.12	

WATER LEVEL FLAGS: E Water elevation may not be comparable to other water elevations at this site because the water level was below the top of the pump.

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

Time-Concentration Graphs
Floodplain Locations

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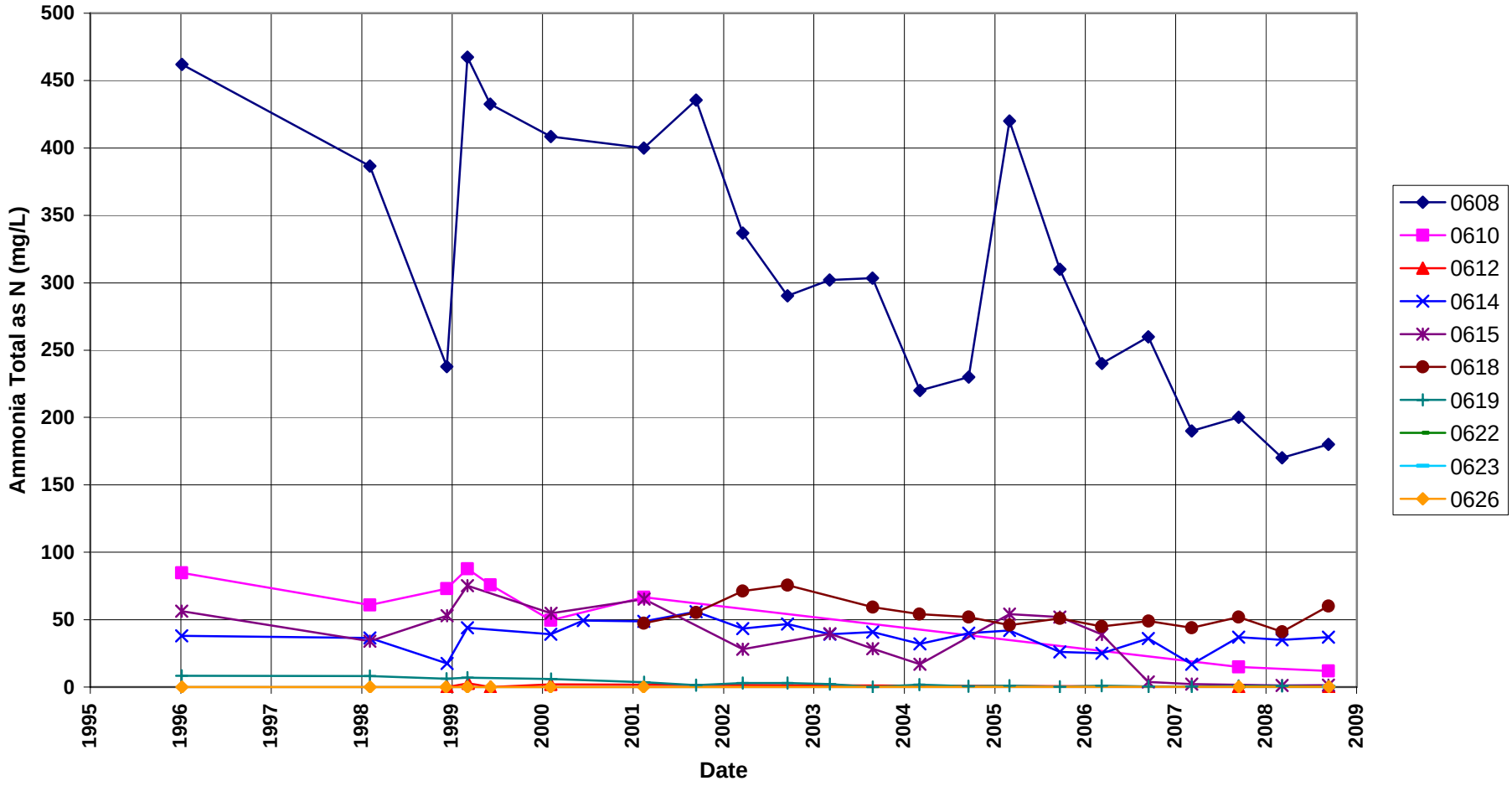
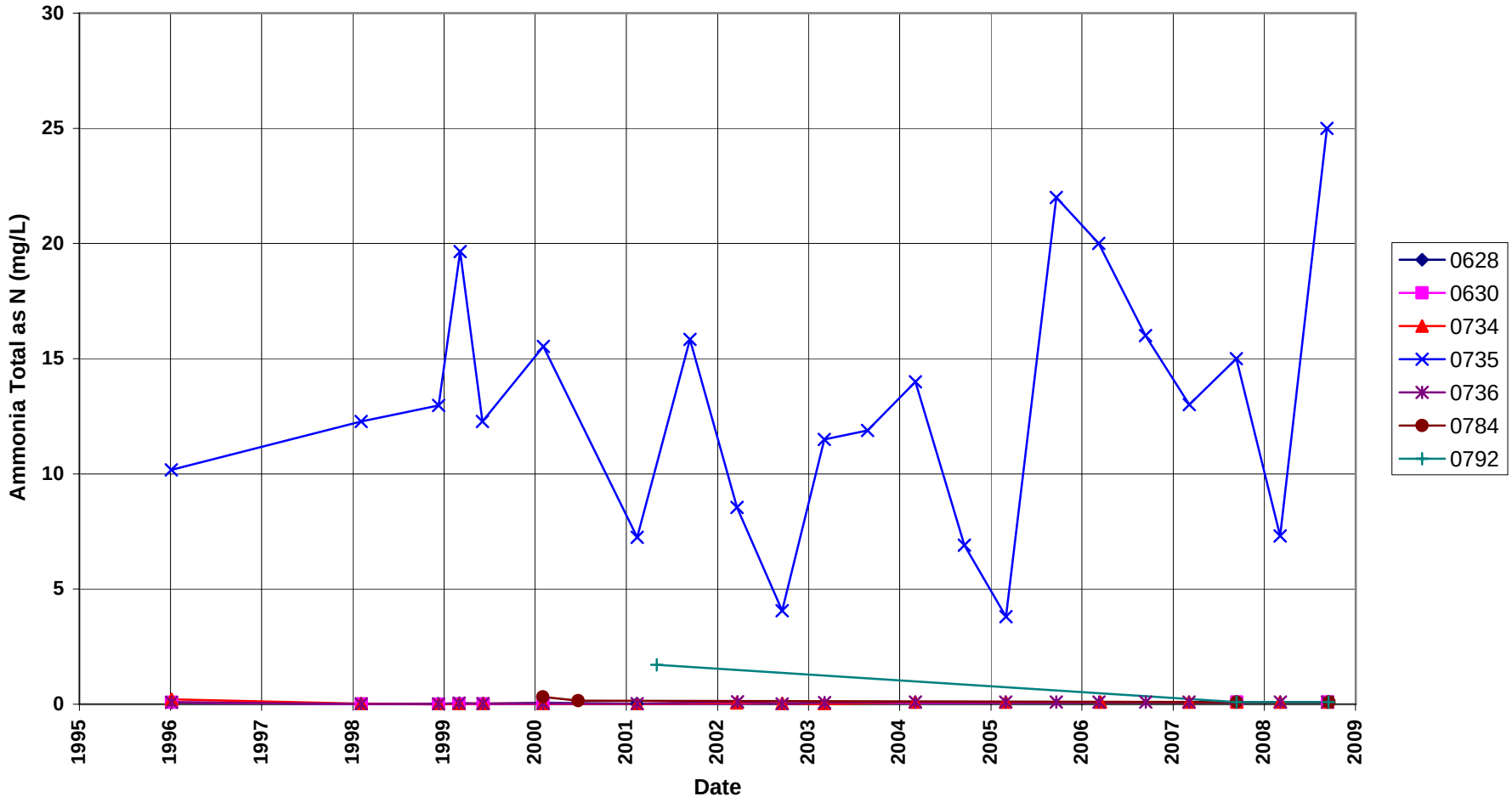
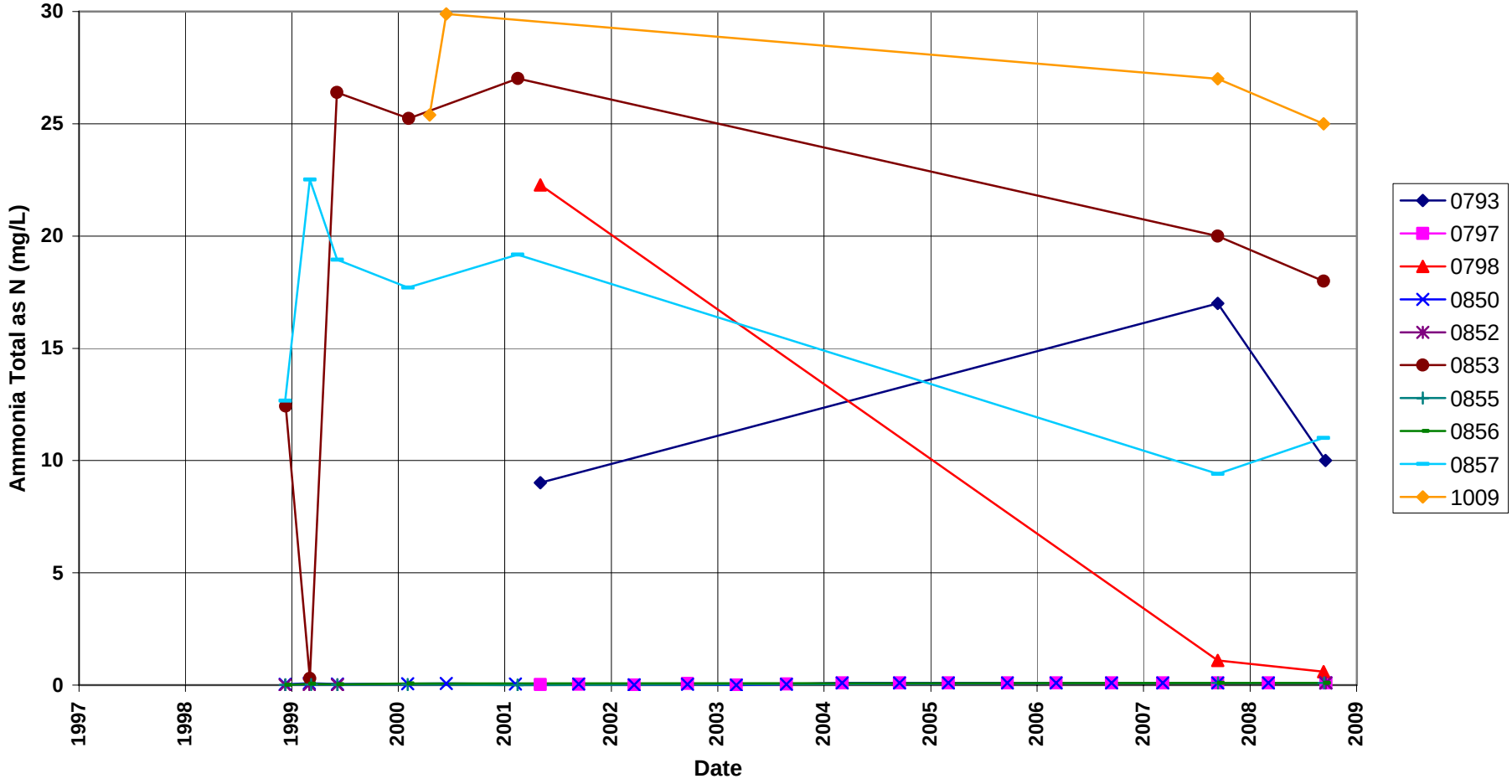
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



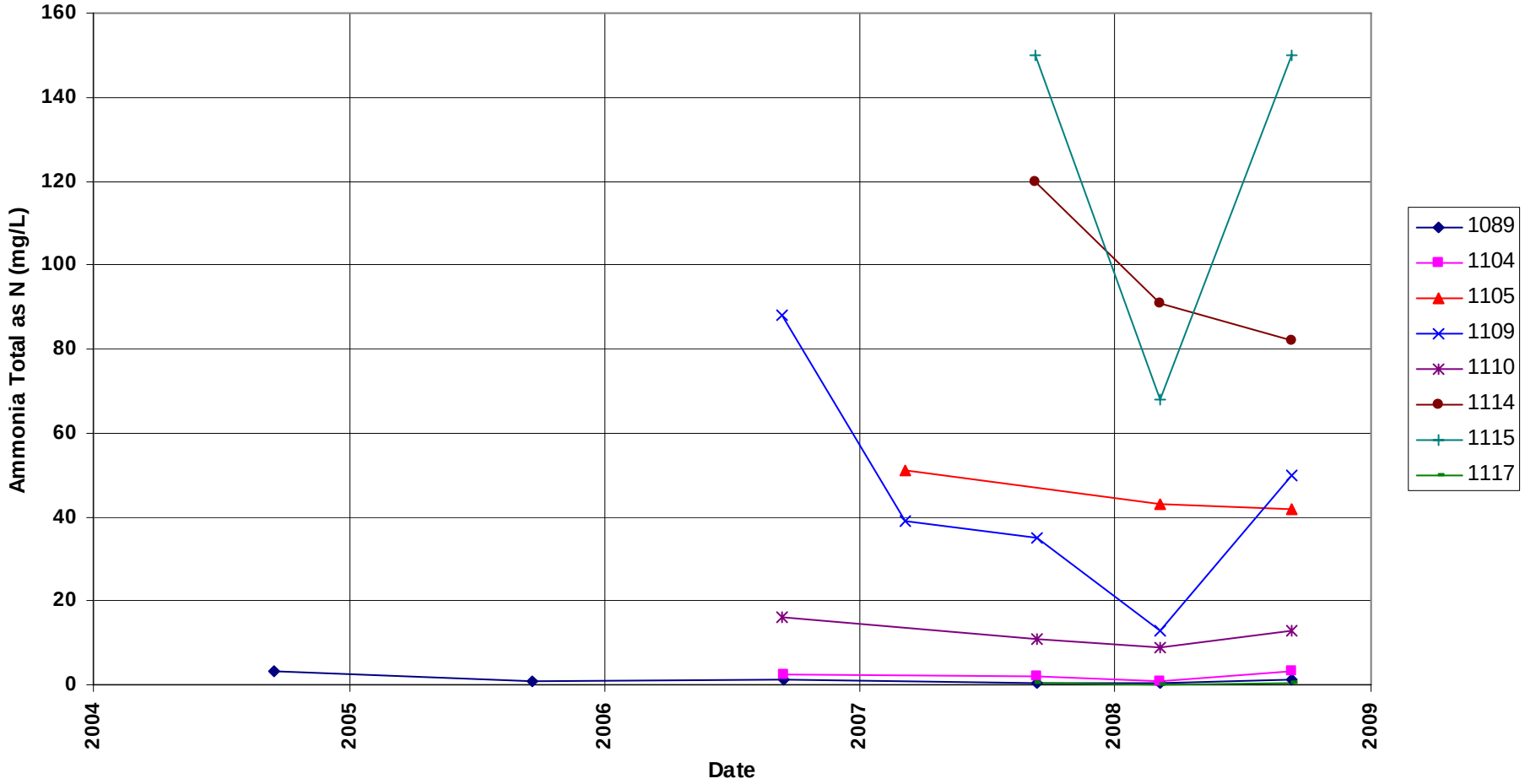
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



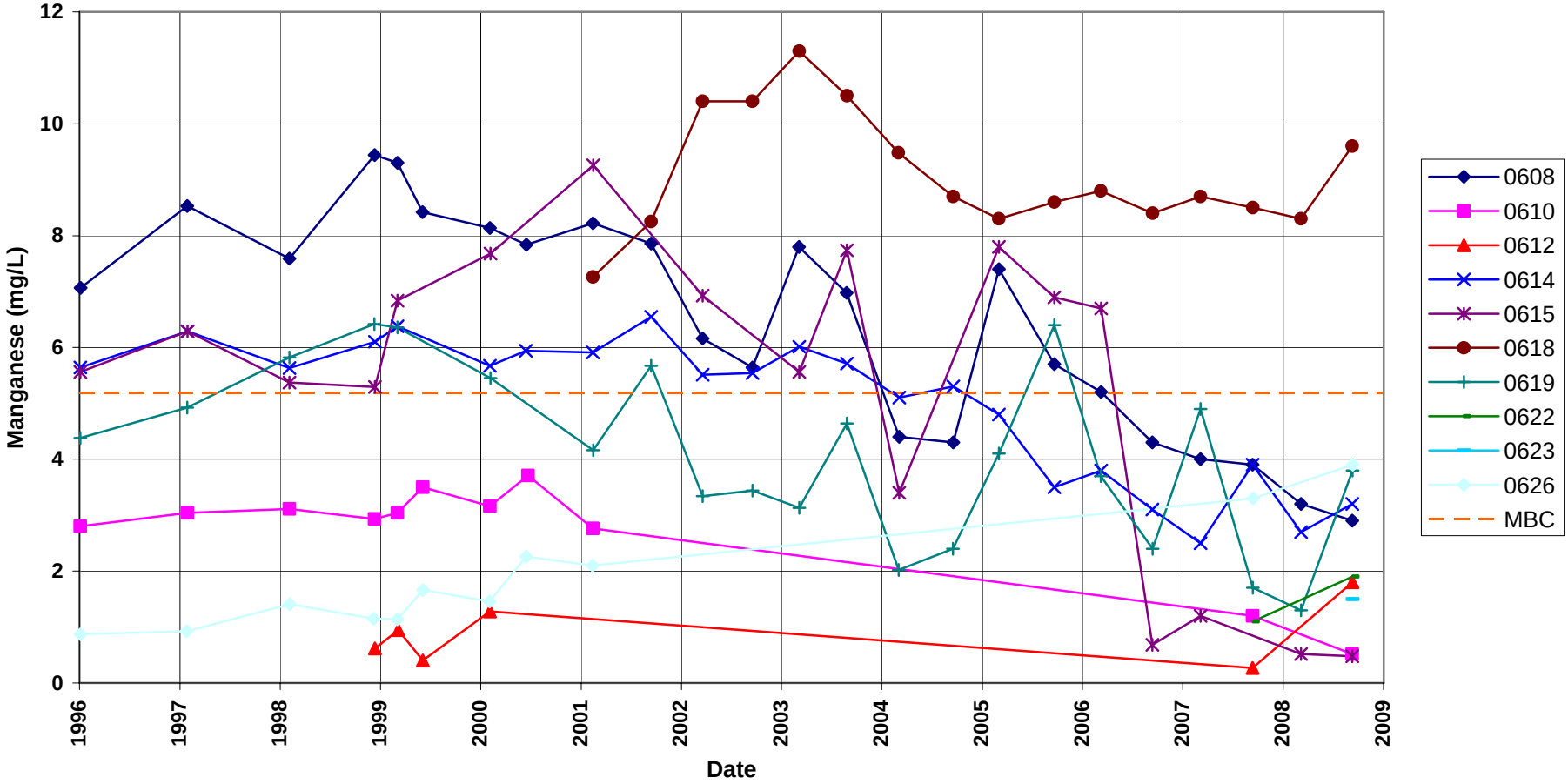
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



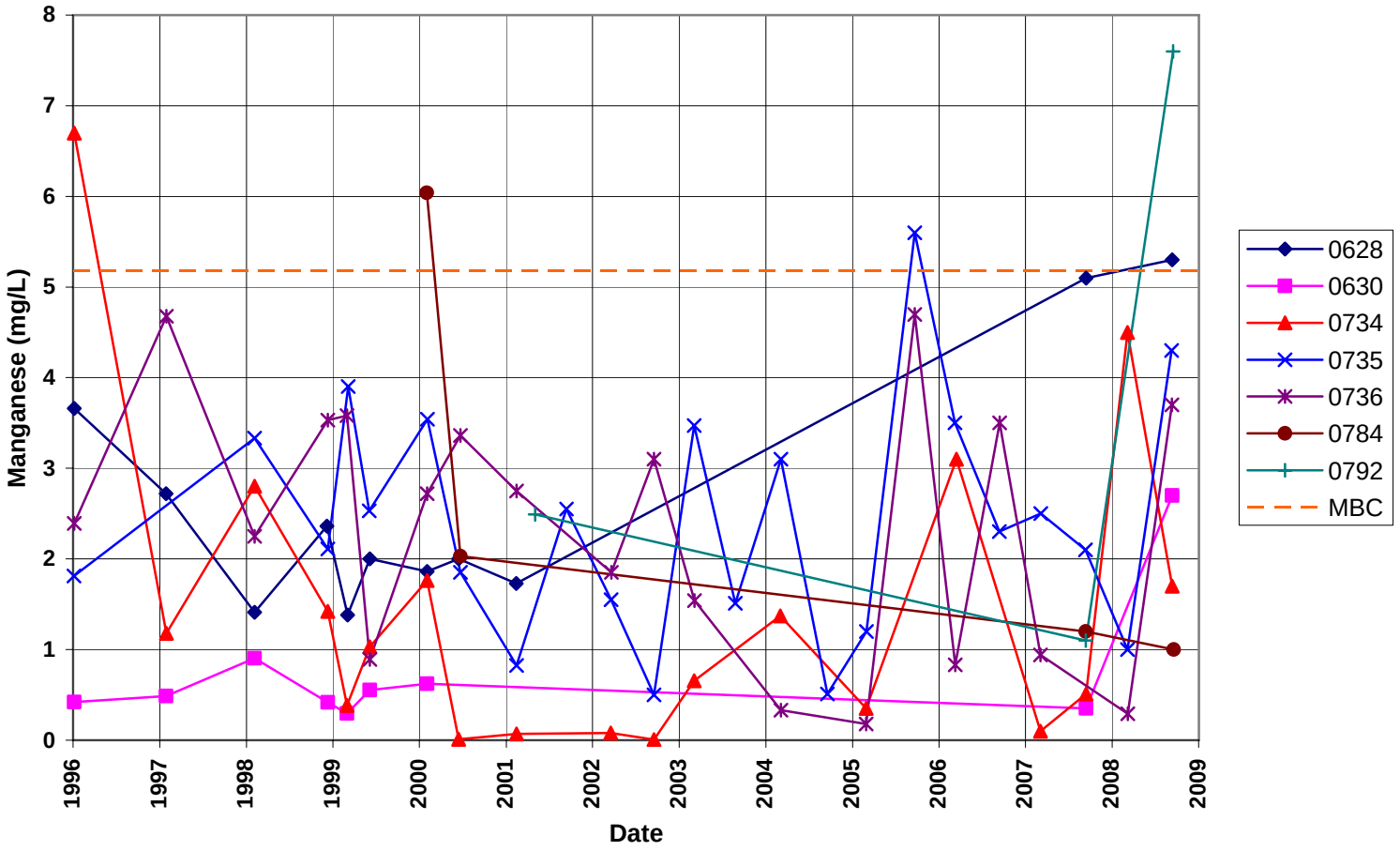
Shiprock Disposal Site (Floodplain)
Ammonia Total as N Concentration



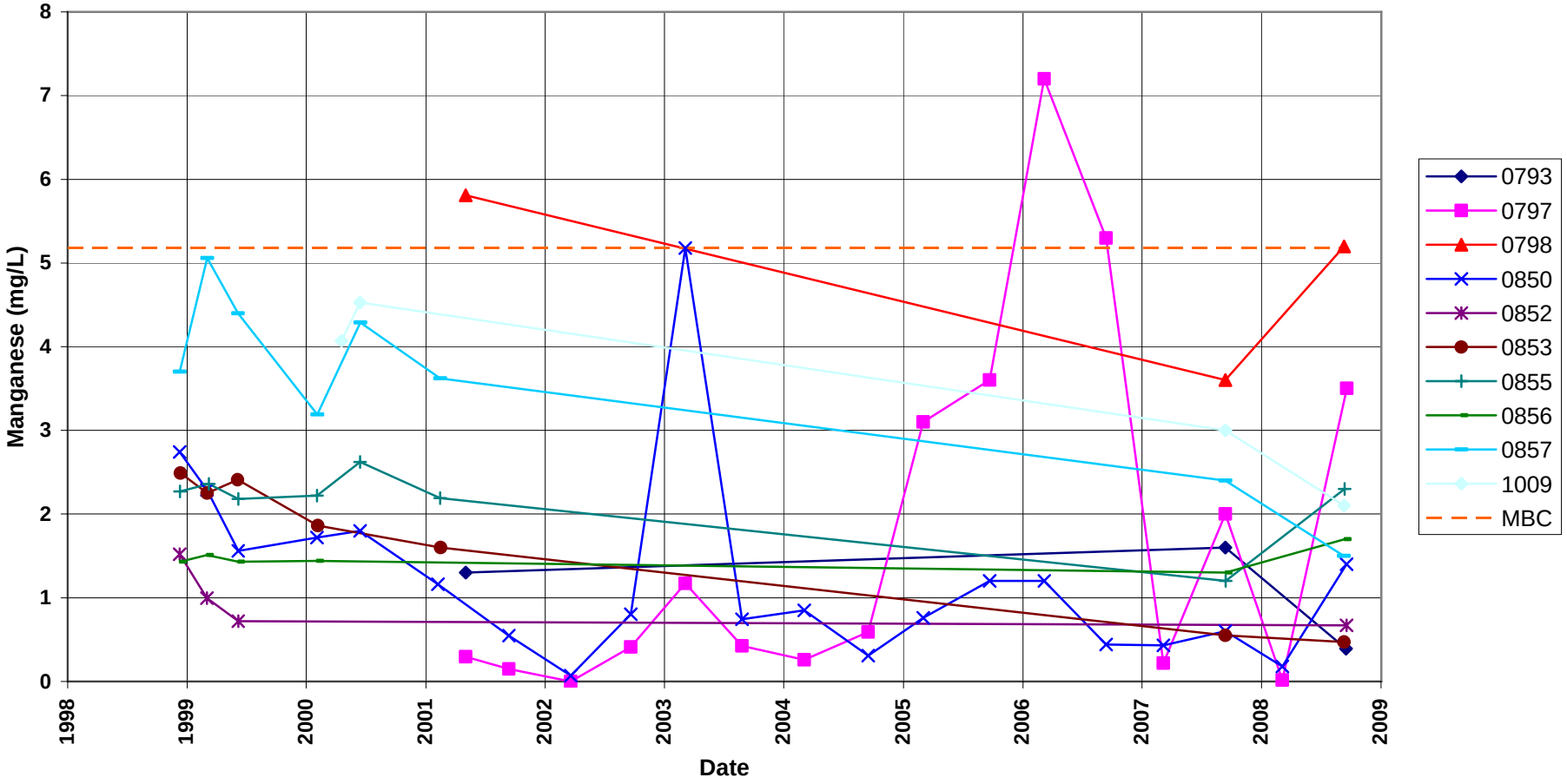
Shiprock Disposal Site (Floodplain)
Manganese Concentration
Maximum Background Concentration = 5.18 mg/L



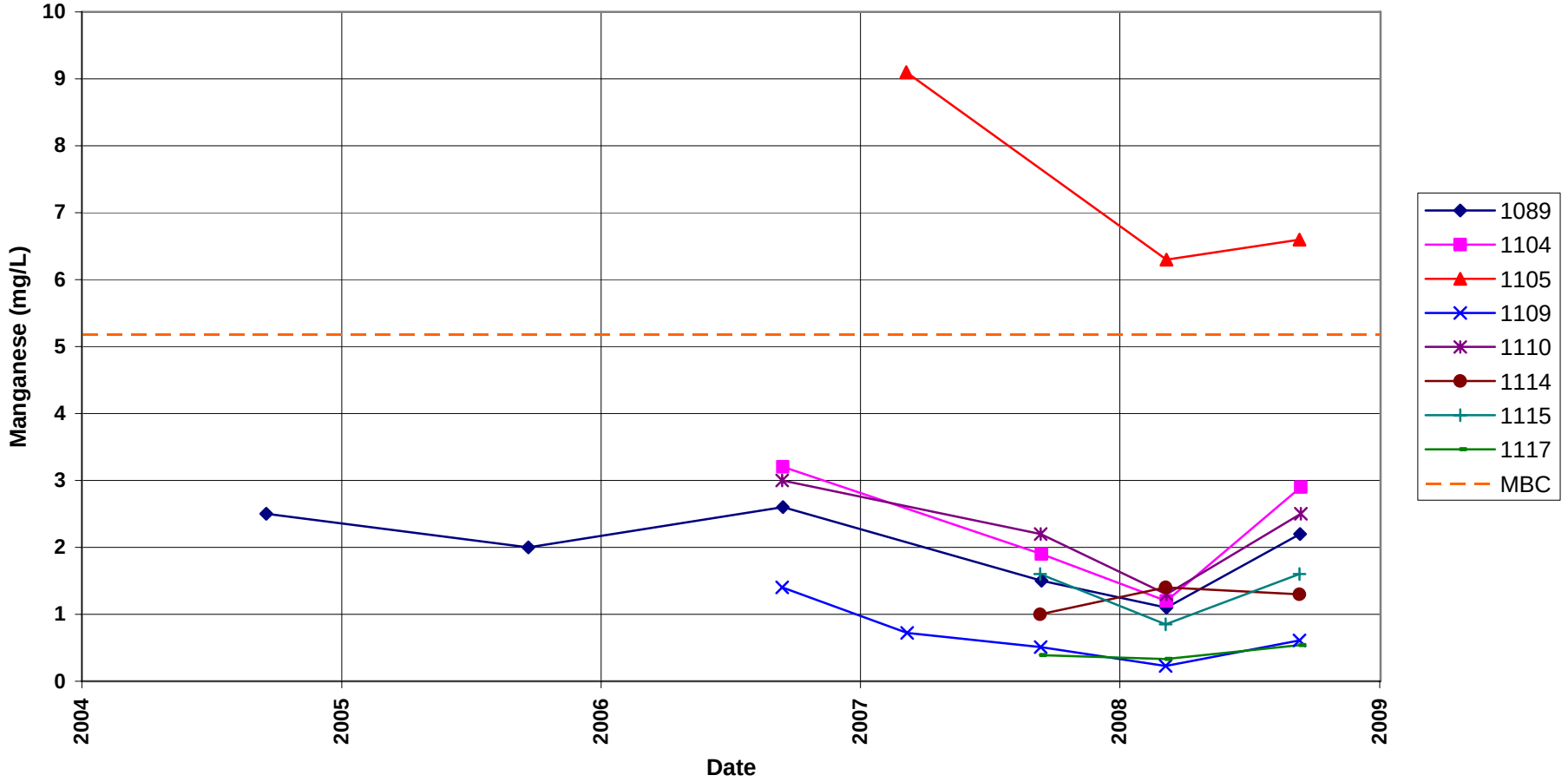
Shiprock Disposal Site (Floodplain)
Manganese Concentration
Maximum Background Concentration = 5.18 mg/L



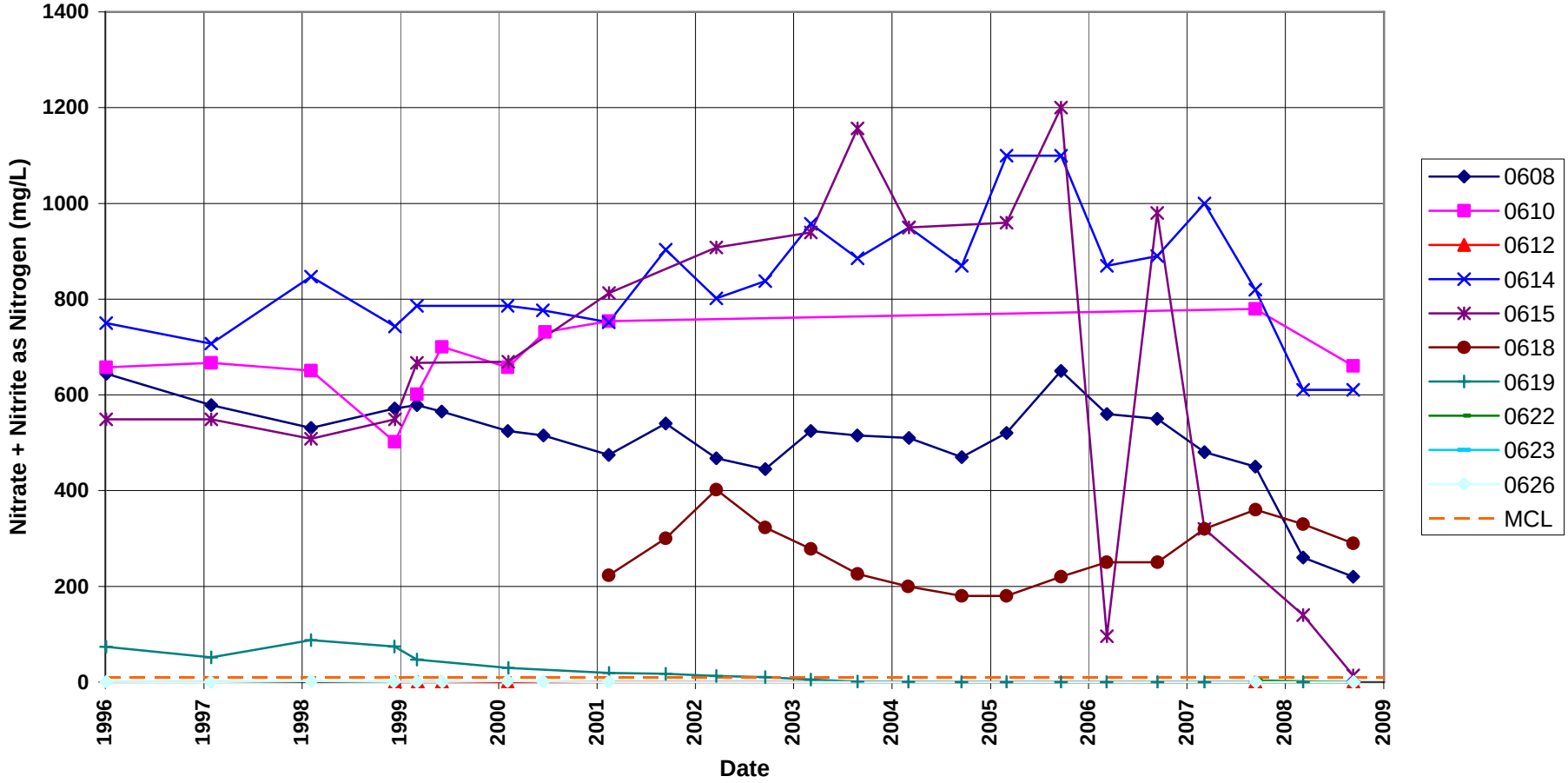
Shiprock Disposal Site (Floodplain)
Manganese Concentration
Maximum Background Concentration = 5.18 mg/L



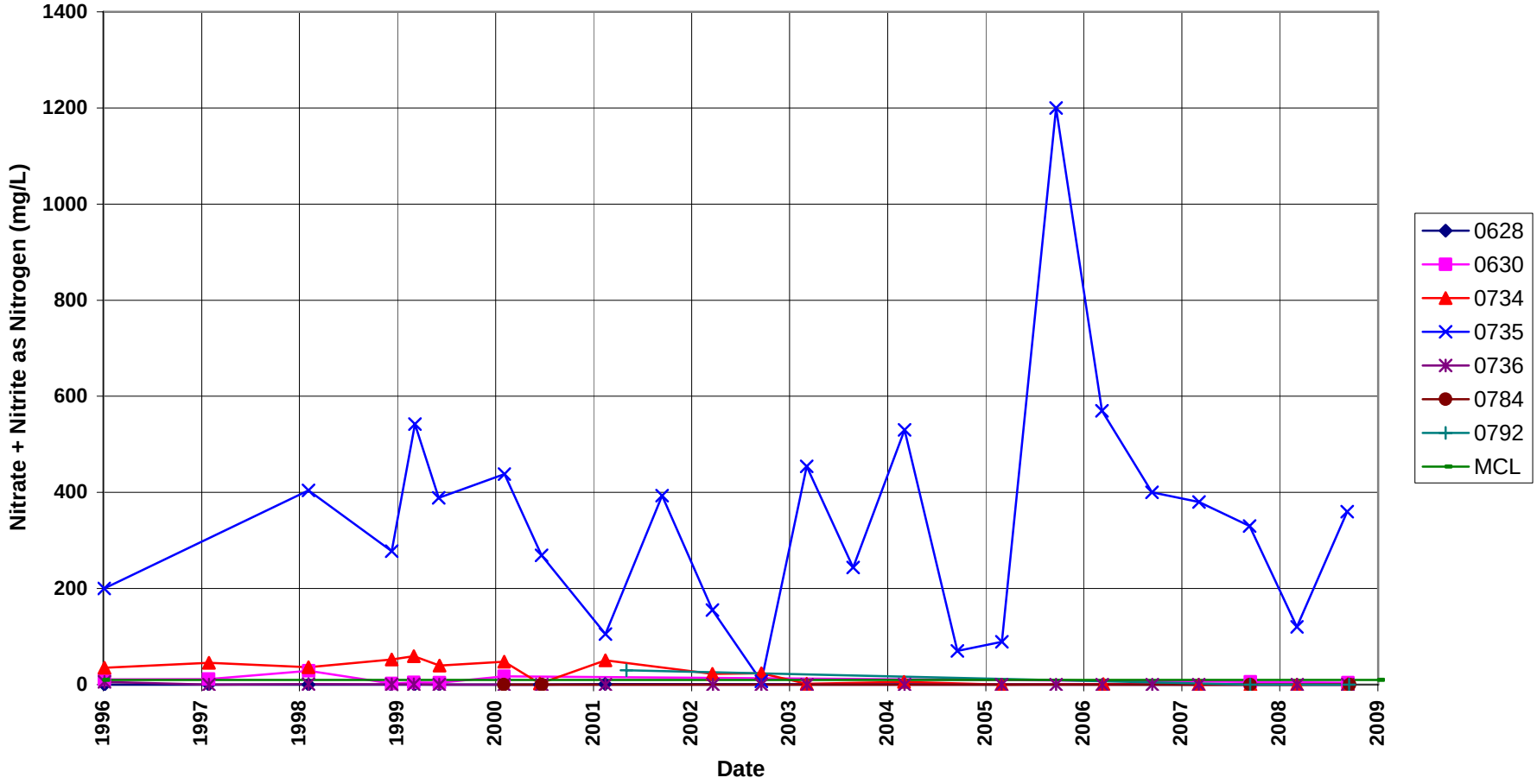
Shiprock Disposal Site (Floodplain)
Manganese Concentration
Maximum Background Concentration = 5.18 mg/L



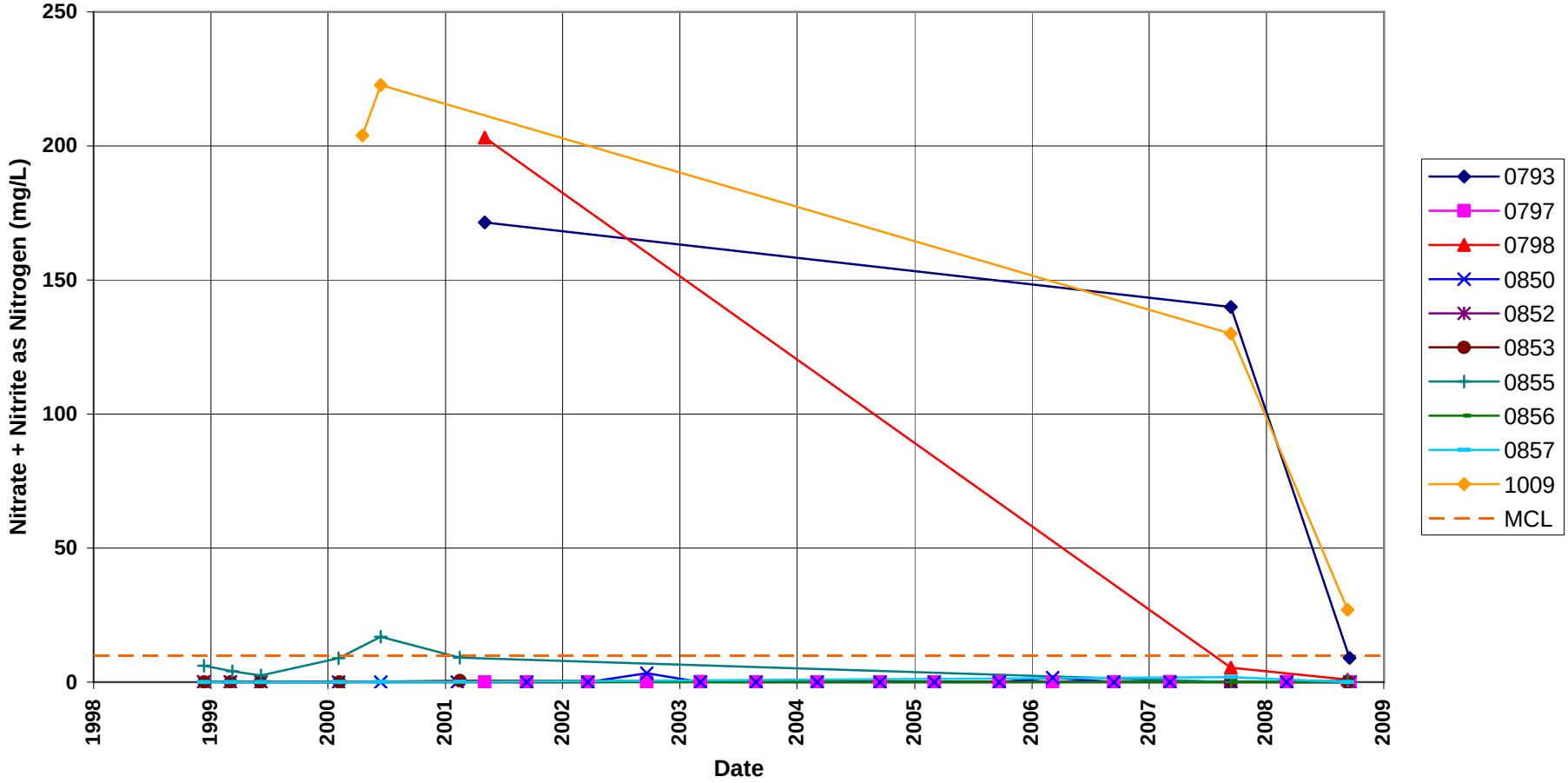
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



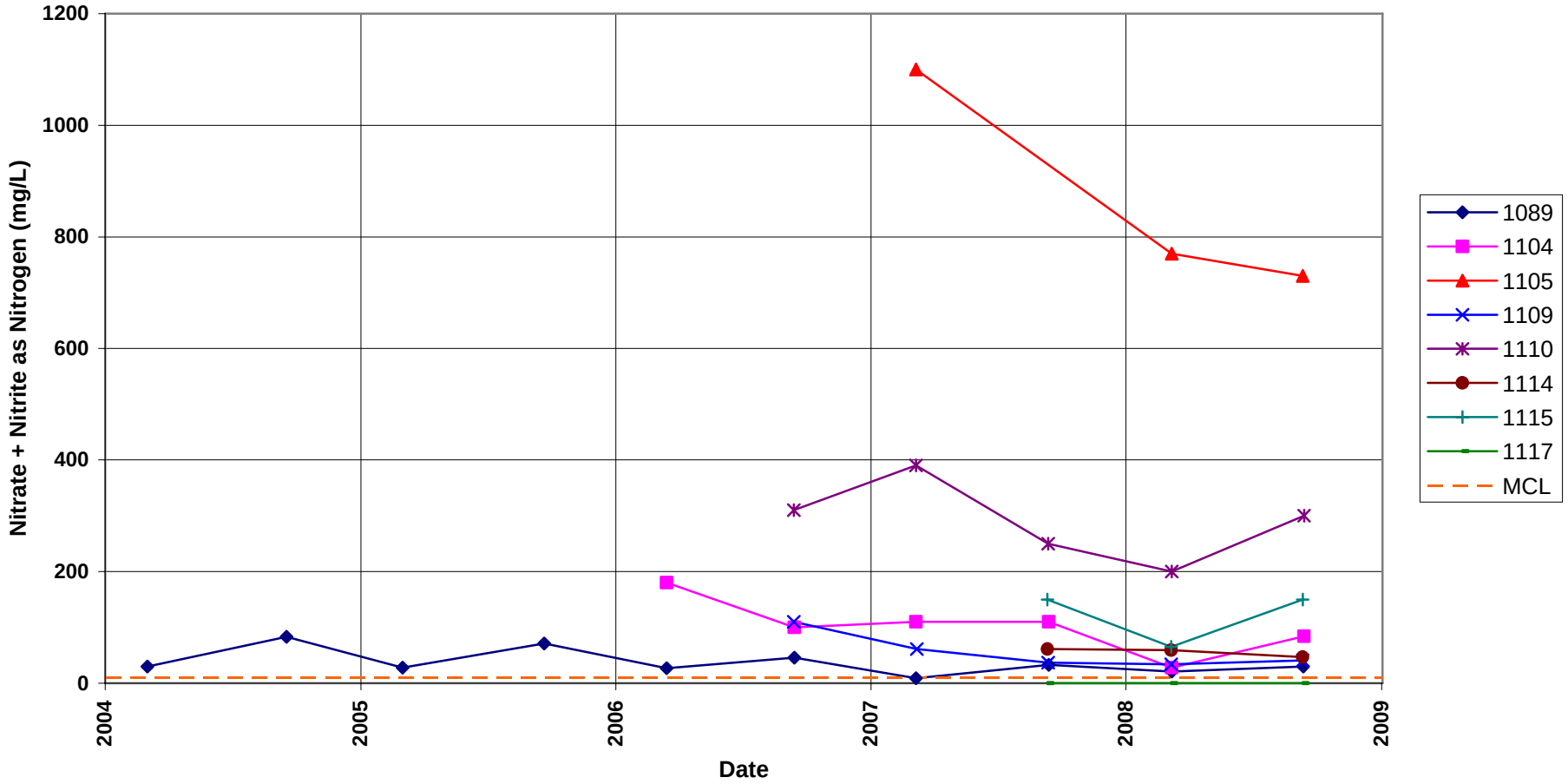
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



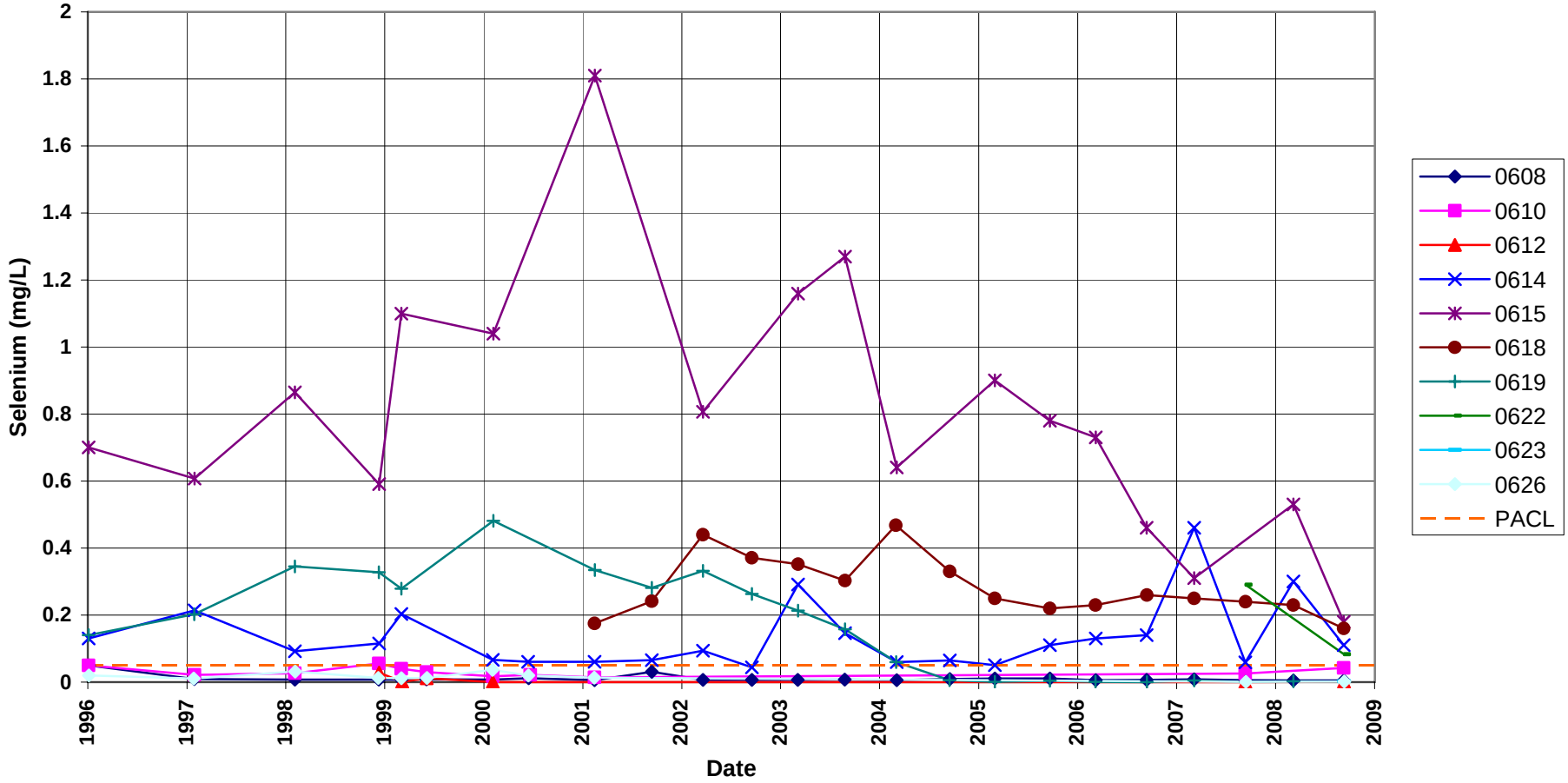
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



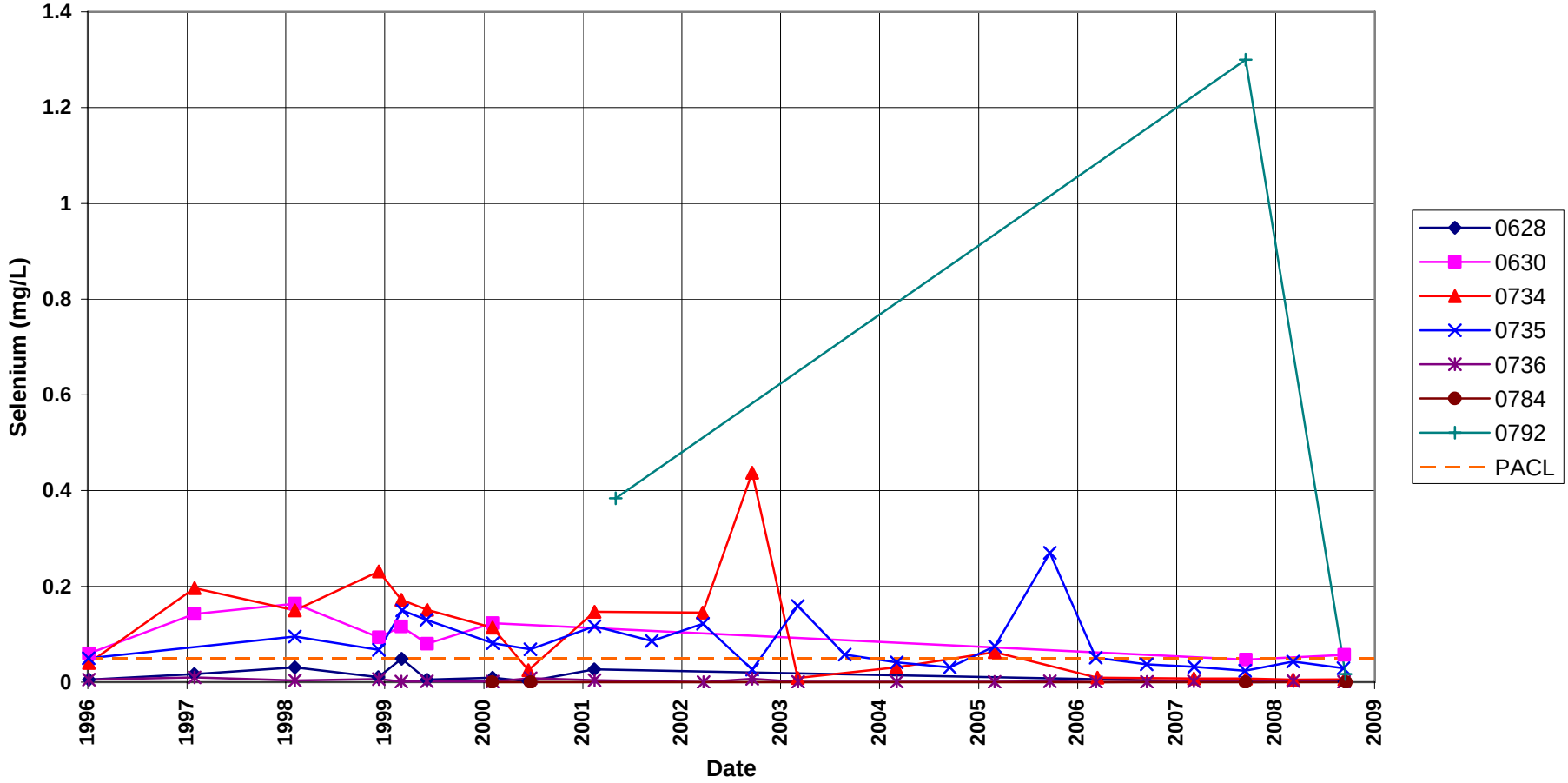
Shiprock Disposal Site (Floodplain)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



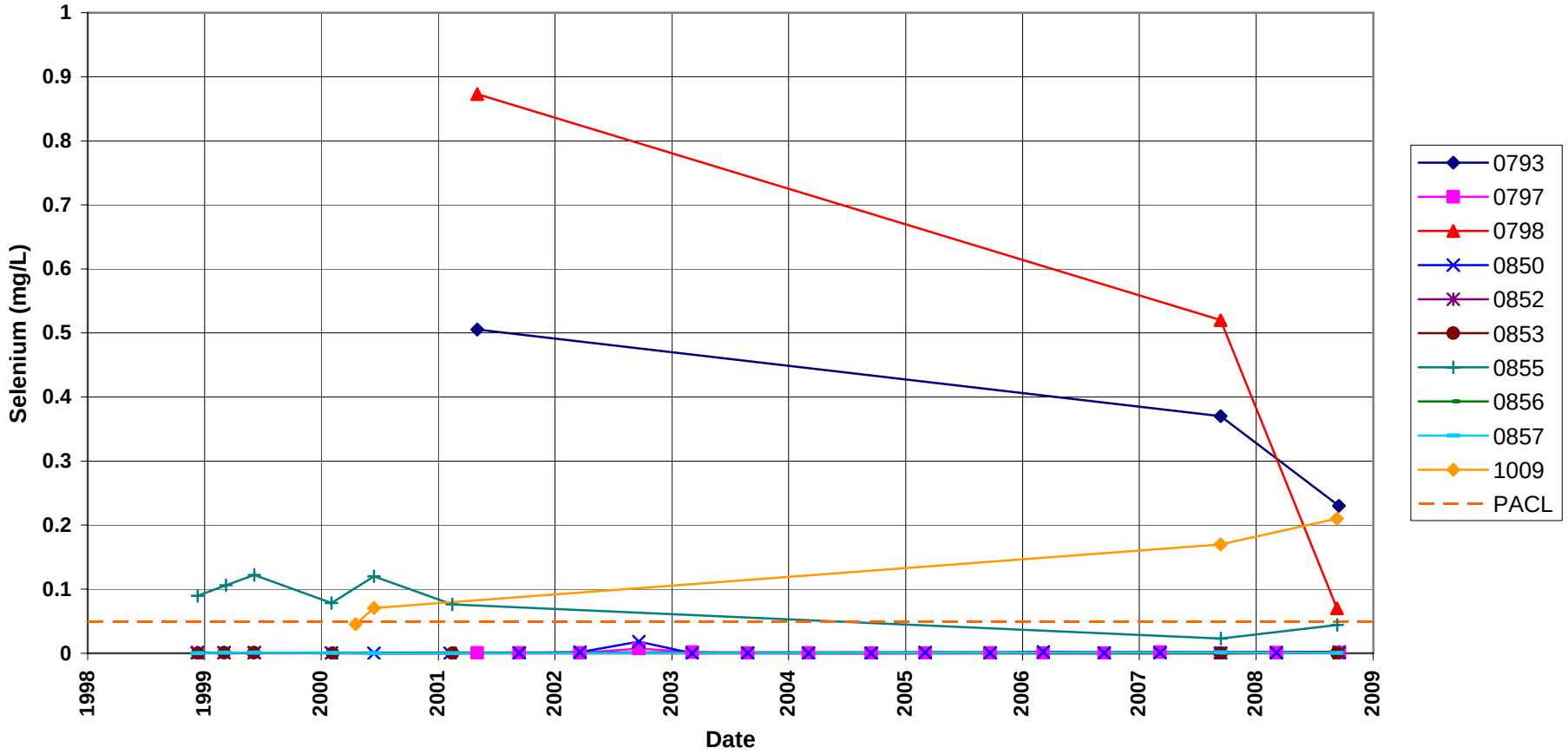
Shiprock Disposal Site (Floodplain)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



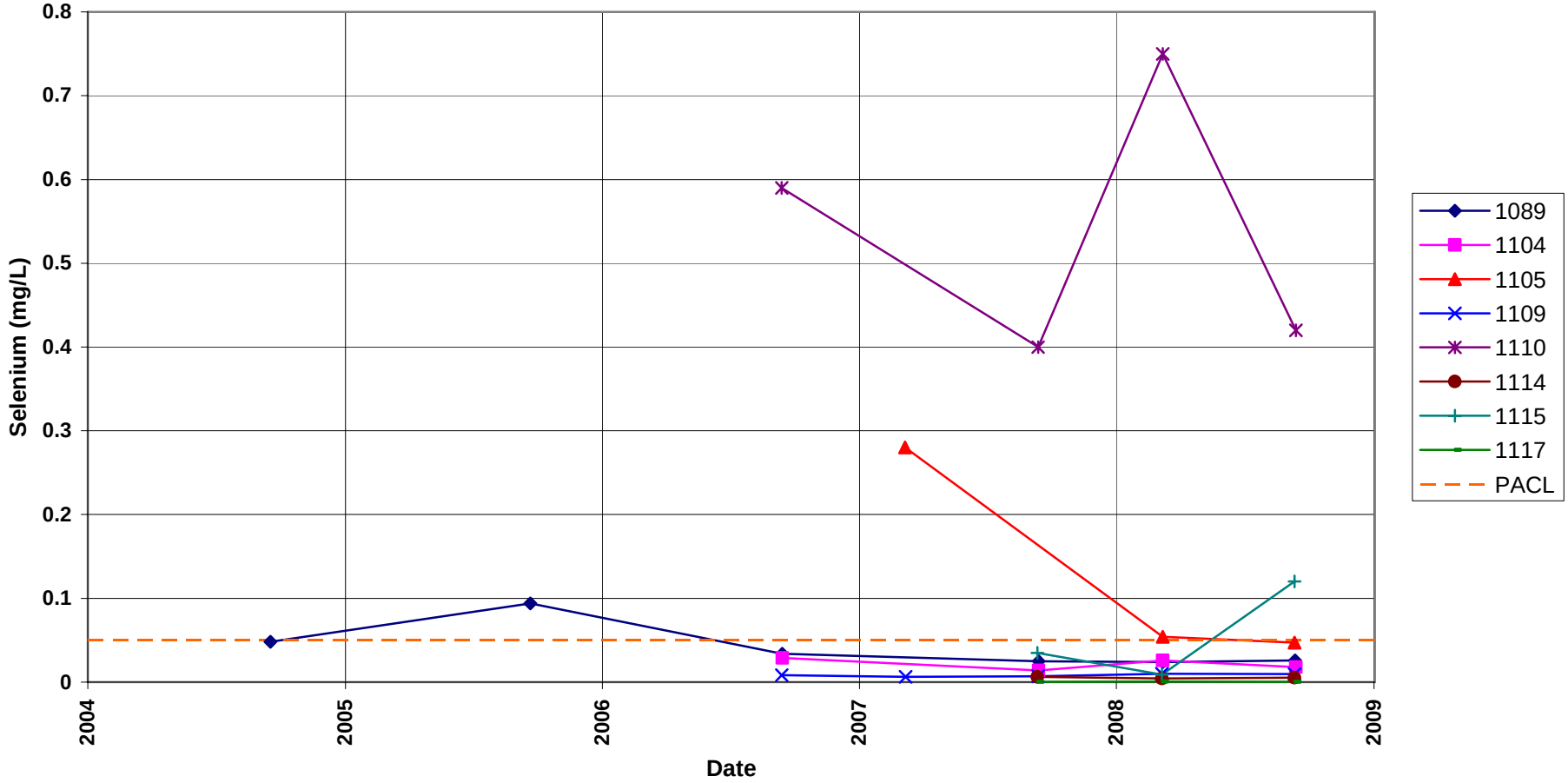
Shiprock Disposal Site (Floodplain)
Selenium Concentration
Proposedf Alternate Contaminant Limit = 0.05 mg/L



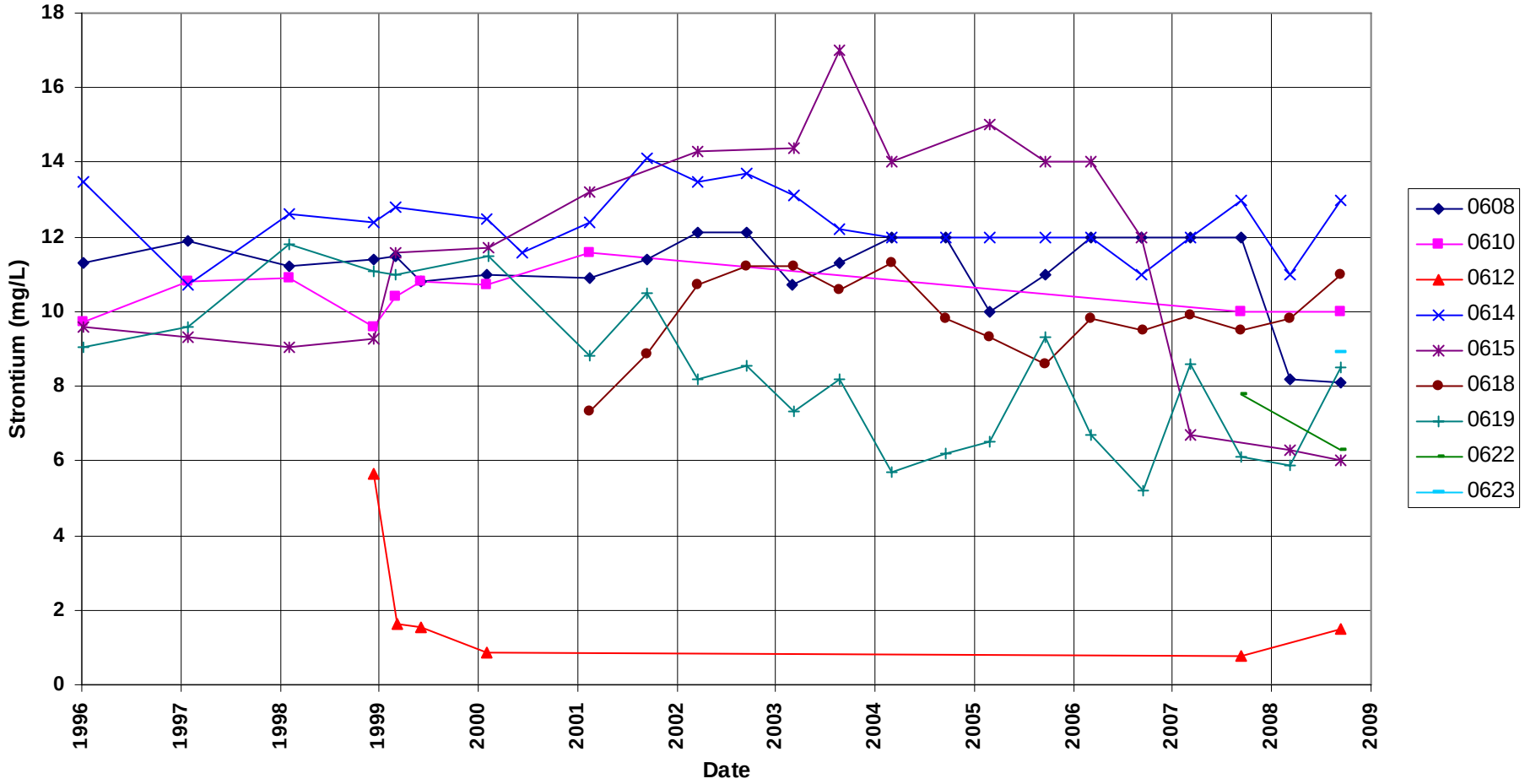
Shiprock Disposal Site (Floodplain)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



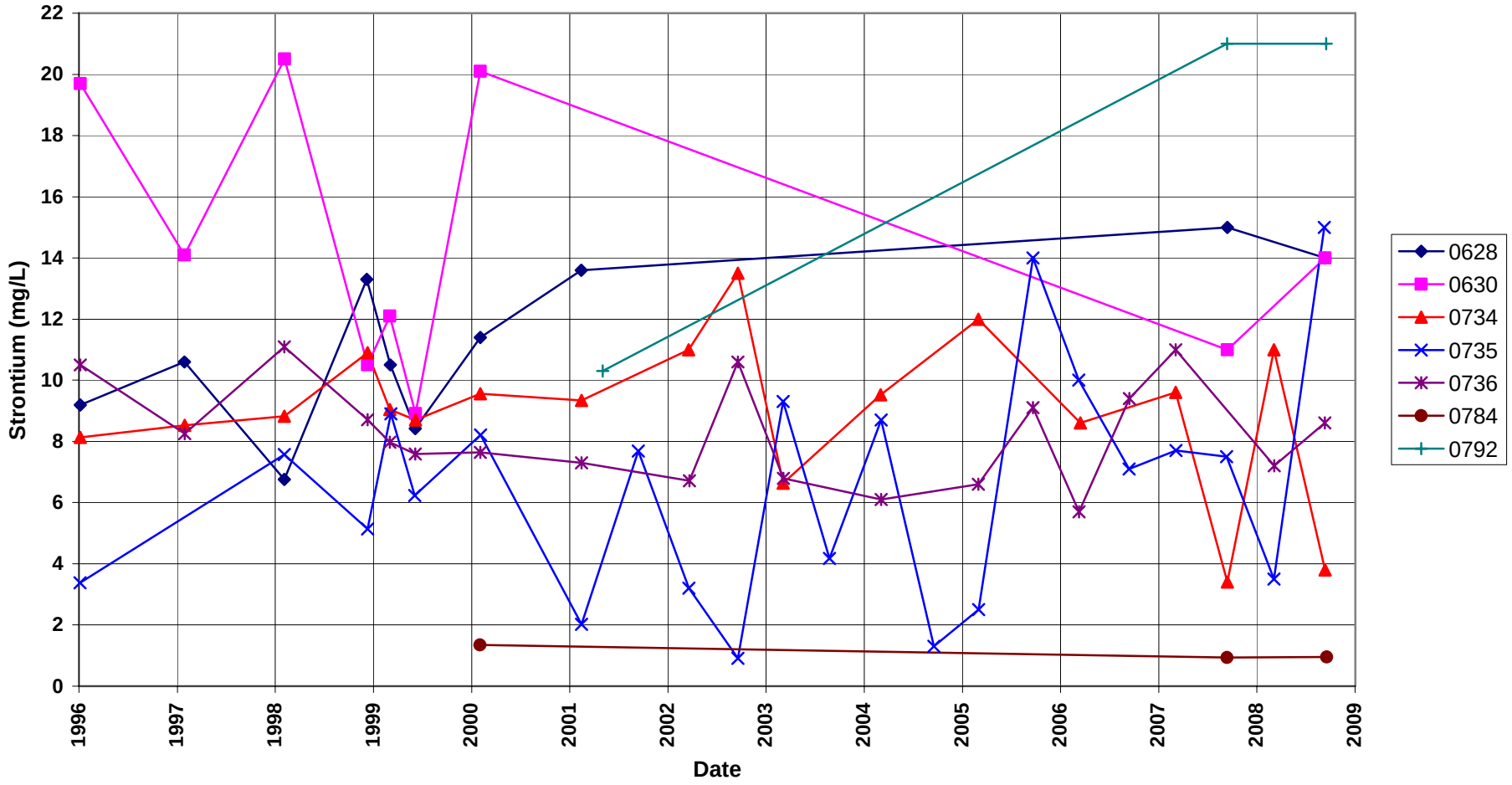
Shiprock Disposal Site (Floodplain)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



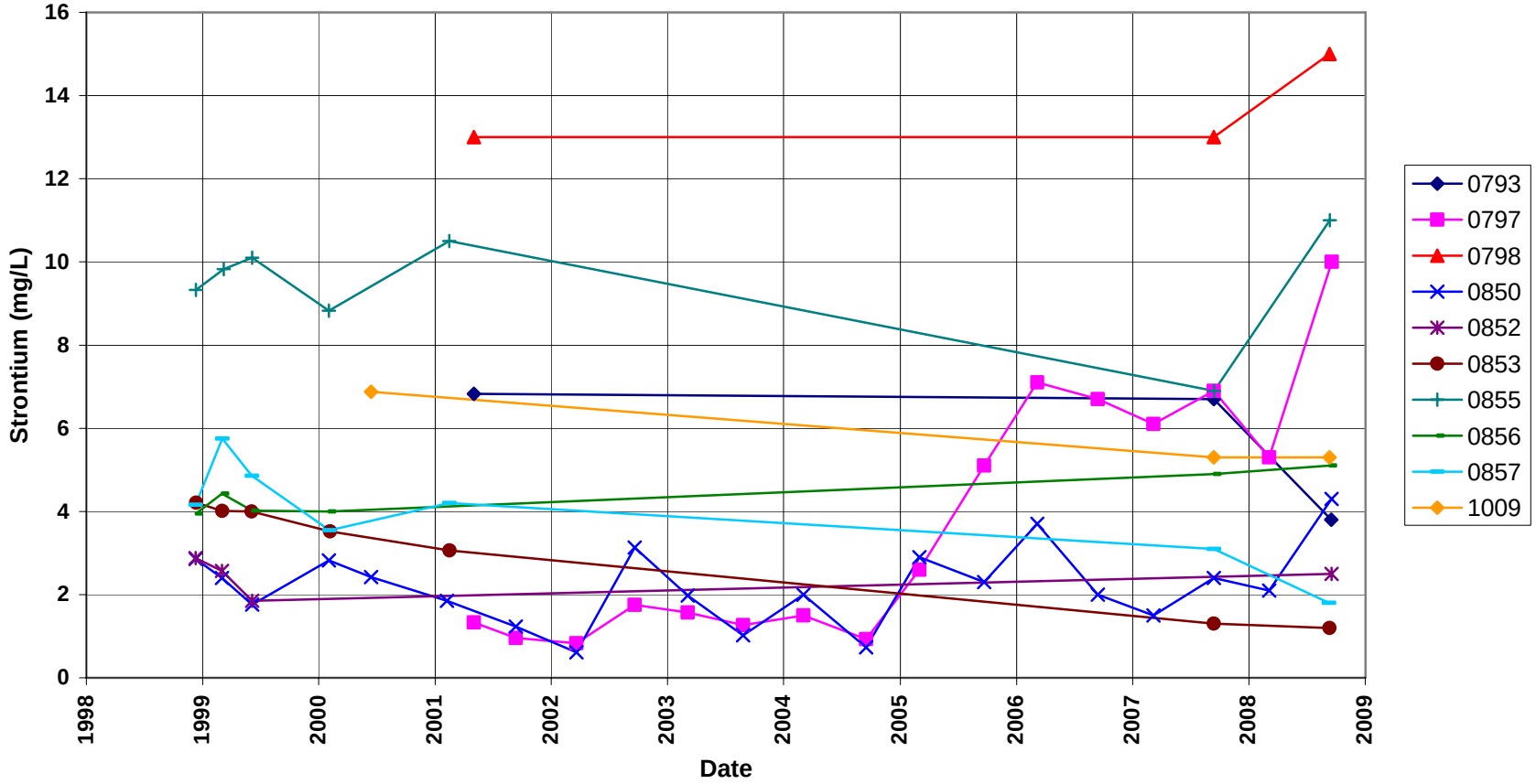
Shiprock Disposal Site (Floodplain)
Strontium Concentration

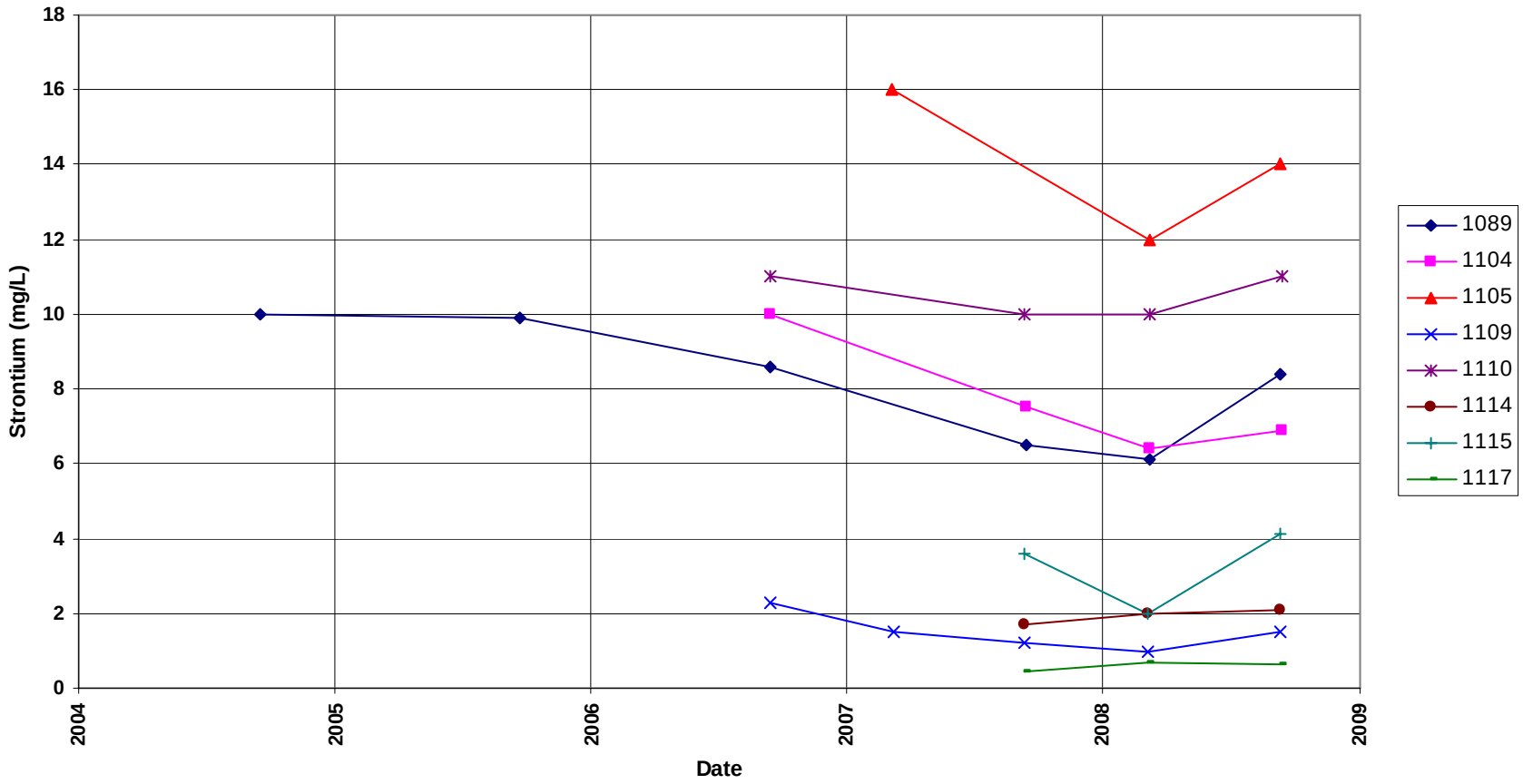


Shiprock Disposal Site (Floodplain)
Strontium Concentration

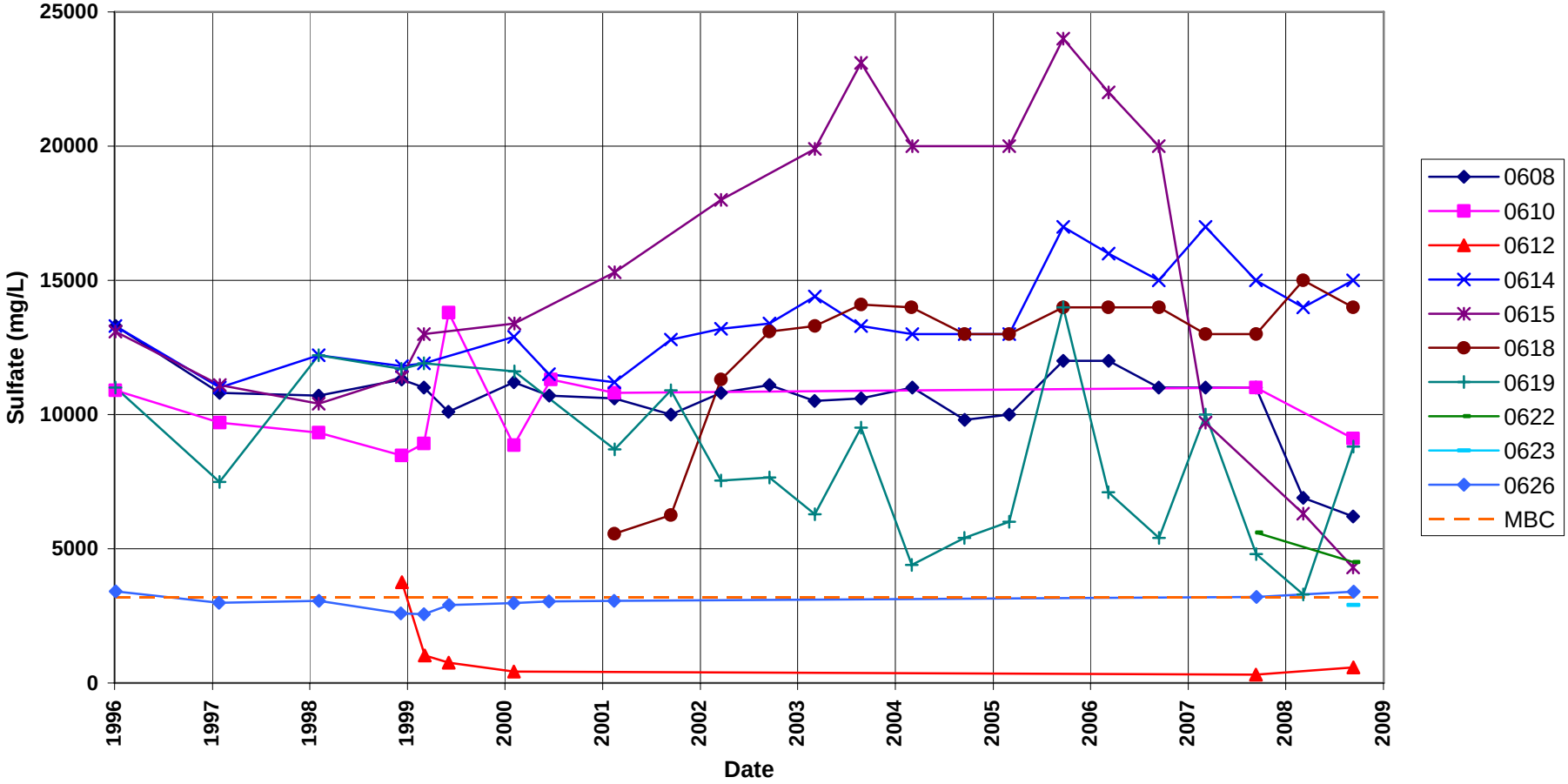


Shiprock Disposal Site (Floodplain)
Strontium Concentration

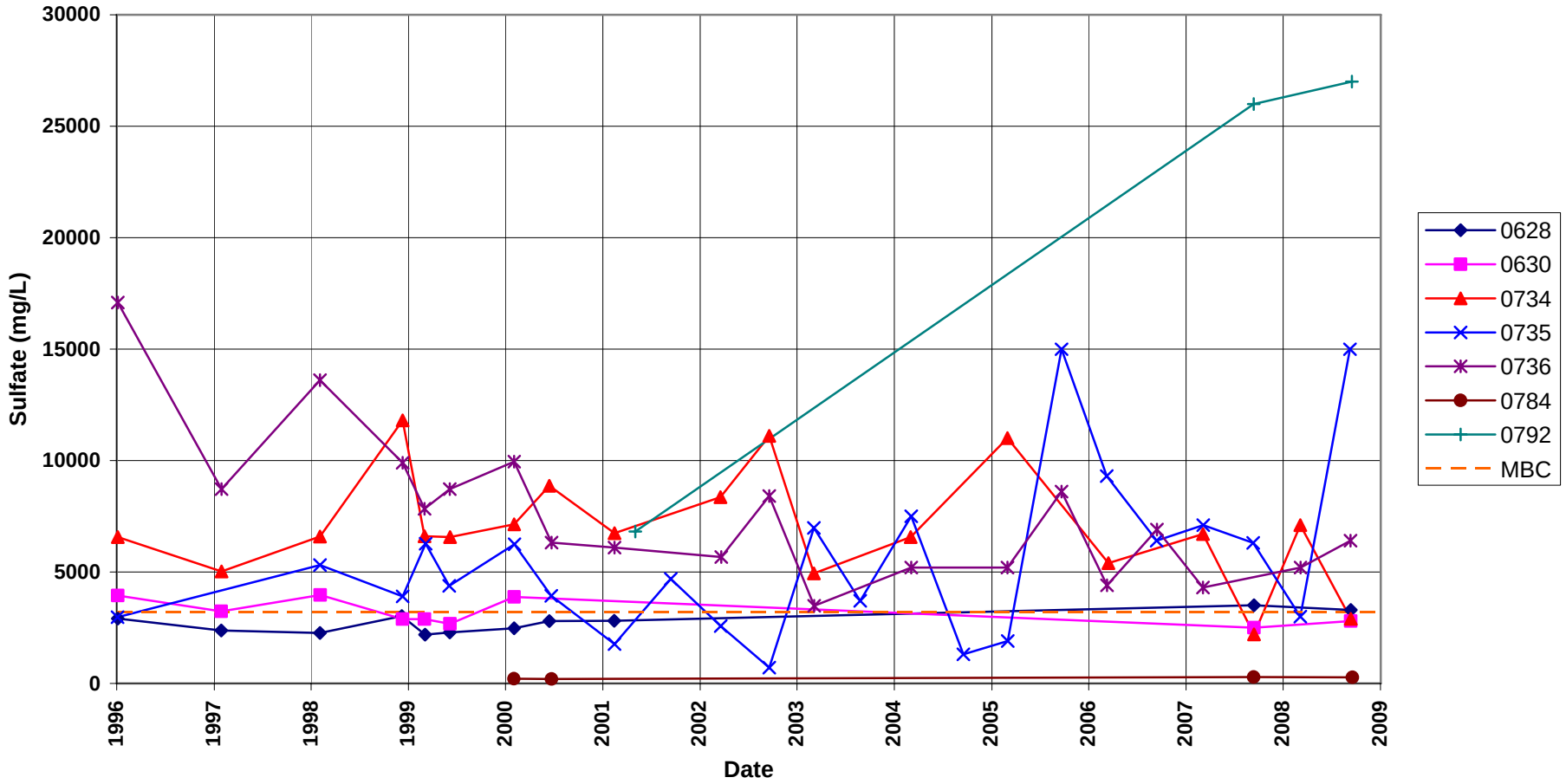



Shiprock Disposal Site (Floodplain)
Strontium Concentration
Strontium (mg/L)
18
16
14
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
Date
1089
1104
1105
1109
1110
1114
1115
1117

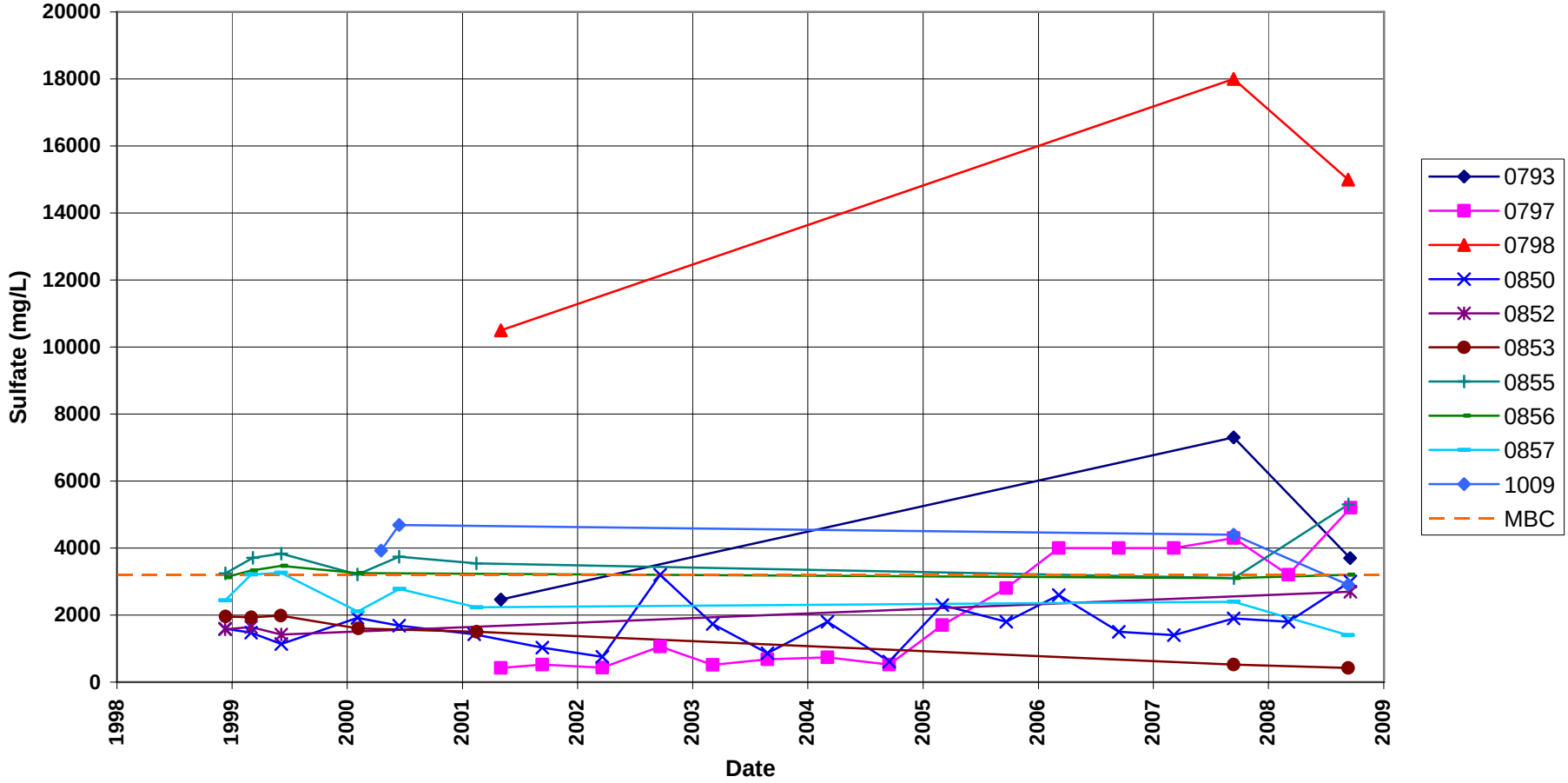
Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Maximum Background Concentration = 3200 mg/L



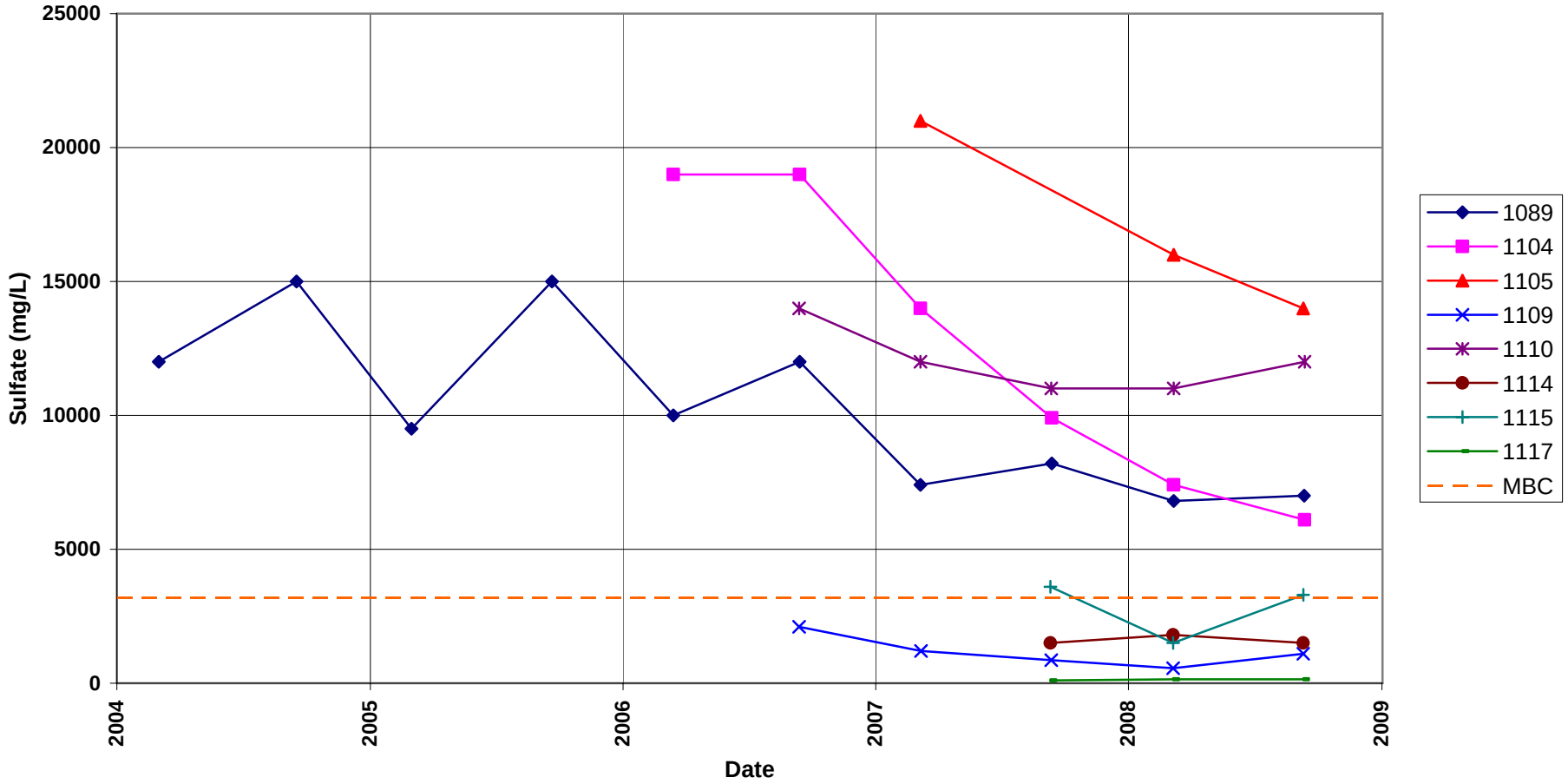
Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Maximum Background Concentration = 3200 mg/L



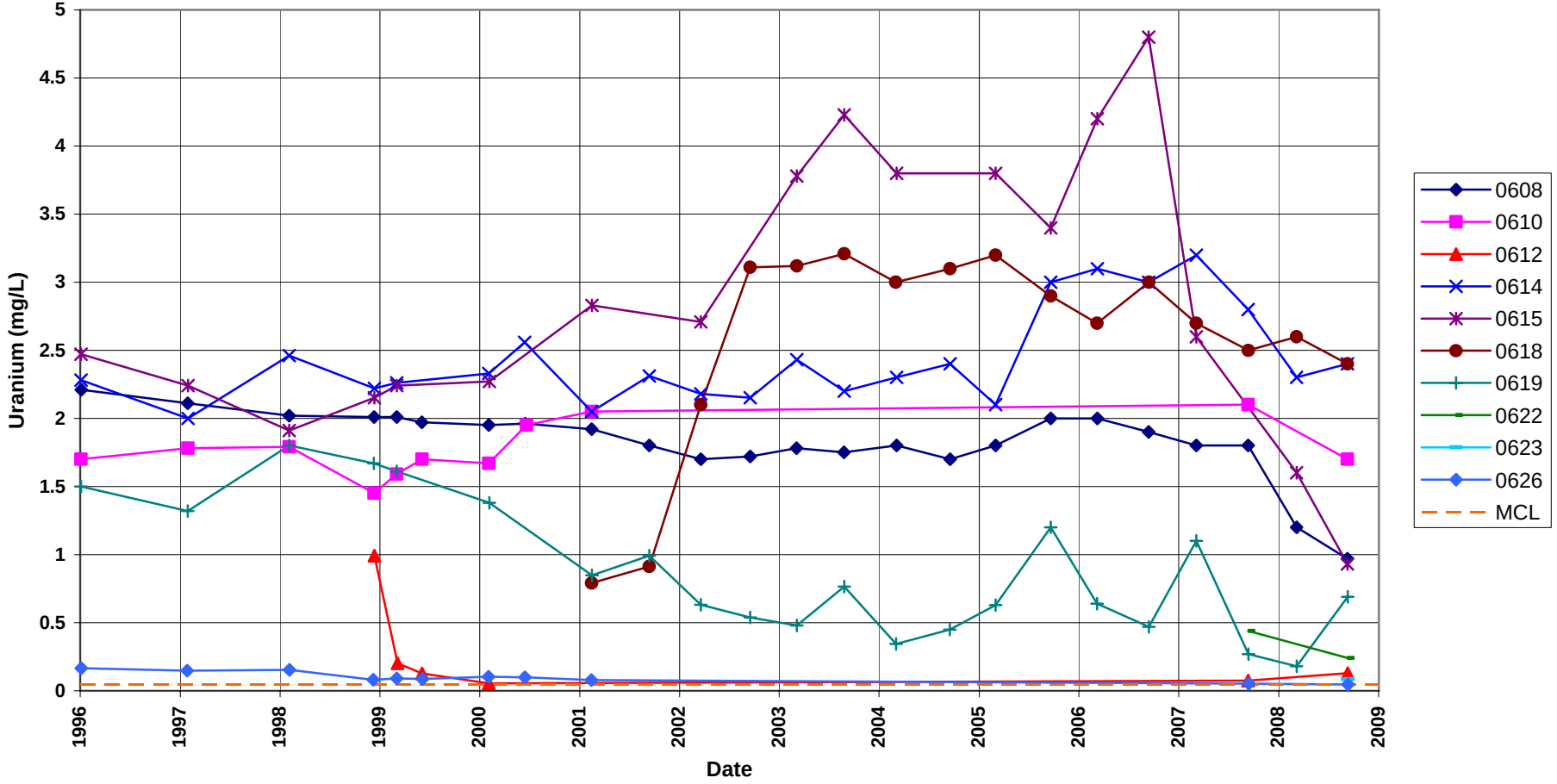
Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Maximum Background Concentration = 3200 mg/L



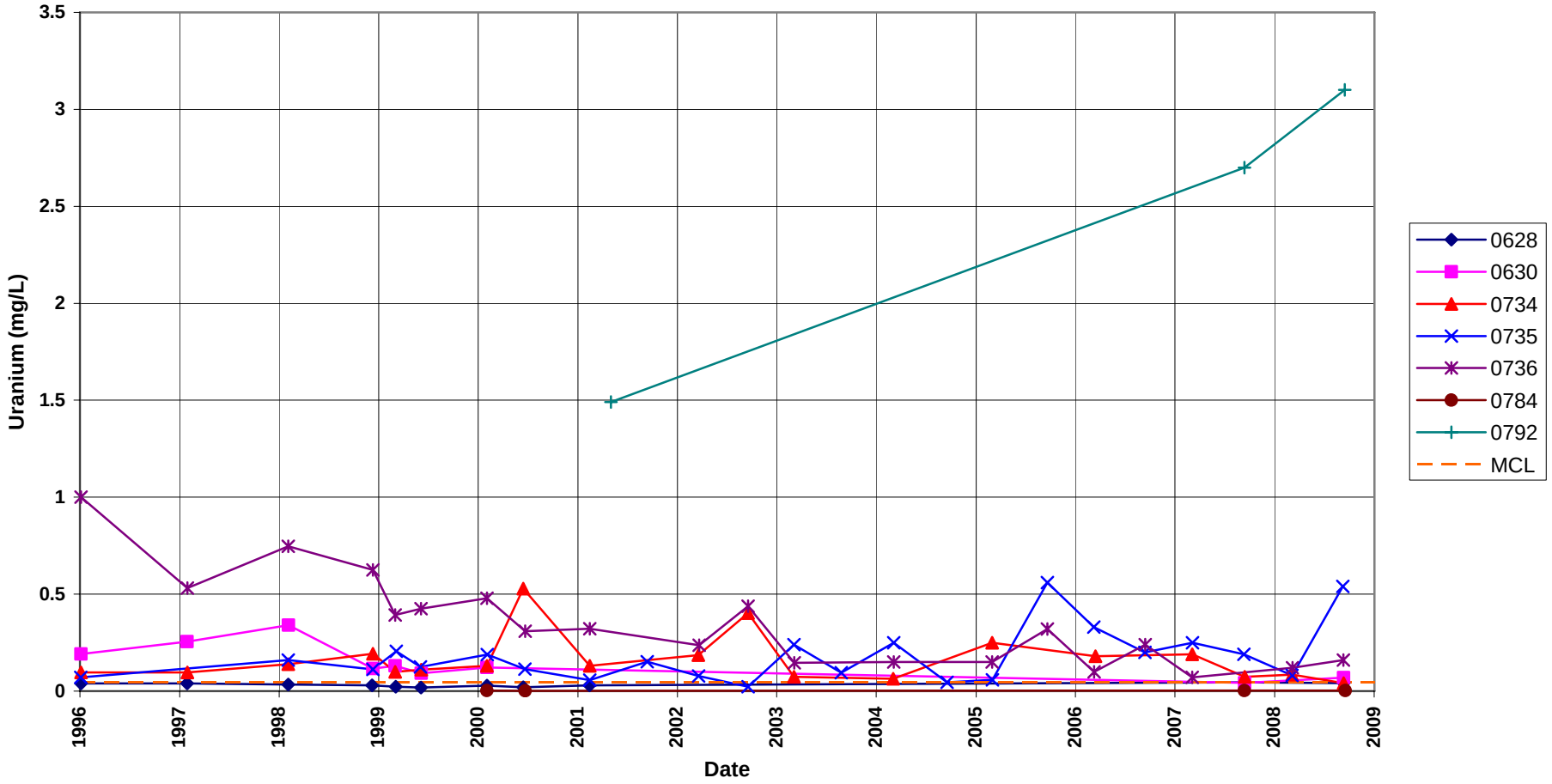
Shiprock Disposal Site (Floodplain)
Sulfate Concentration
Maximum Background Concentration = 3200 mg/L



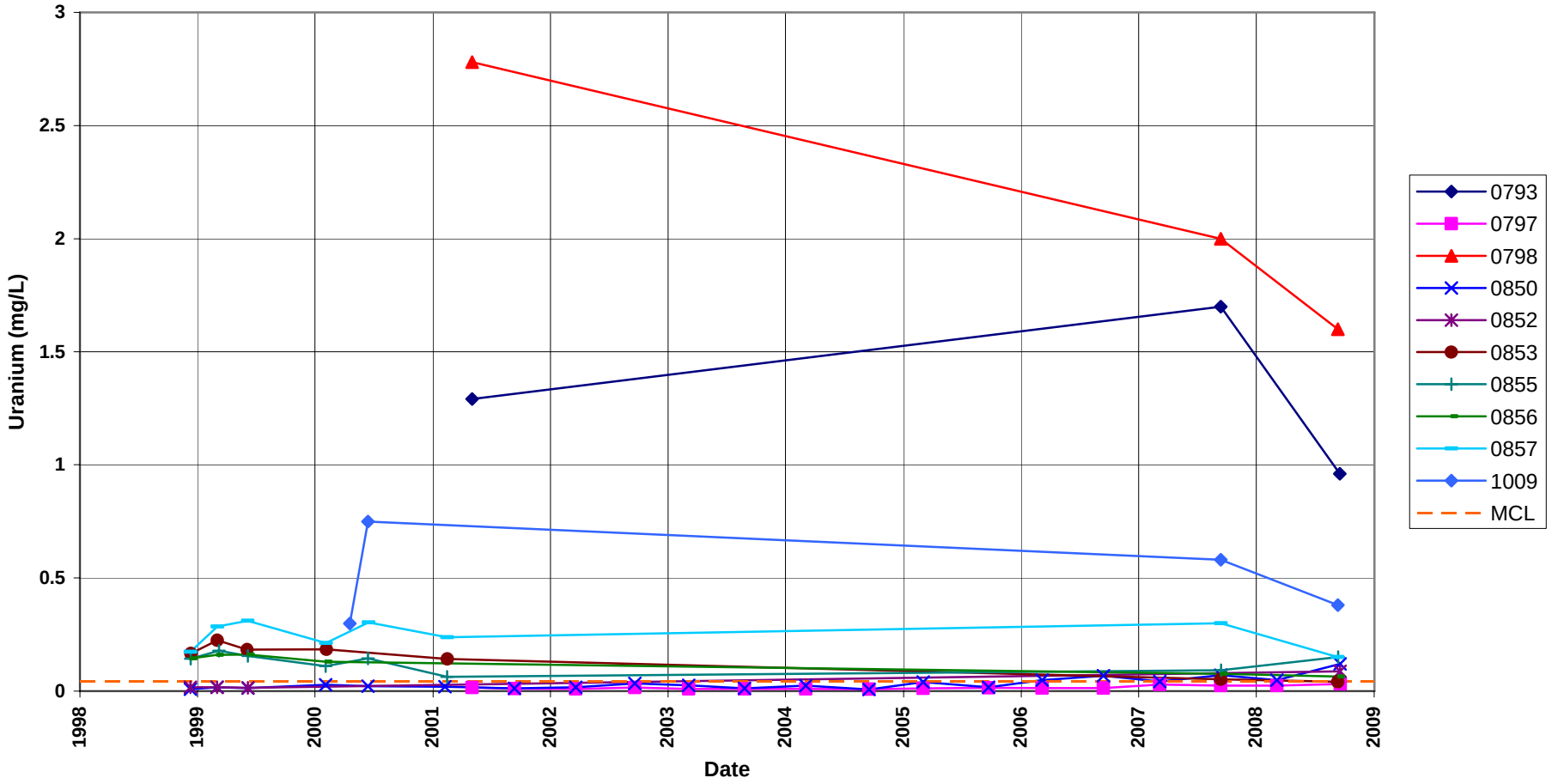
Shiprock Disposal Site (Floodplain)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



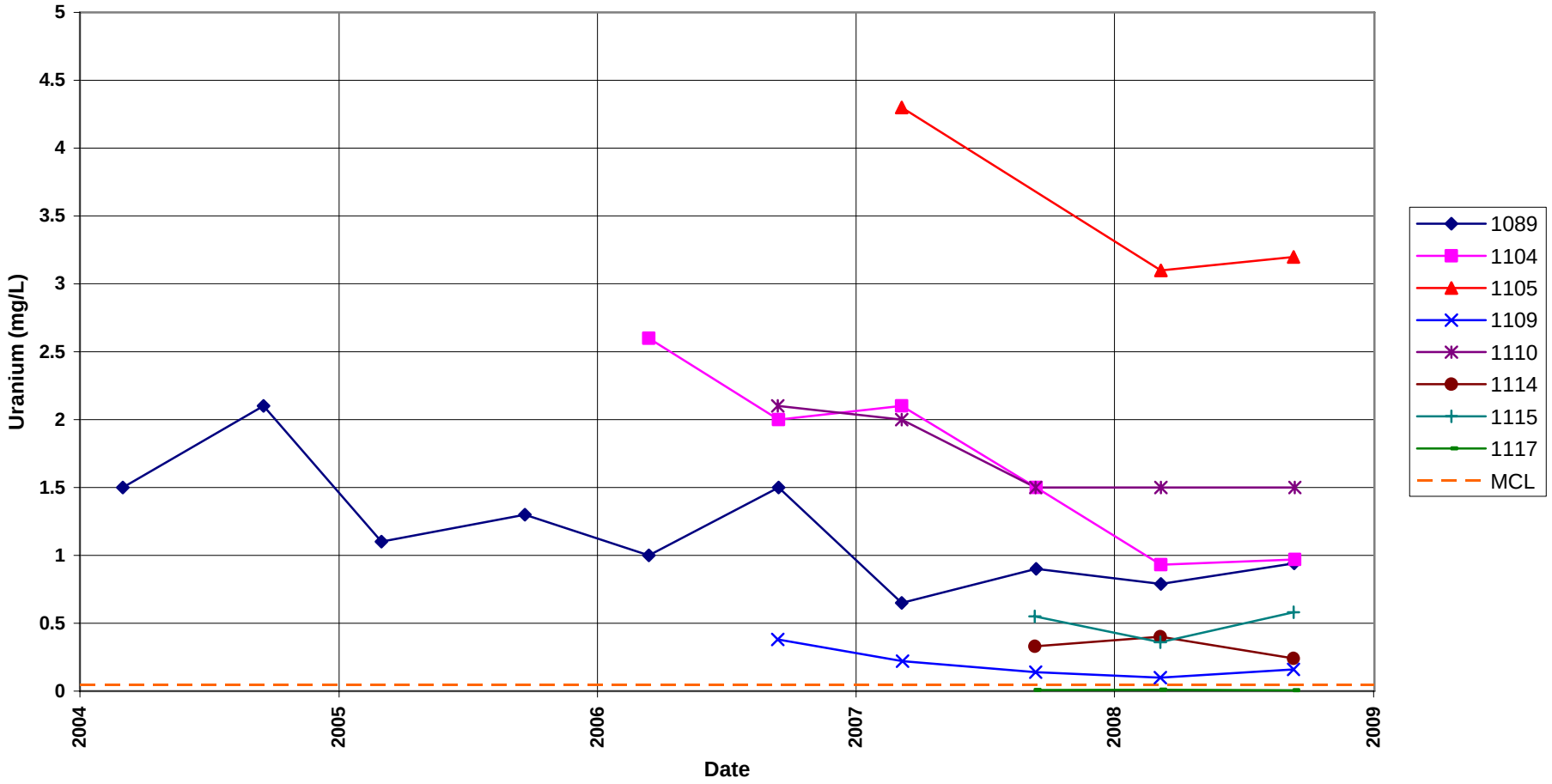
Shiprock Disposal Site (Floodplain)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



Shiprock Disposal Site (Floodplain)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



Shiprock Disposal Site (Floodplain)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



Time-Concentration Graphs
Terrace Locations

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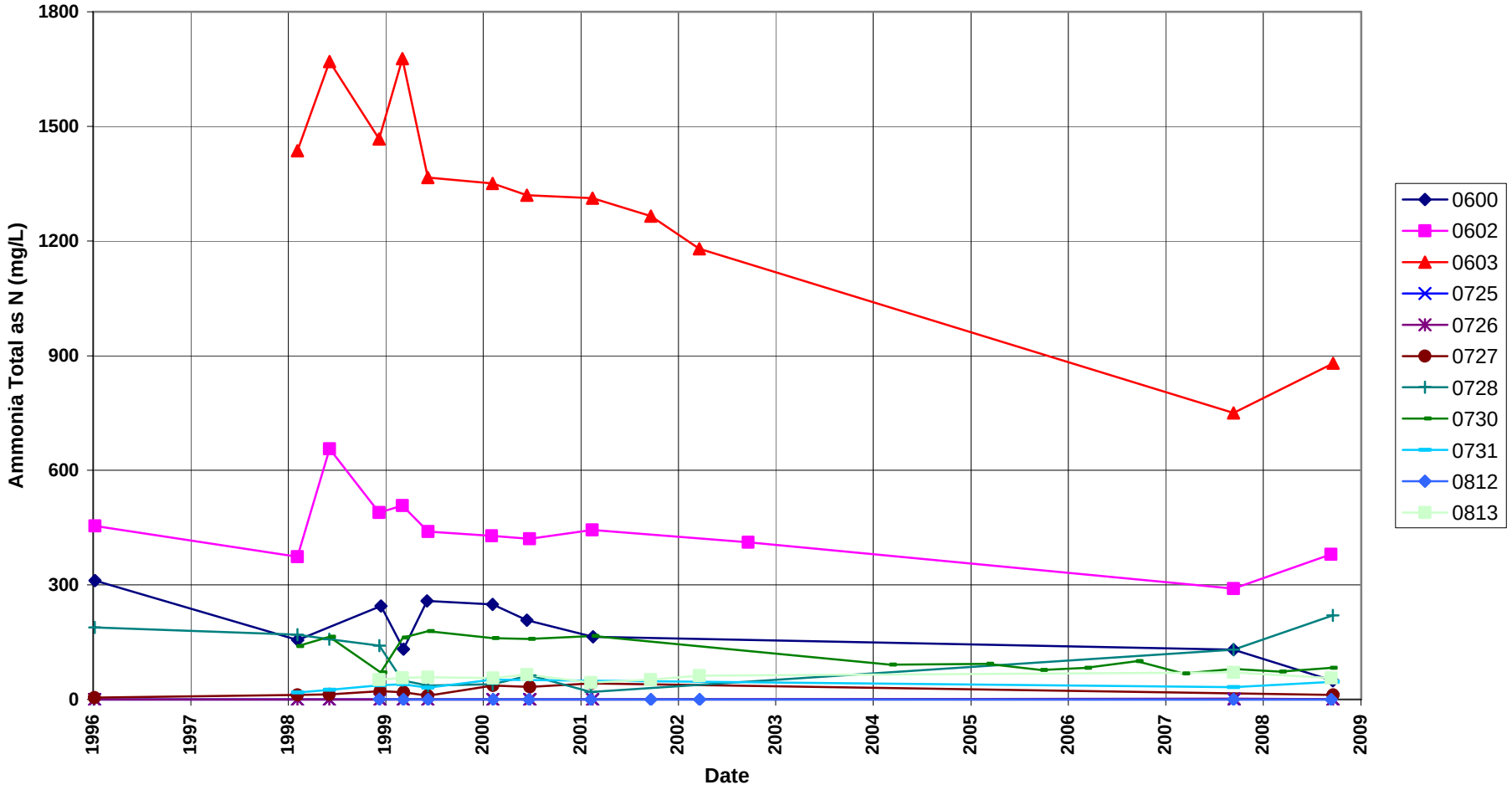
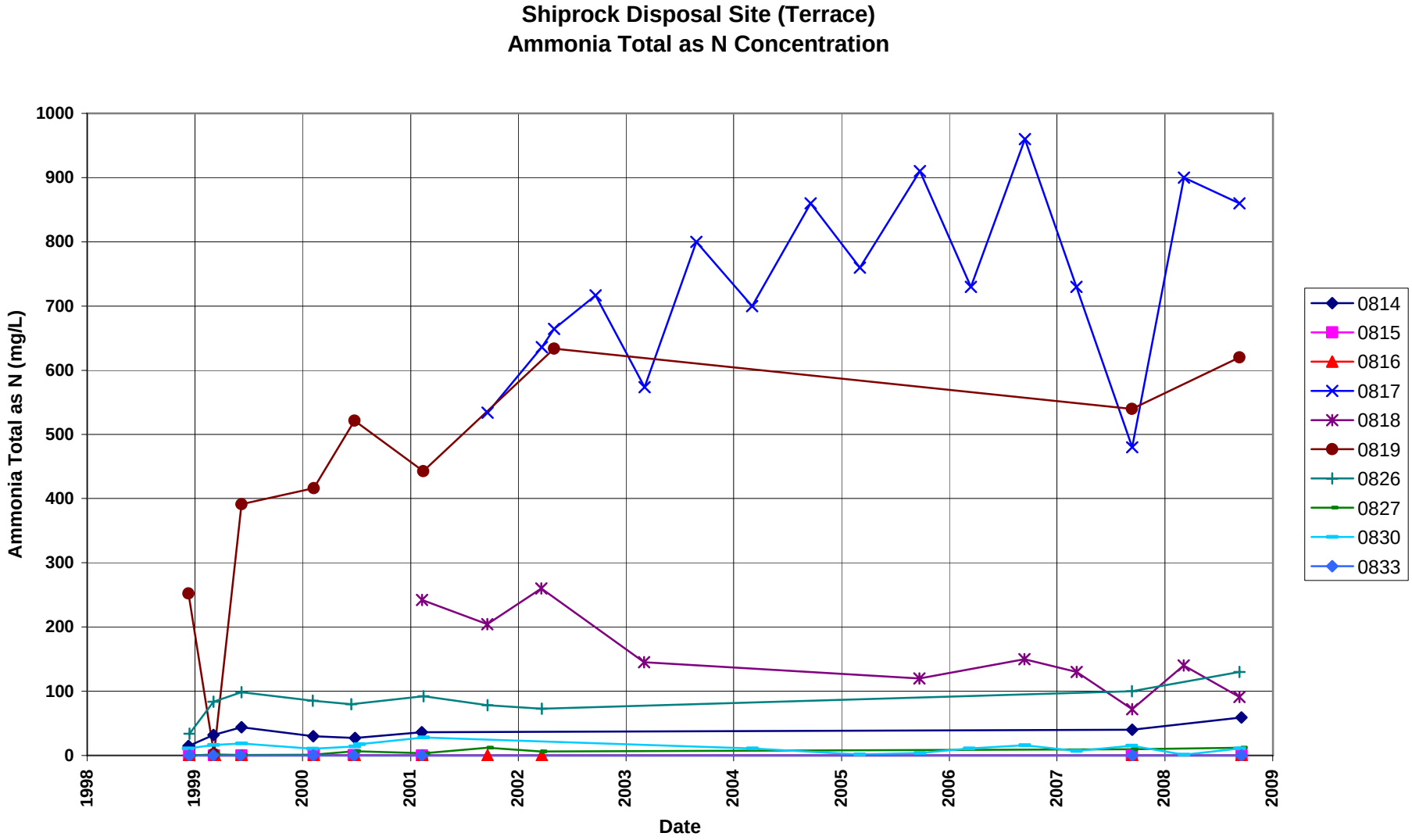
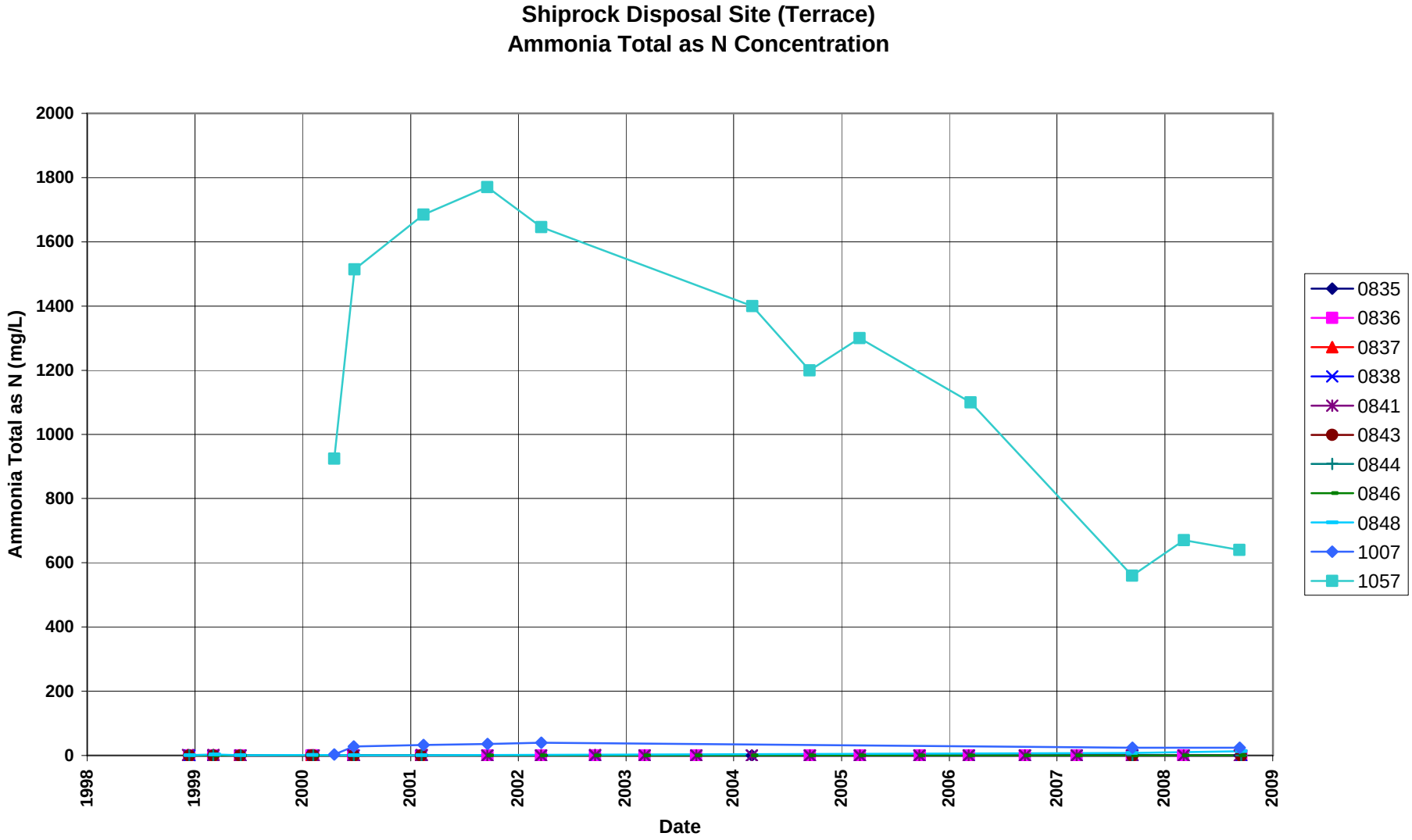
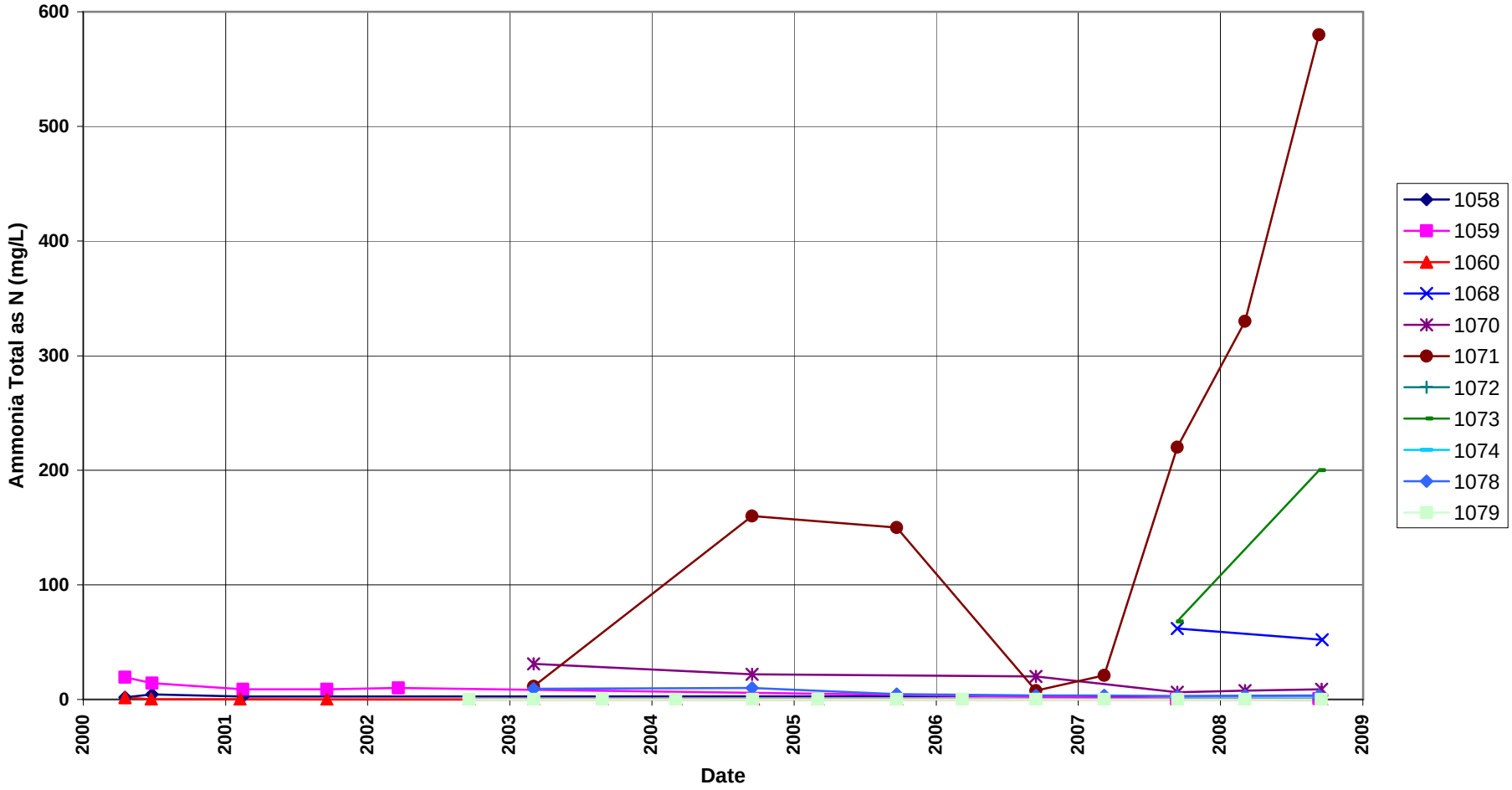
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration

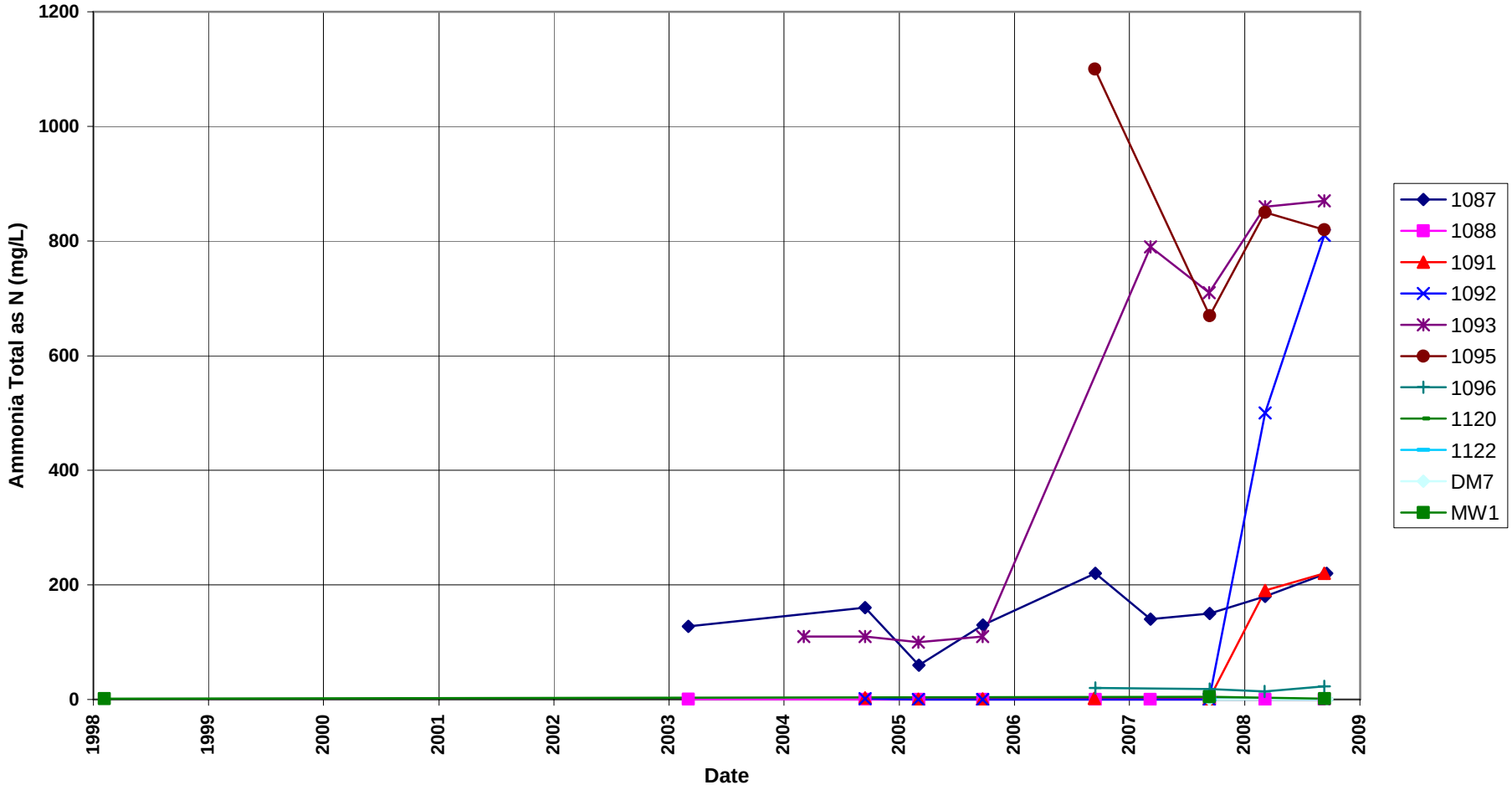



Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration
Ammonia Total as N (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
0814
0815
0816
0817
0818
0819
0826
0827
0830
0833

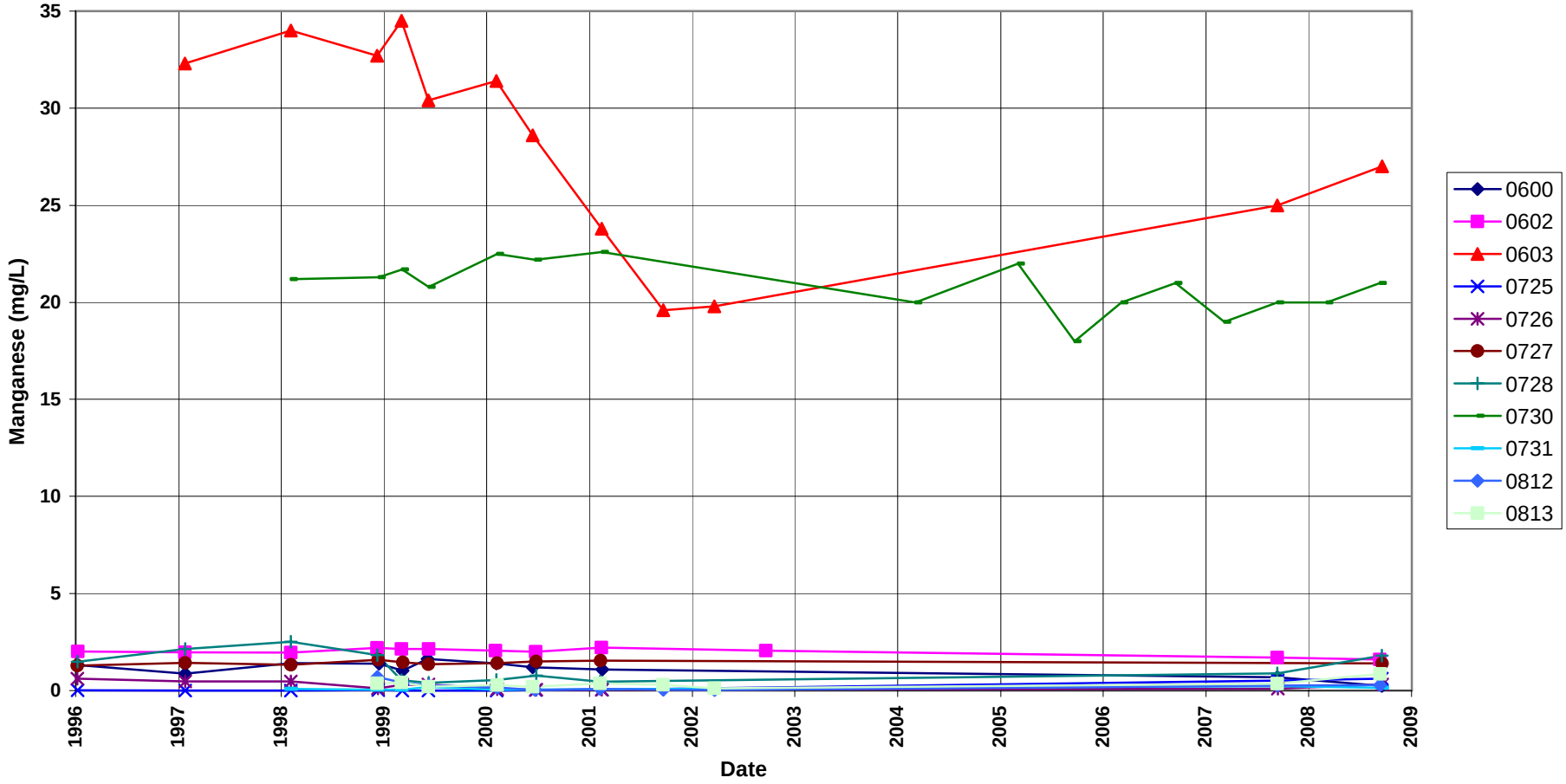

Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration
Ammonia Total as N (mg/L)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
0835
0836
0837
0838
0841
0843
0844
0846
0848
1007
1057


Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration
Ammonia Total as N (mg/L)
600
500
400
300
200
100
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
1058
1059
1060
1068
1070
1071
1072
1073
1074
1078
1079

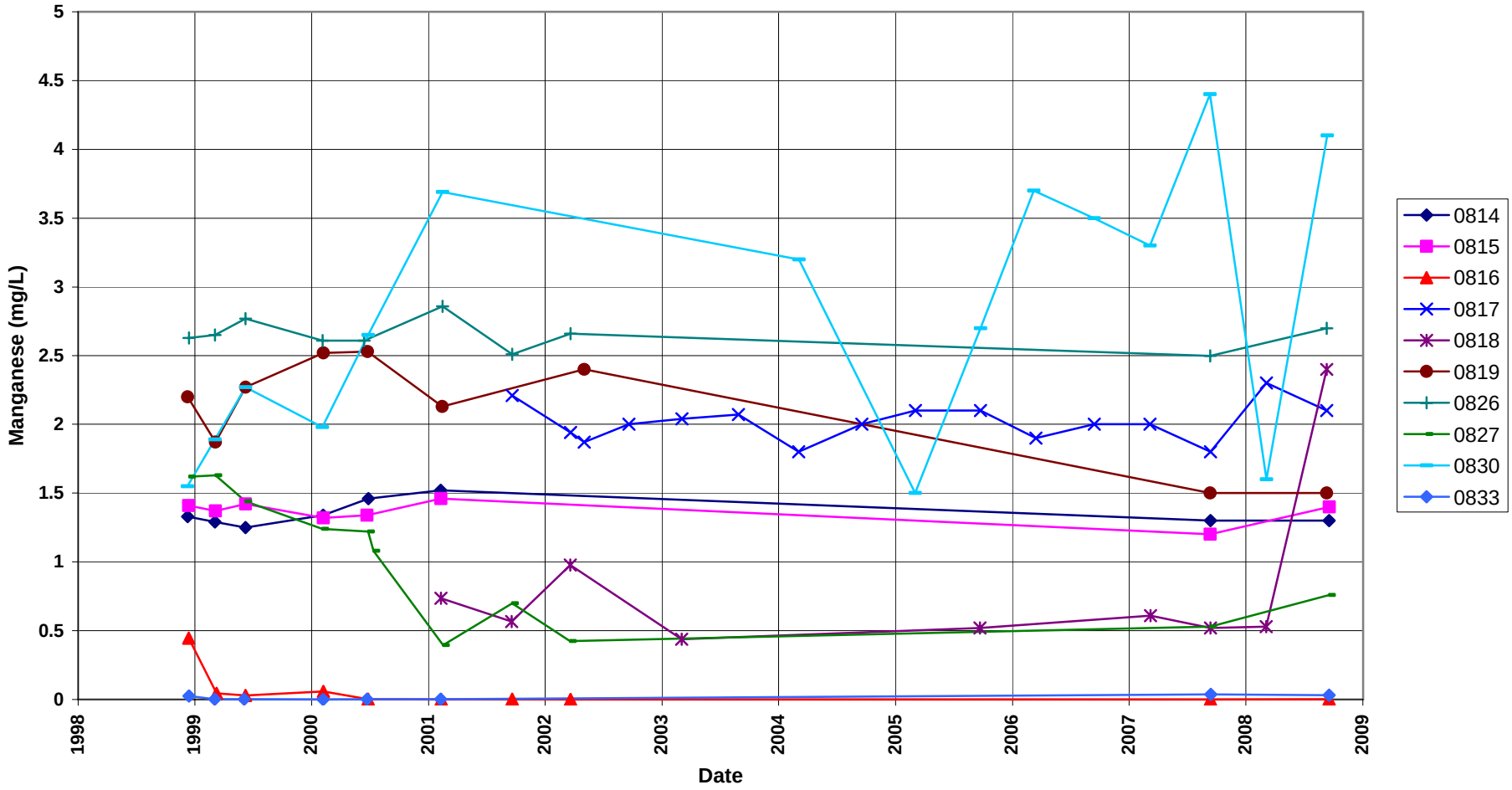
Shiprock Disposal Site (Terrace)
Ammonia Total as N Concentration

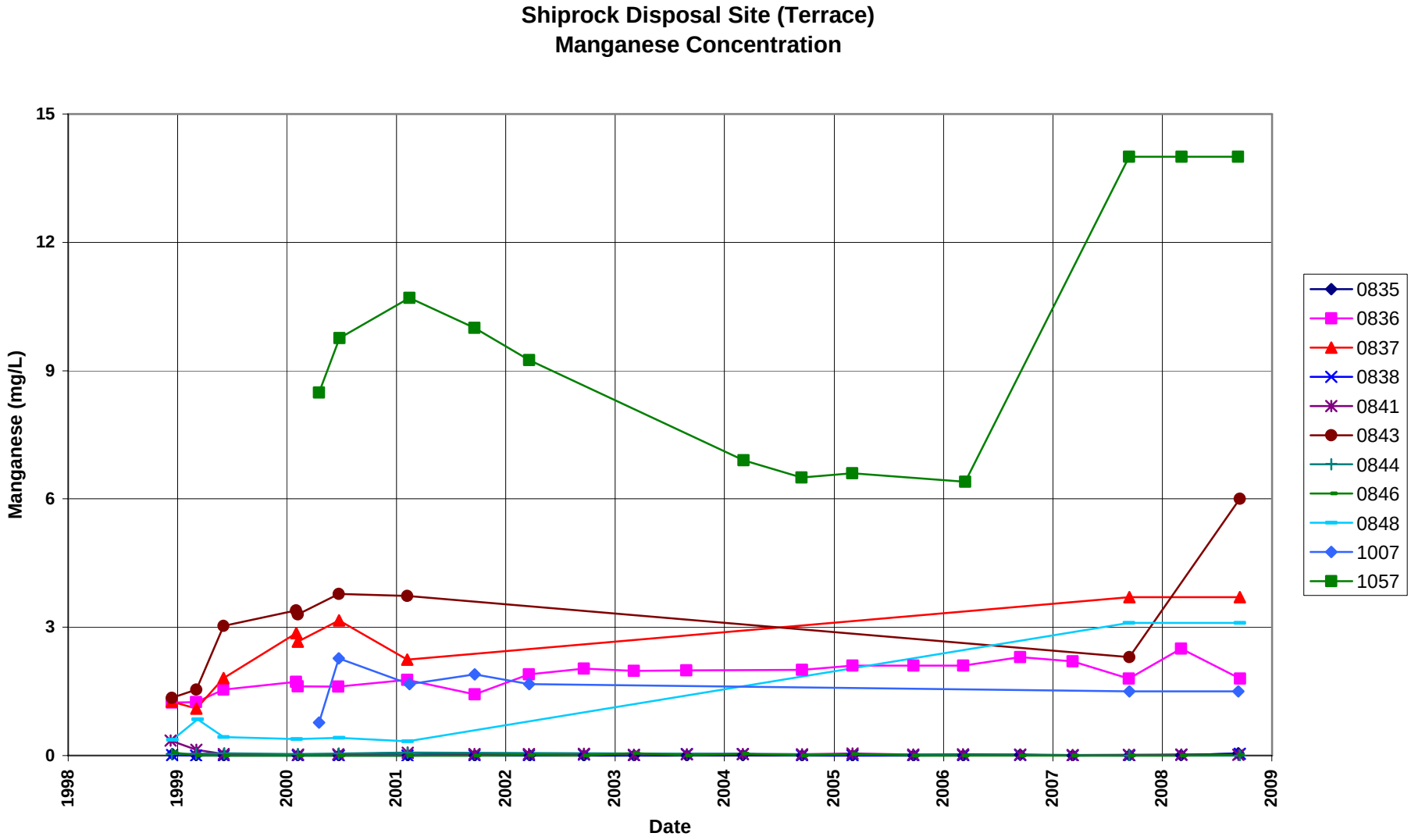


Shiprock Disposal Site (Terrace)
Manganese Concentration

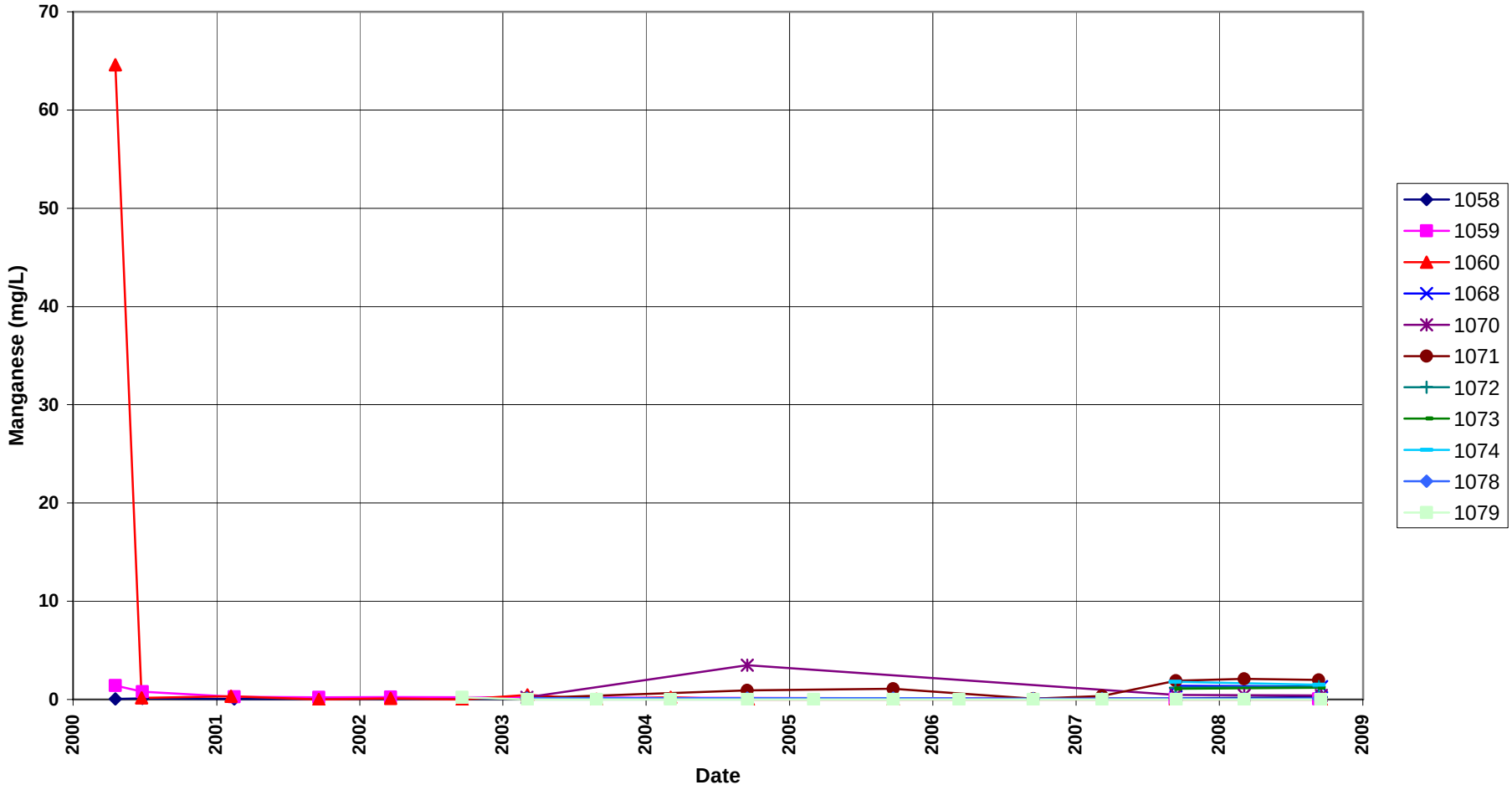


Shiprock Disposal Site (Terrace)
Manganese Concentration

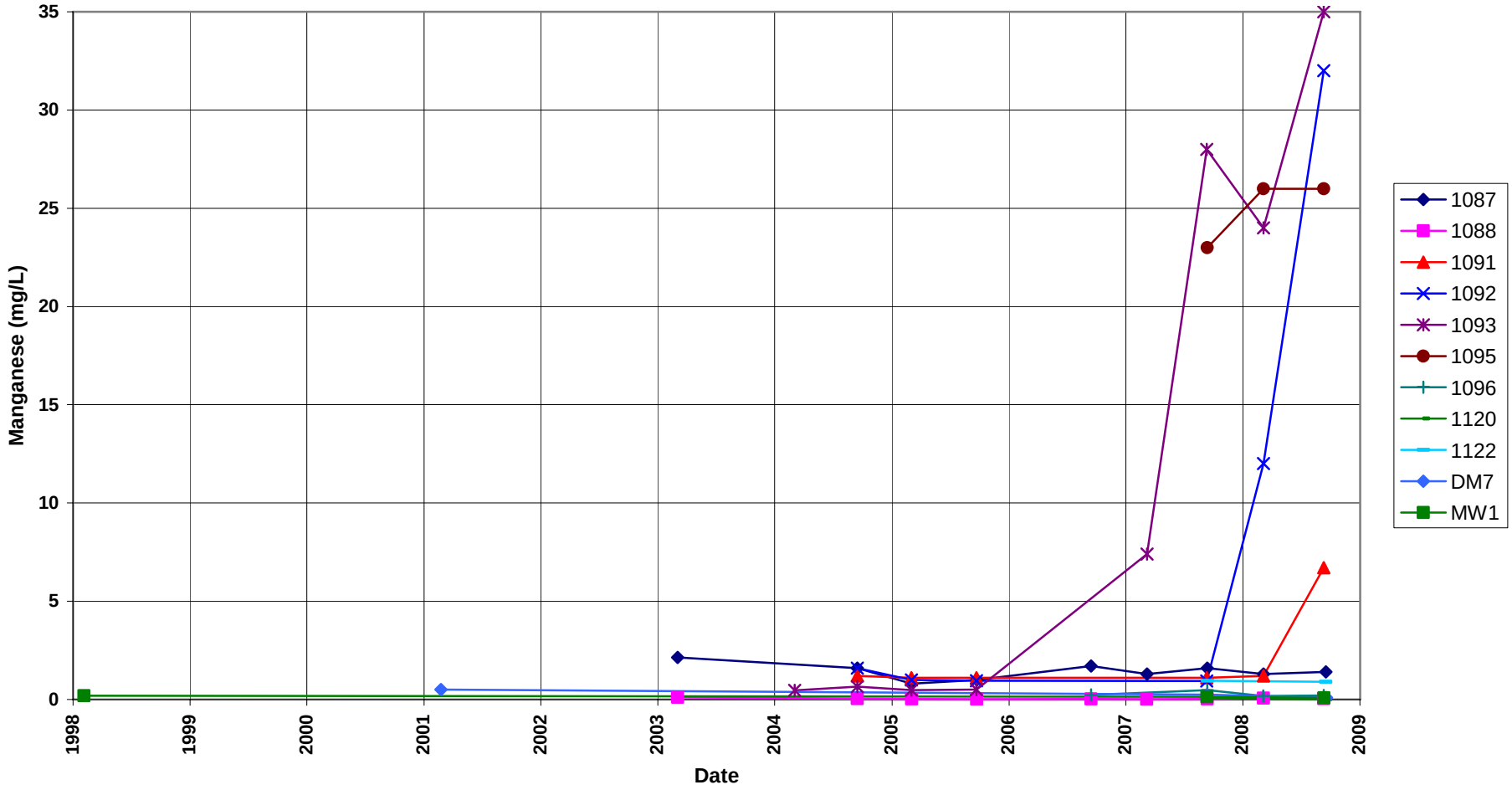



Shiprock Disposal Site (Terrace)
Manganese Concentration
Manganese (mg/L)
15
12
9
6
3
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
0835
0836
0837
0838
0841
0843
0844
0846
0848
1007
1057

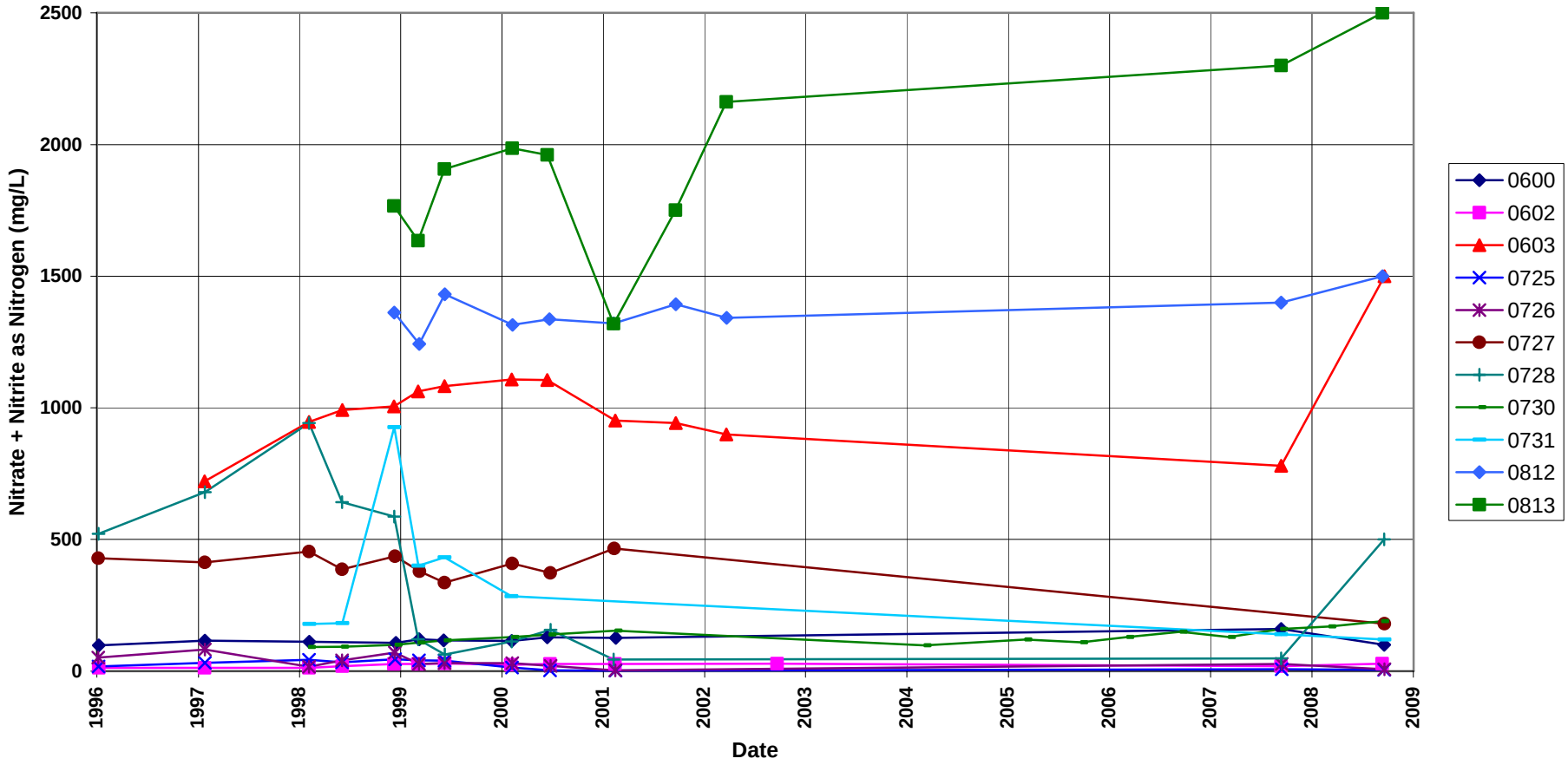
Shiprock Disposal Site (Terrace)
Manganese Concentration



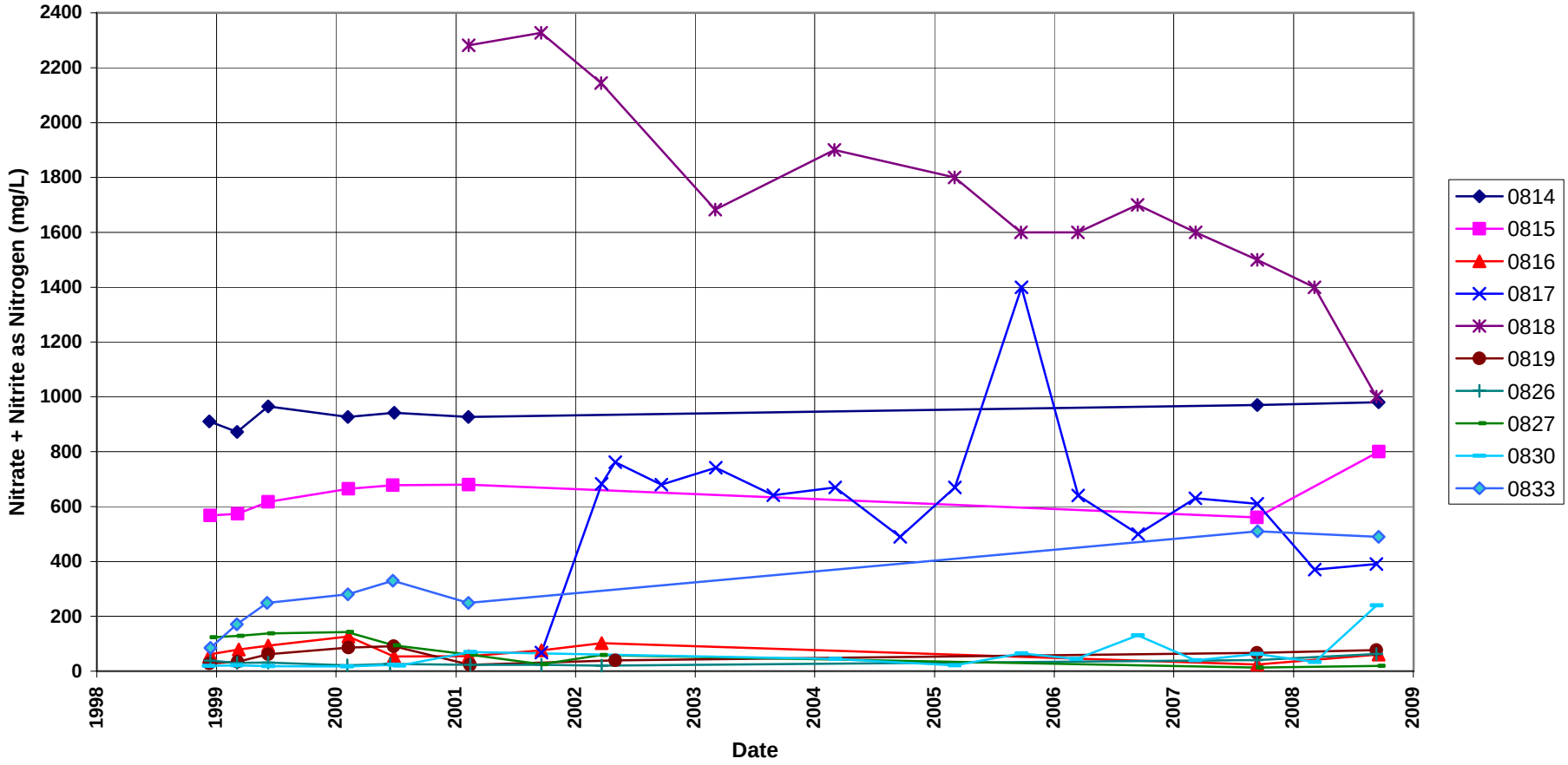
Shiprock Disposal Site (Terrace)
Manganese Concentration



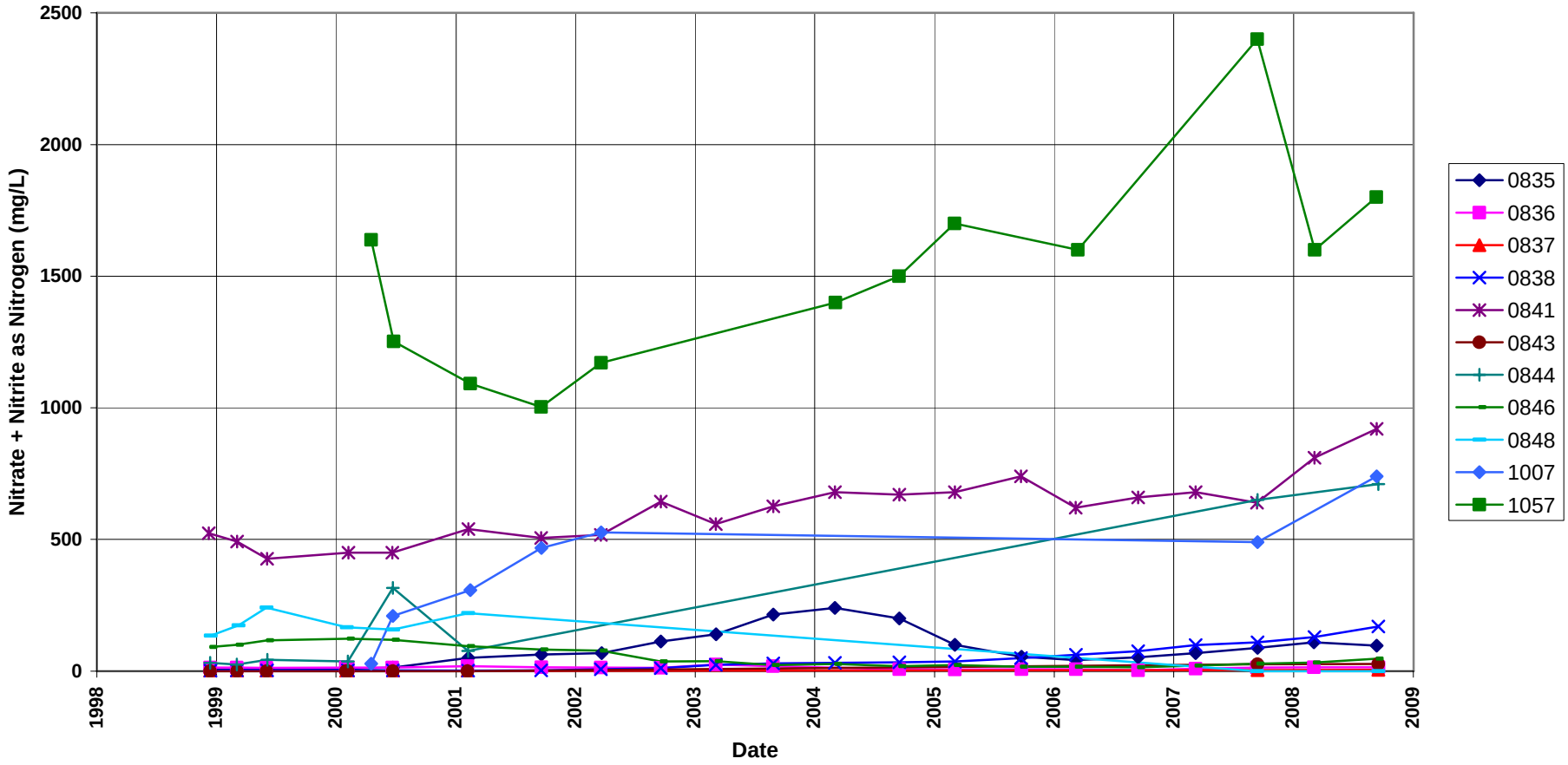
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



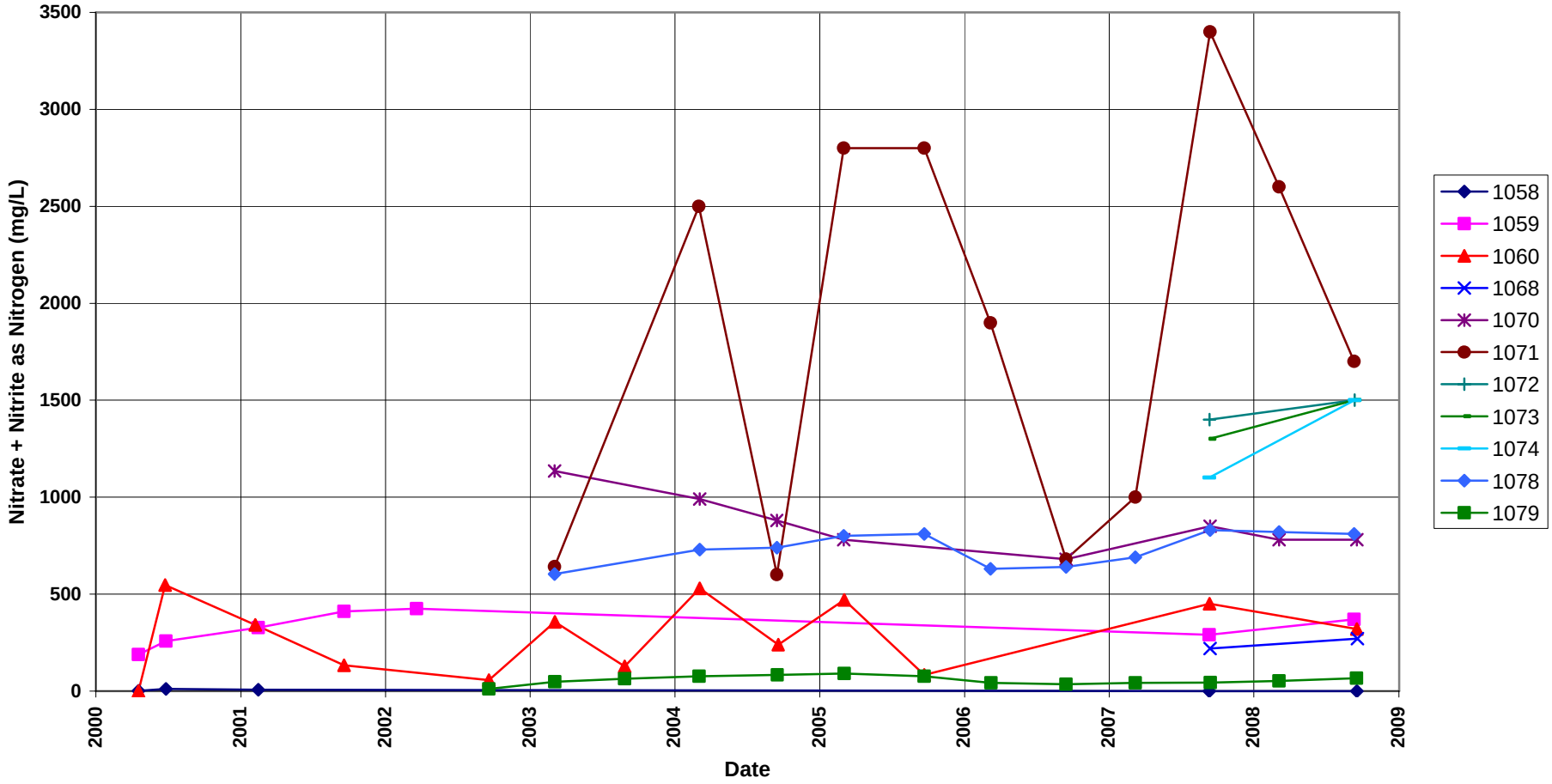
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



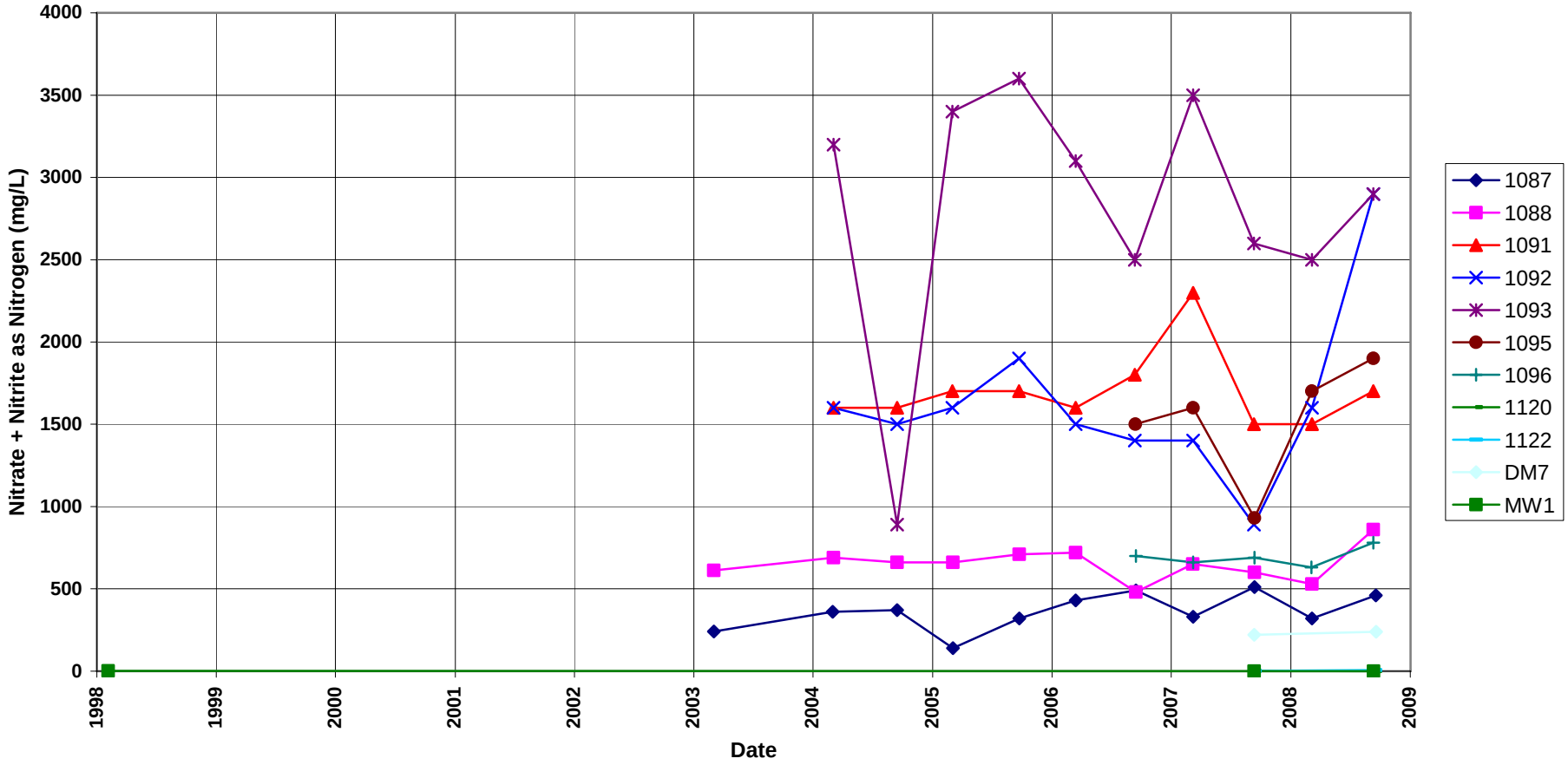
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



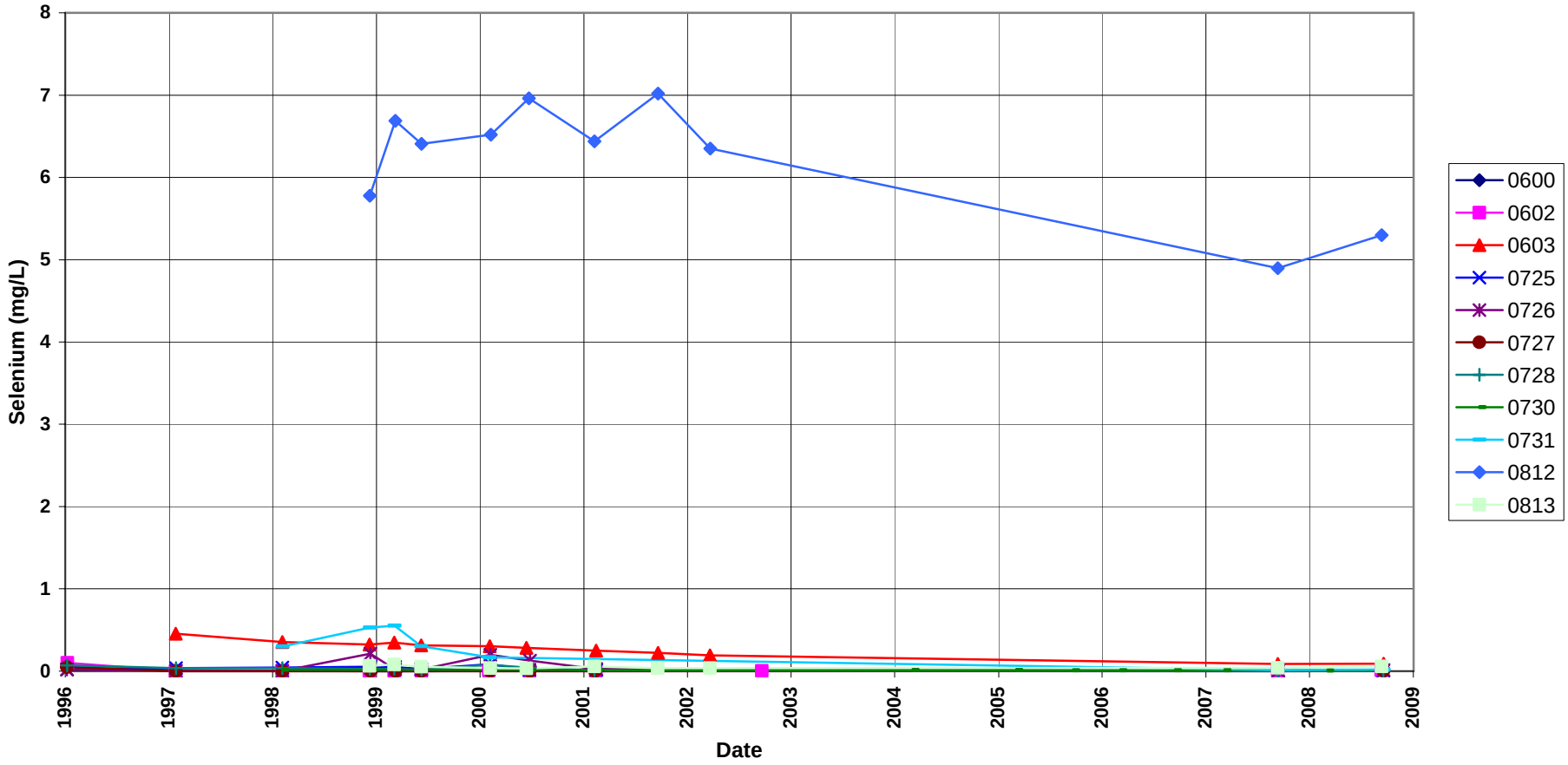
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



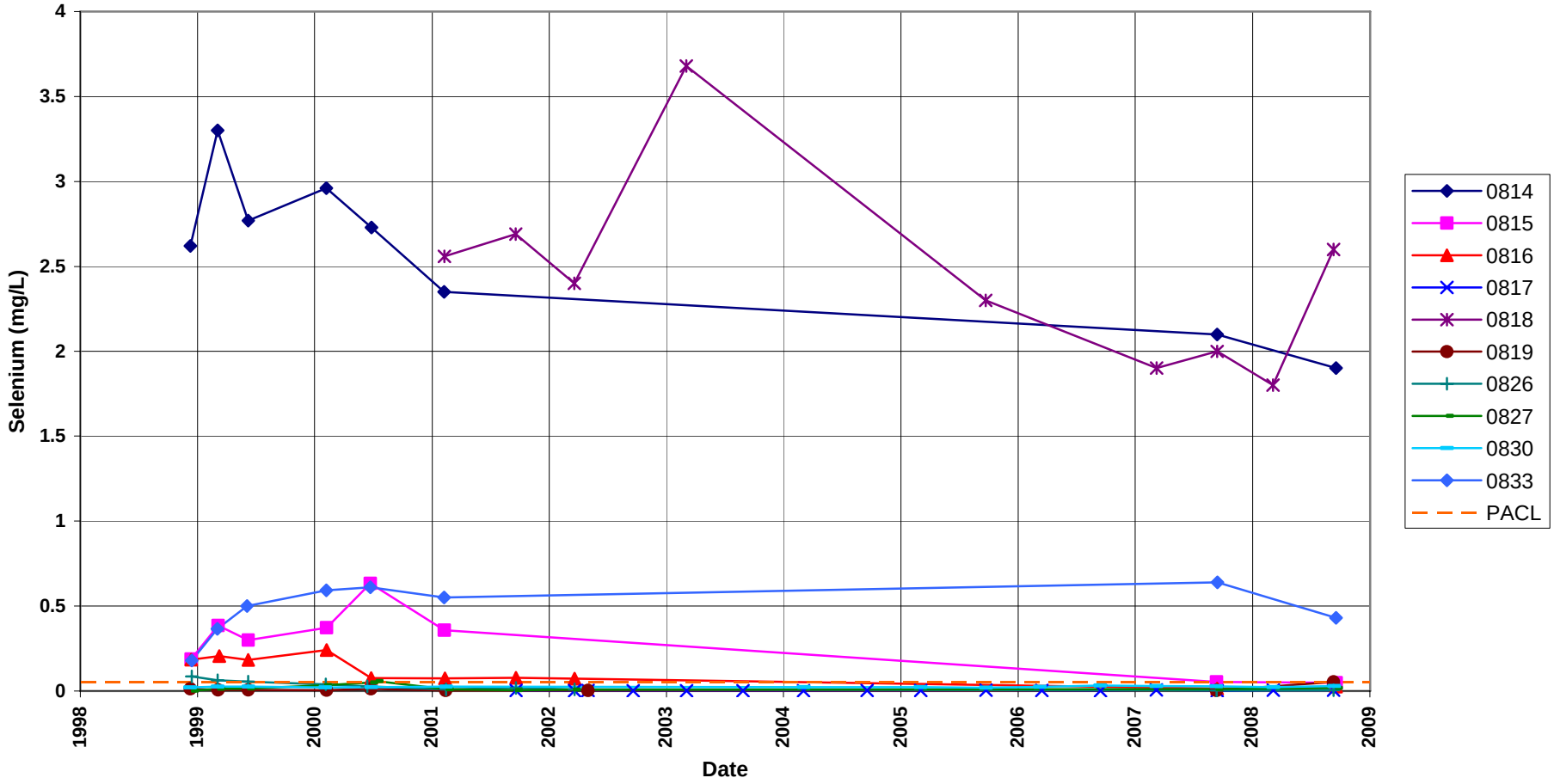
Shiprock Disposal Site (Terrace)
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Limit = 10.0 mg/L



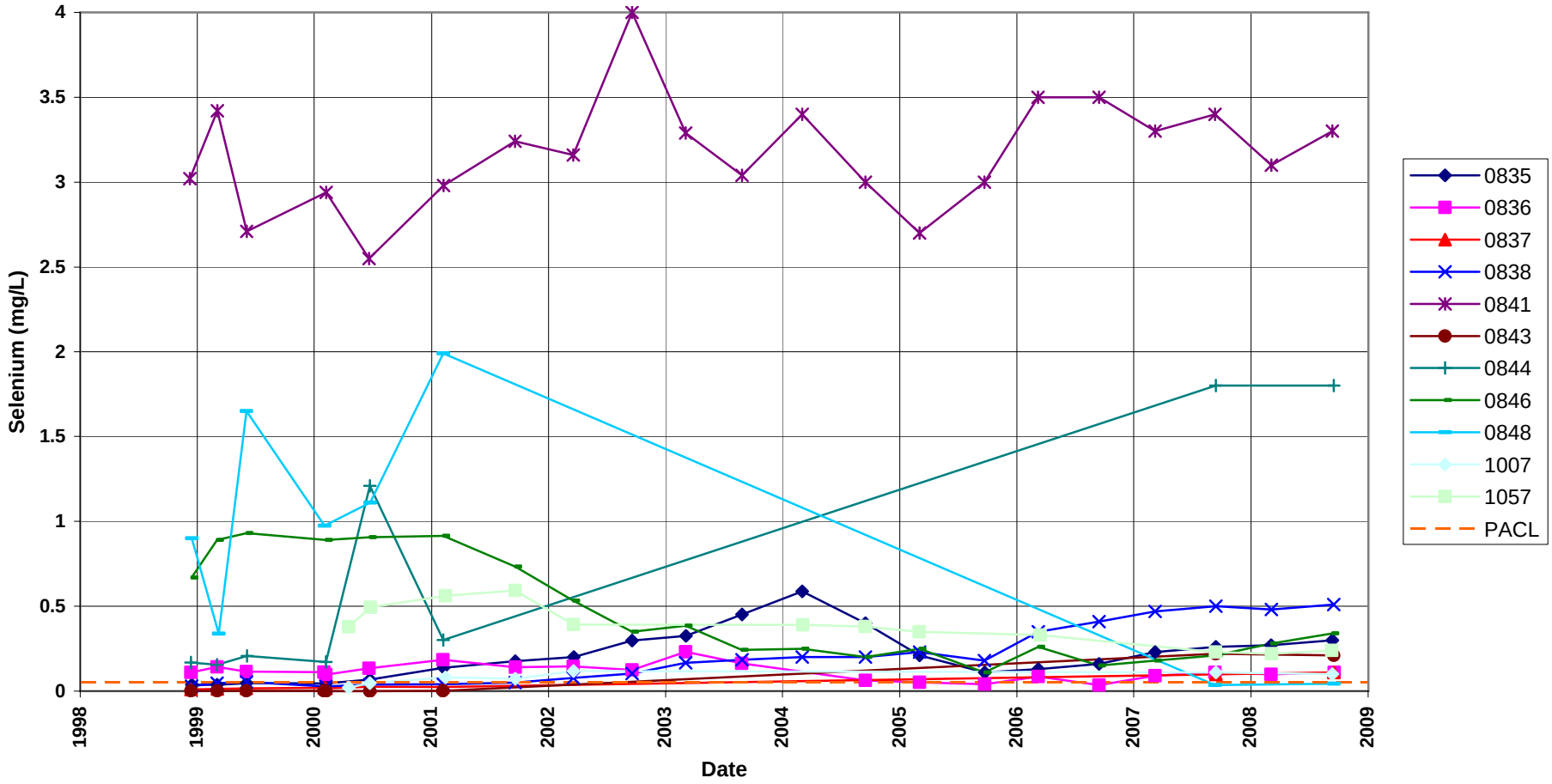
Shiprock Disposal Site (Terrace)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



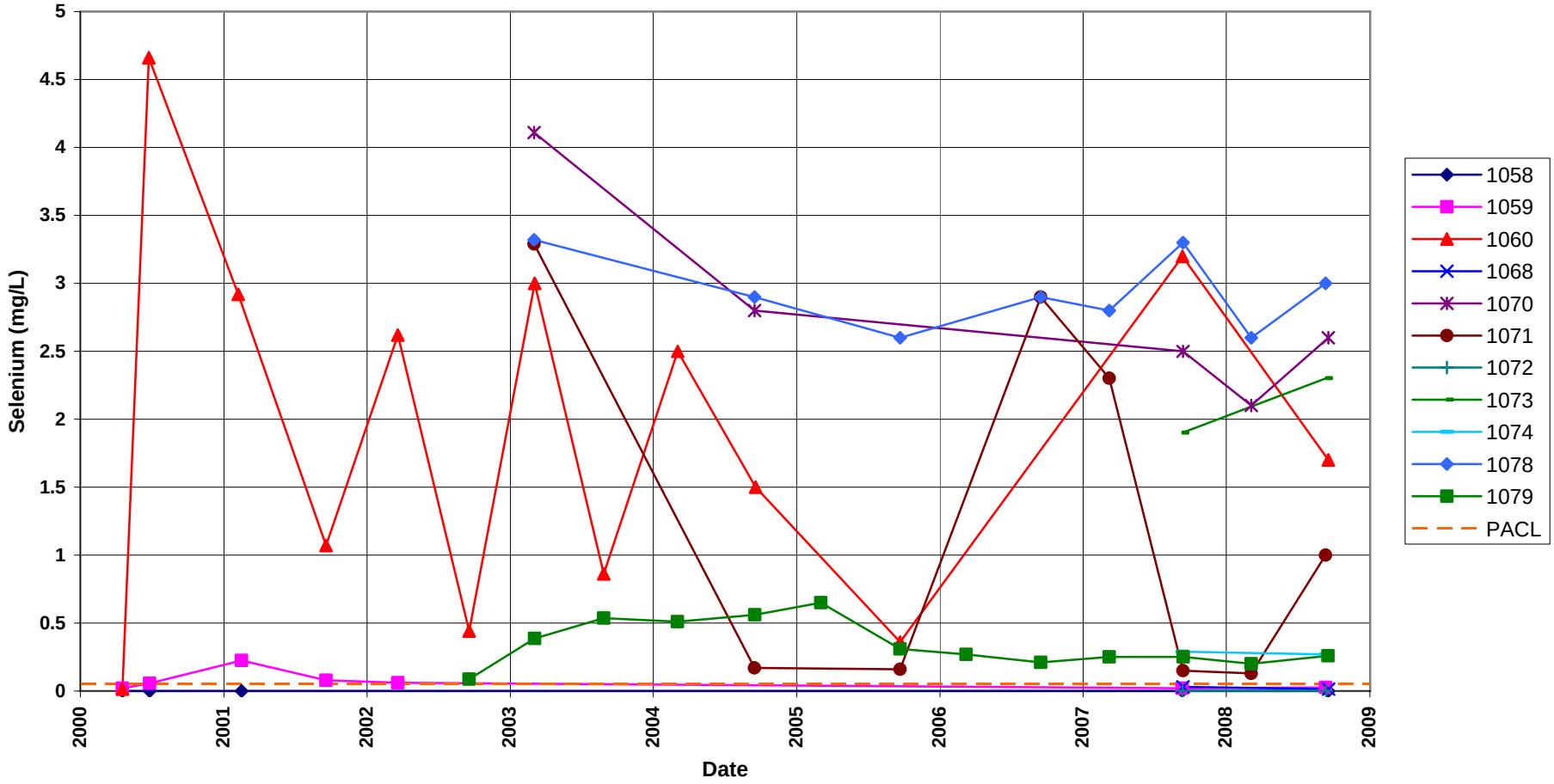
Shiprock Disposal Site (Terrace)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



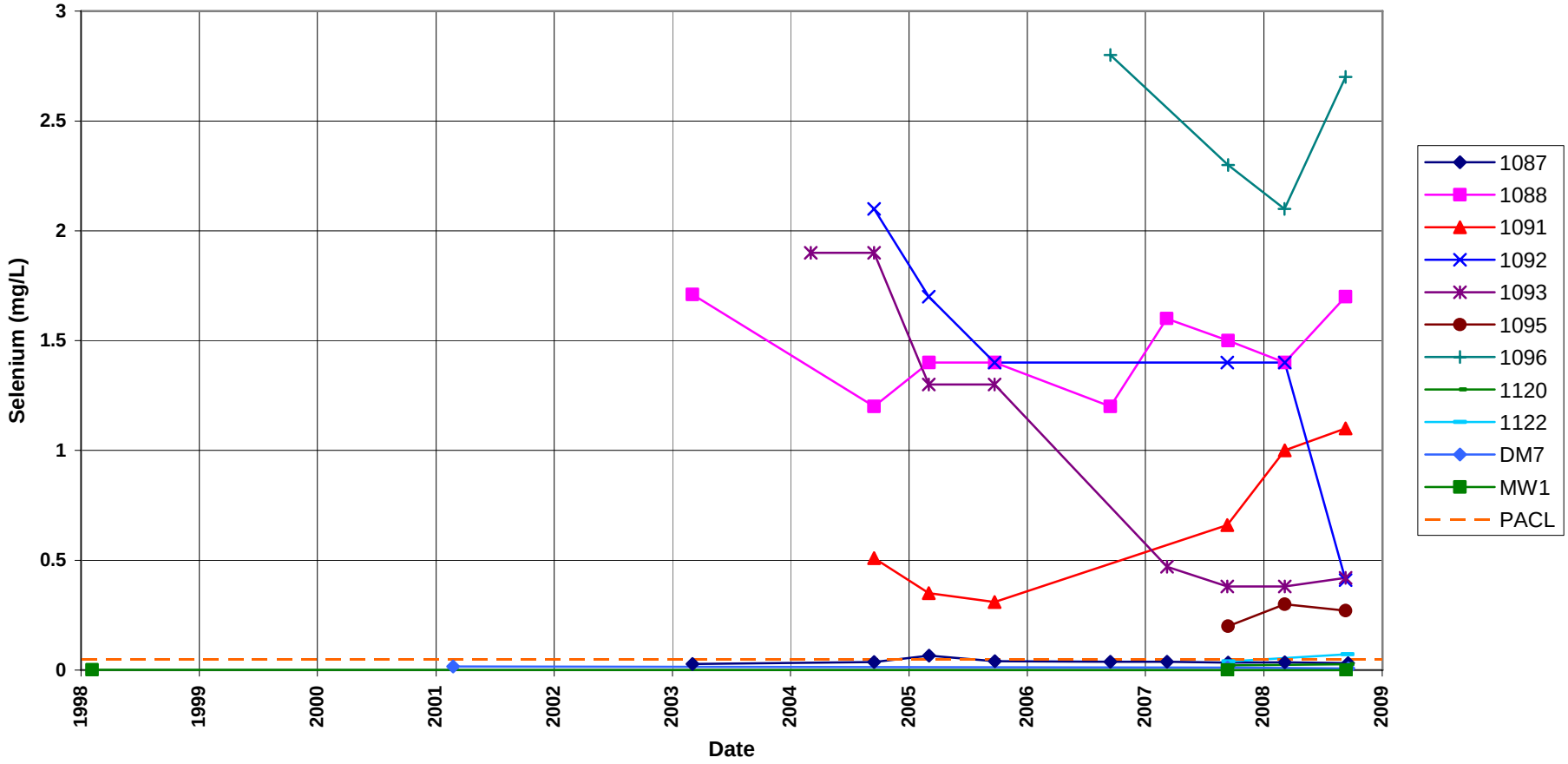
Shiprock Disposal Site (Terrace)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



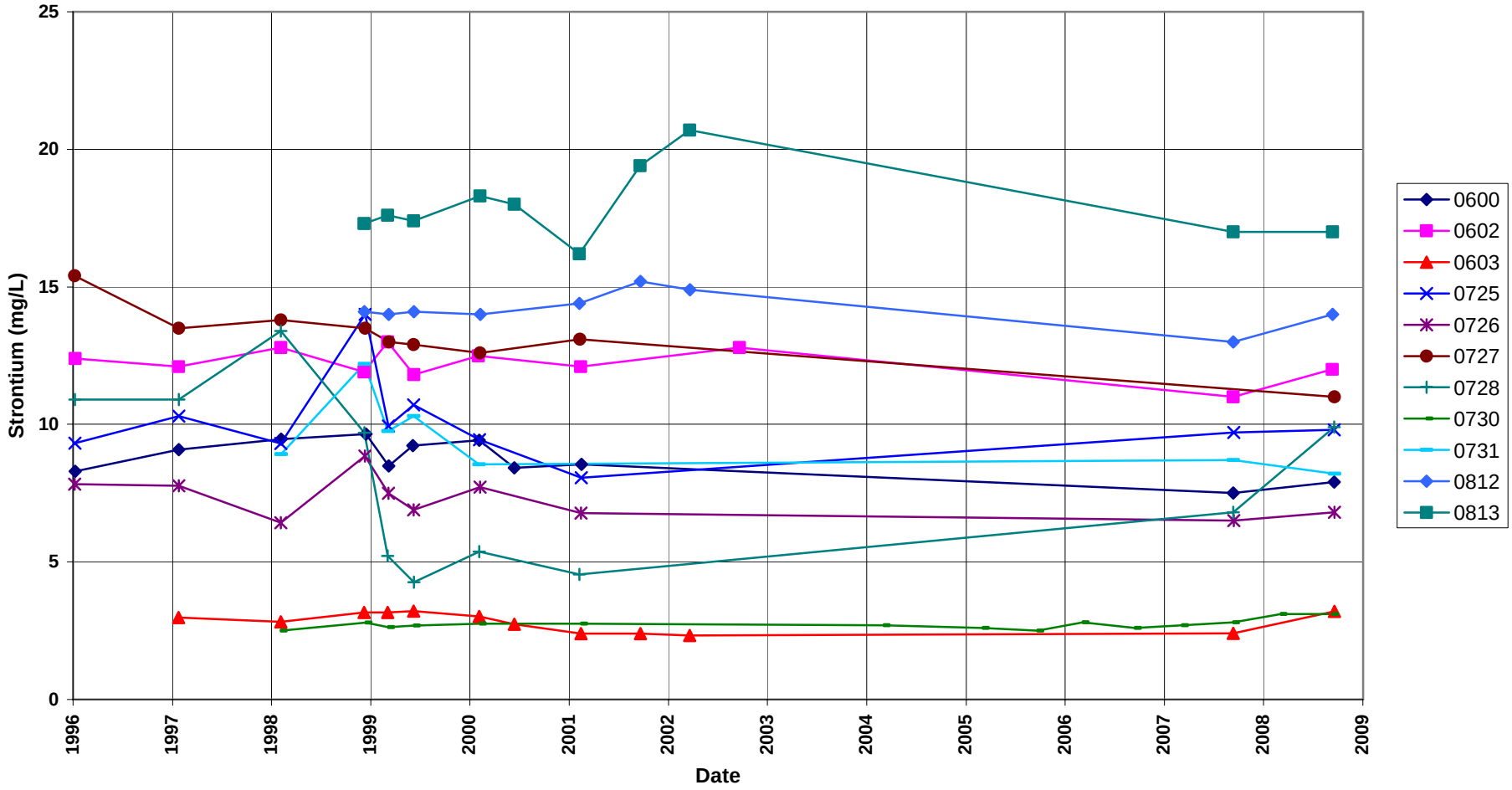
Shiprock Disposal Site (Terrace)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



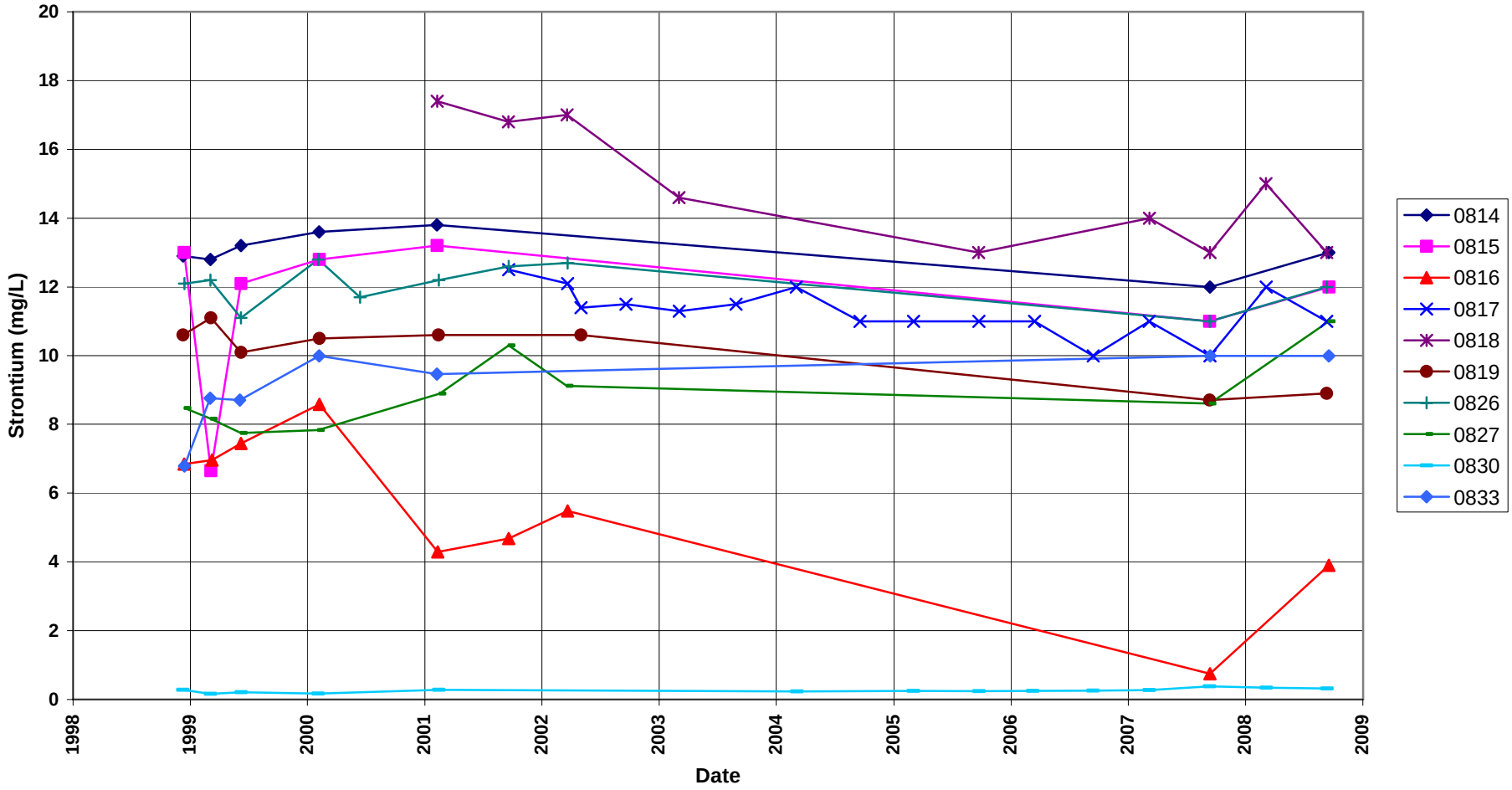
Shiprock Disposal Site (Terrace)
Selenium Concentration
Proposed Alternate Contaminant Limit = 0.05 mg/L



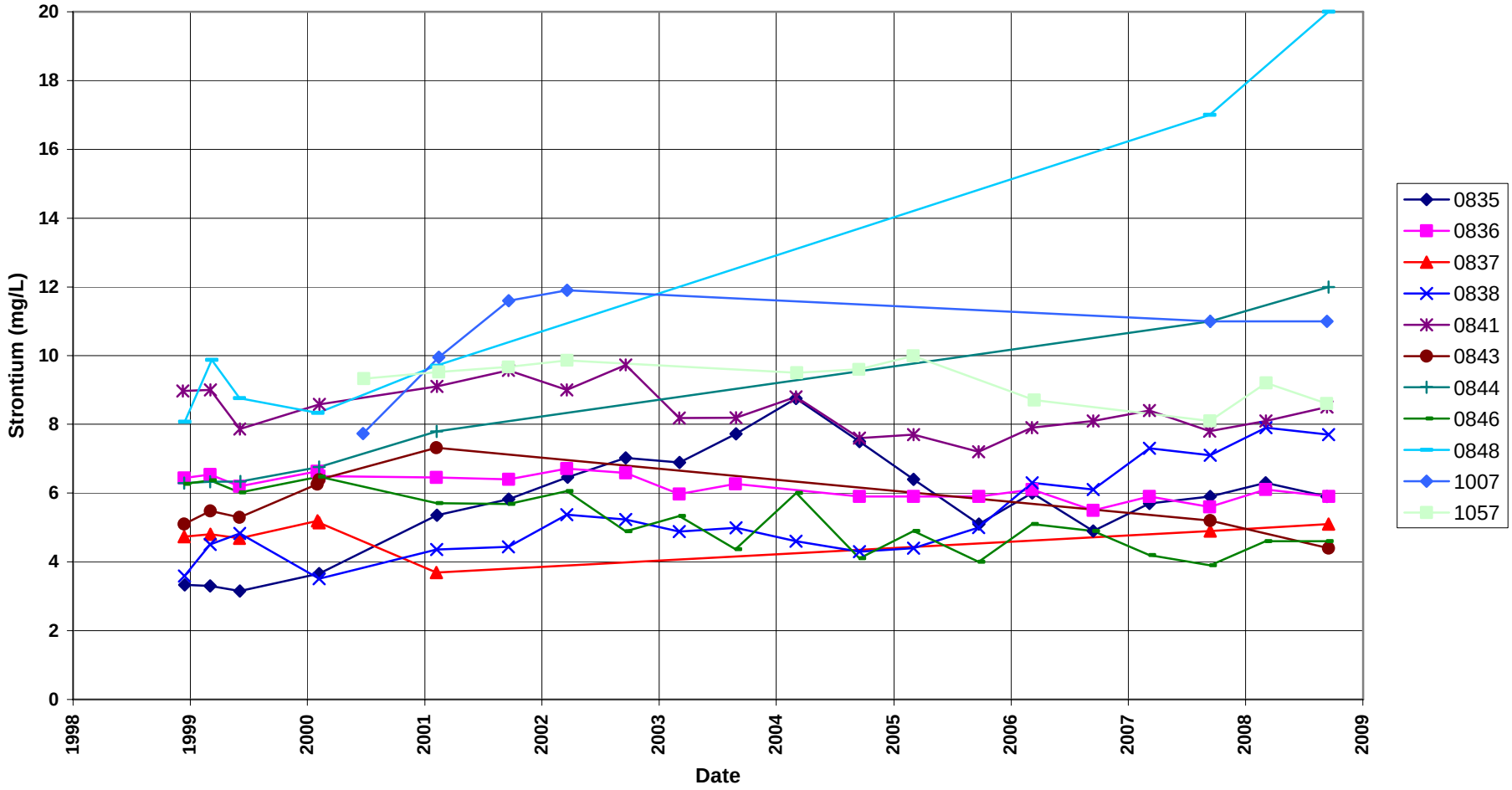
Shiprock Disposal Site (Terrace)
Strontium Concentration



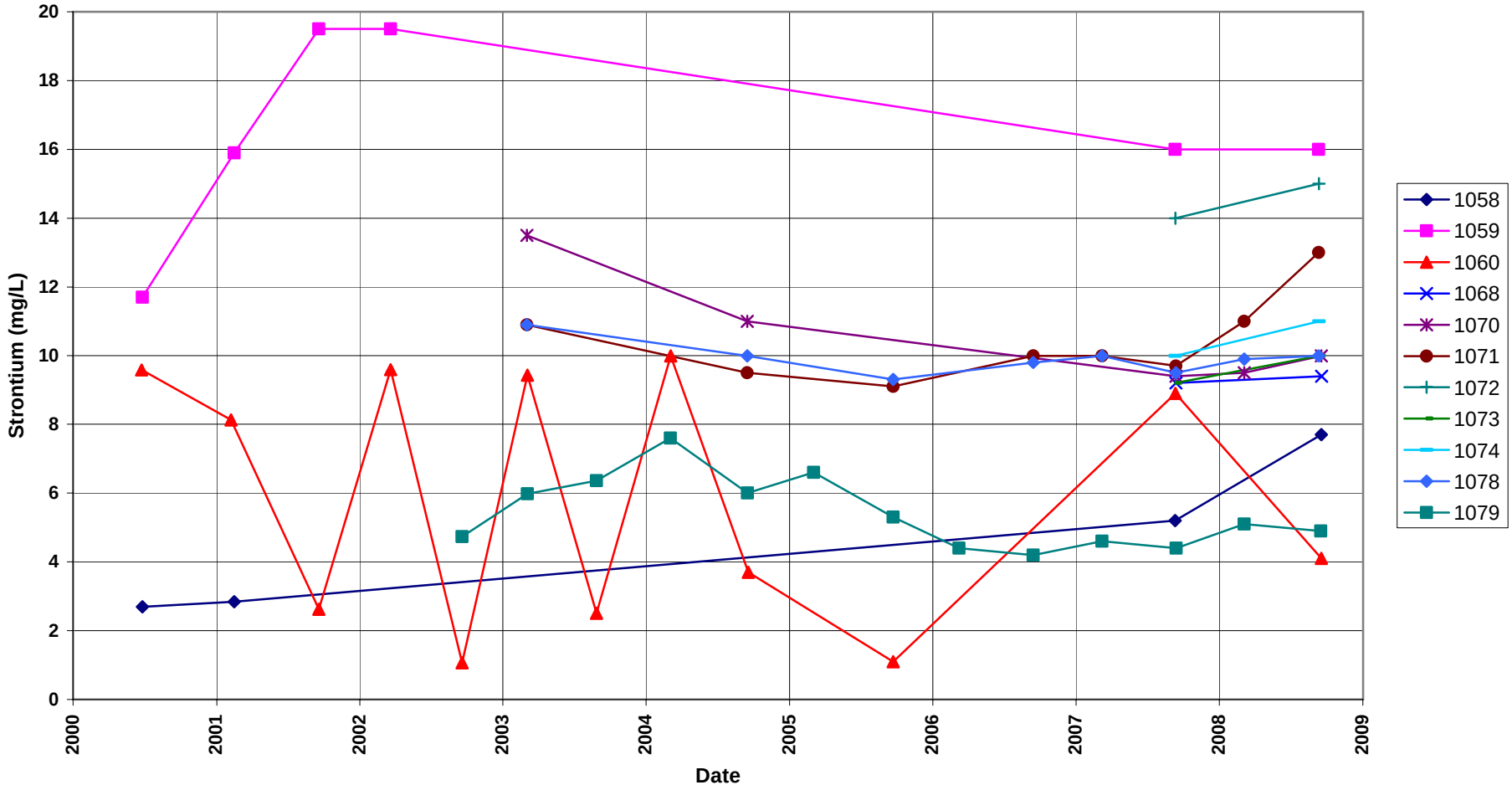
Shiprock Disposal Site (Terrace)
Strontium Concentration

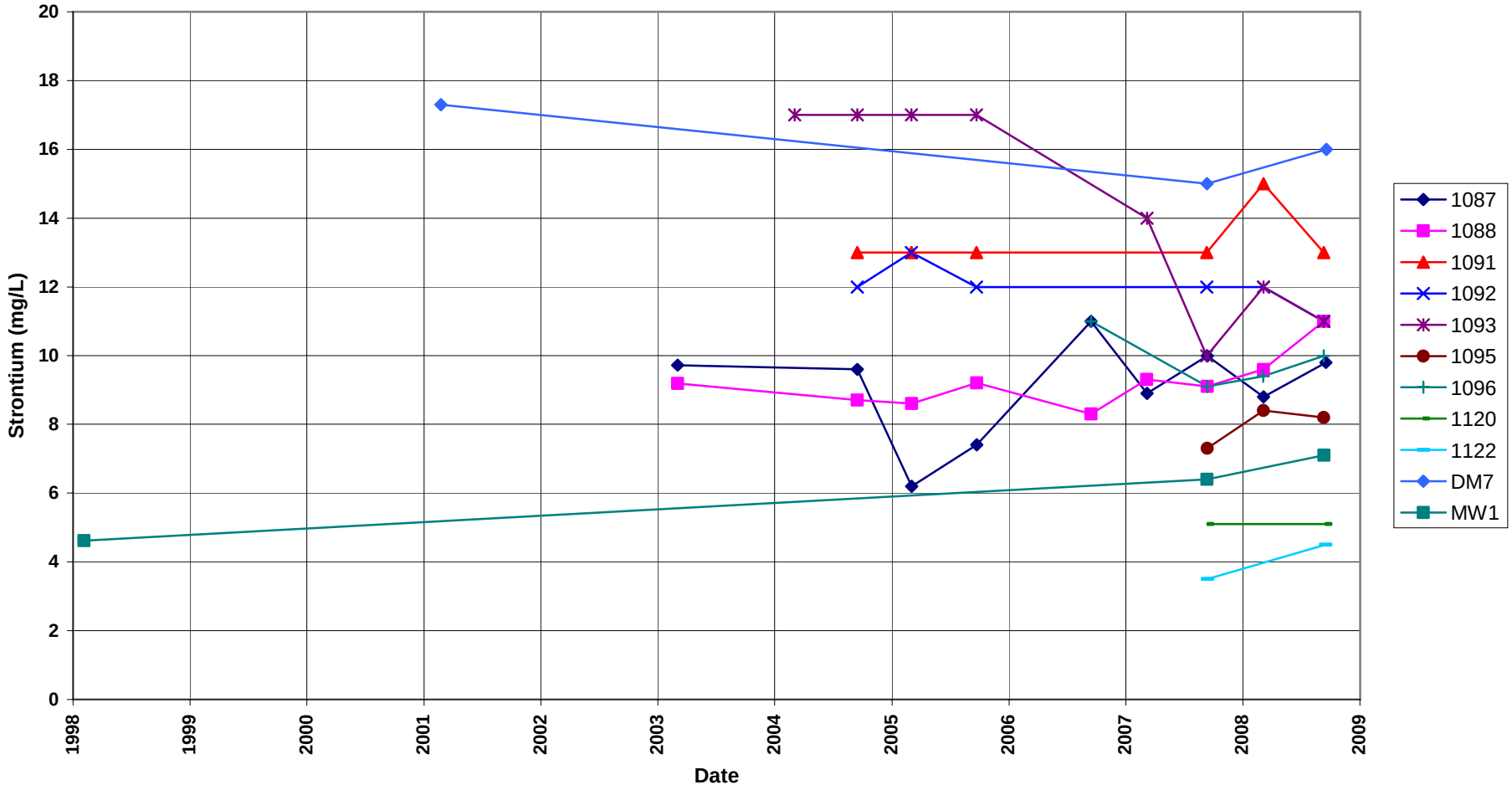


Shiprock Disposal Site (Terrace)
Strontium Concentration

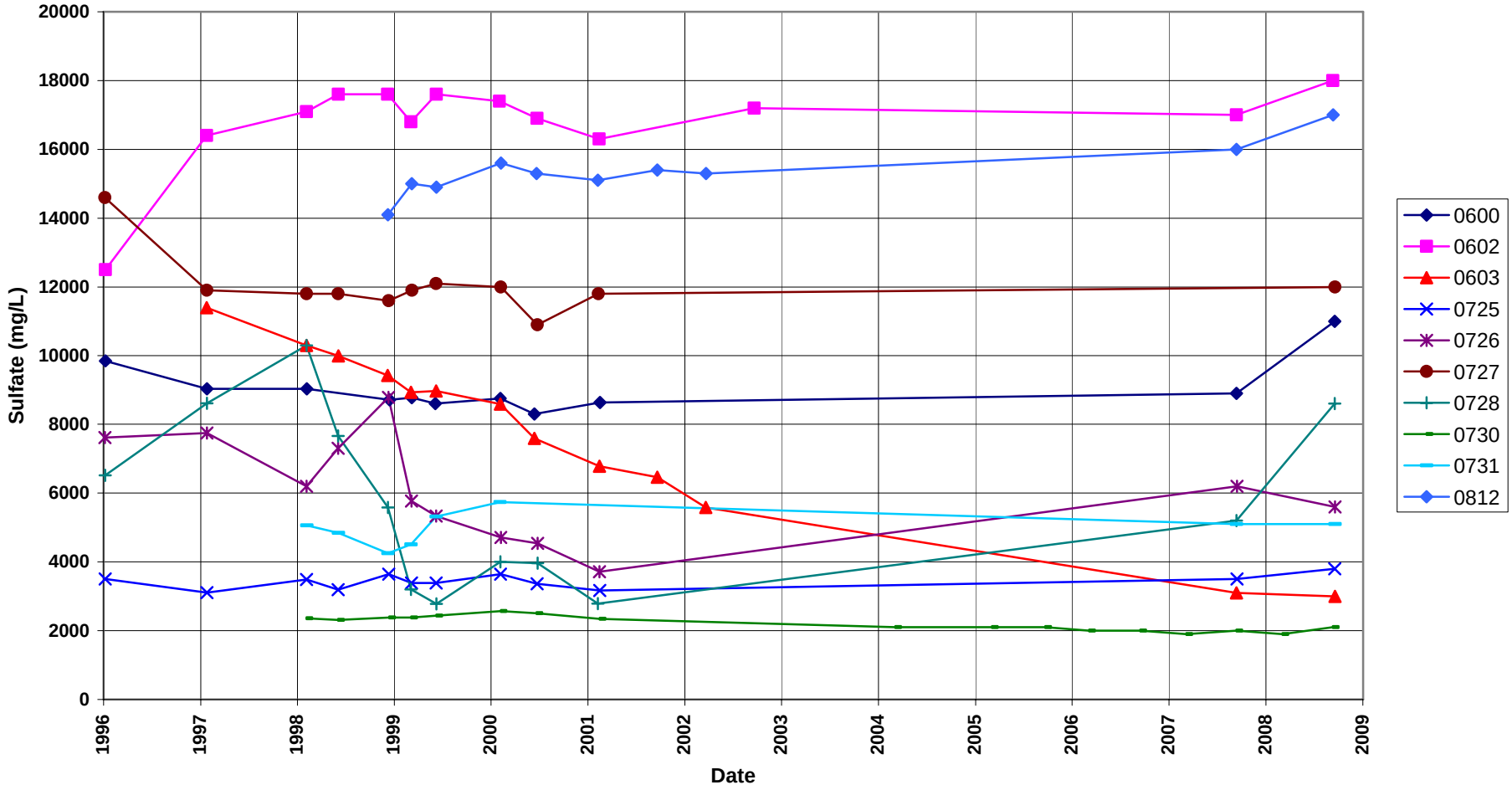


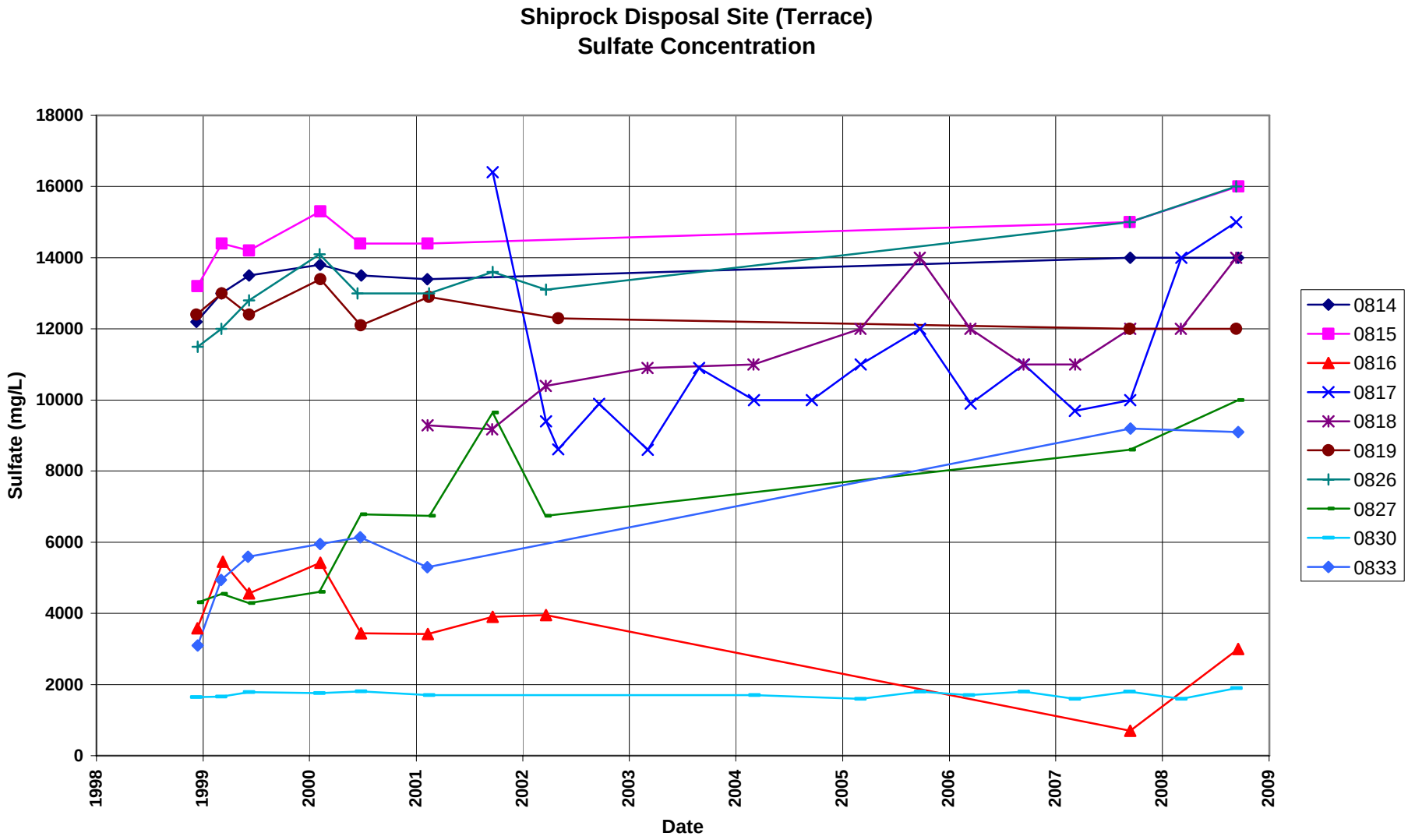
Shiprock Disposal Site (Terrace)
Strontium Concentration

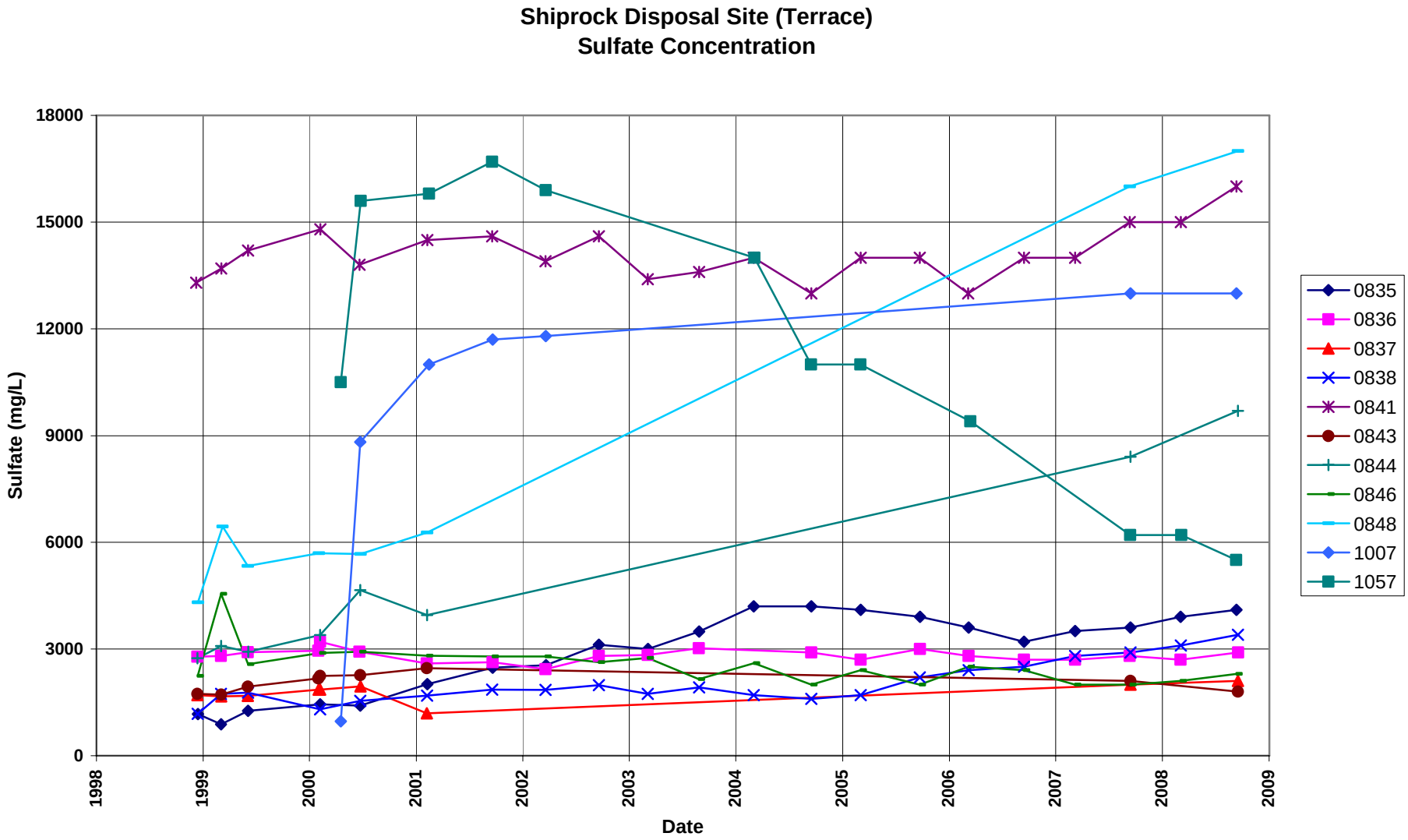


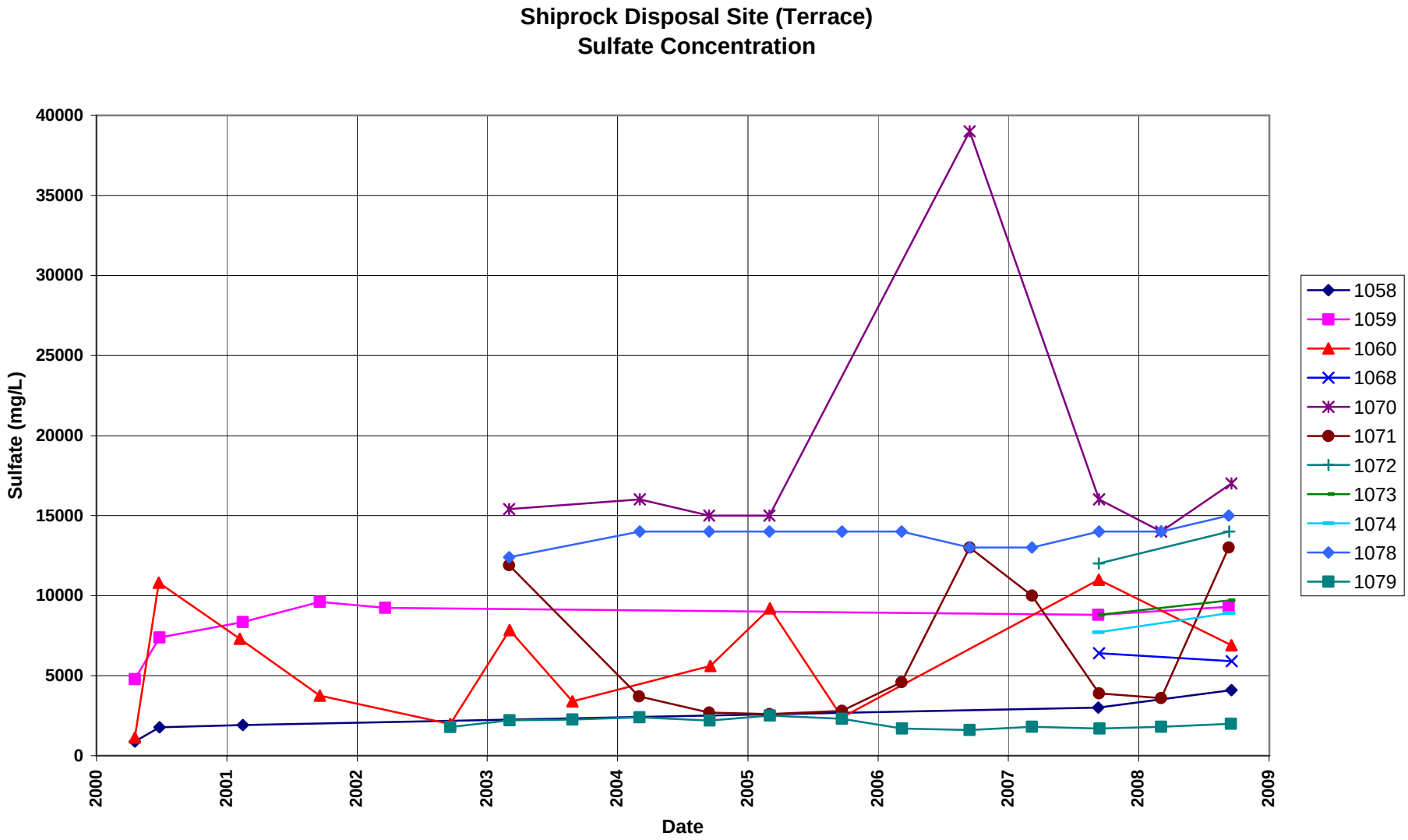

Shiprock Disposal Site (Terrace)
Strontium Concentration
Strontium (mg/L)
Date
0
2
4
6
8
10
12
14
16
18
20
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
1087
1088
1091
1092
1093
1095
1096
1120
1122
DM7
MW1

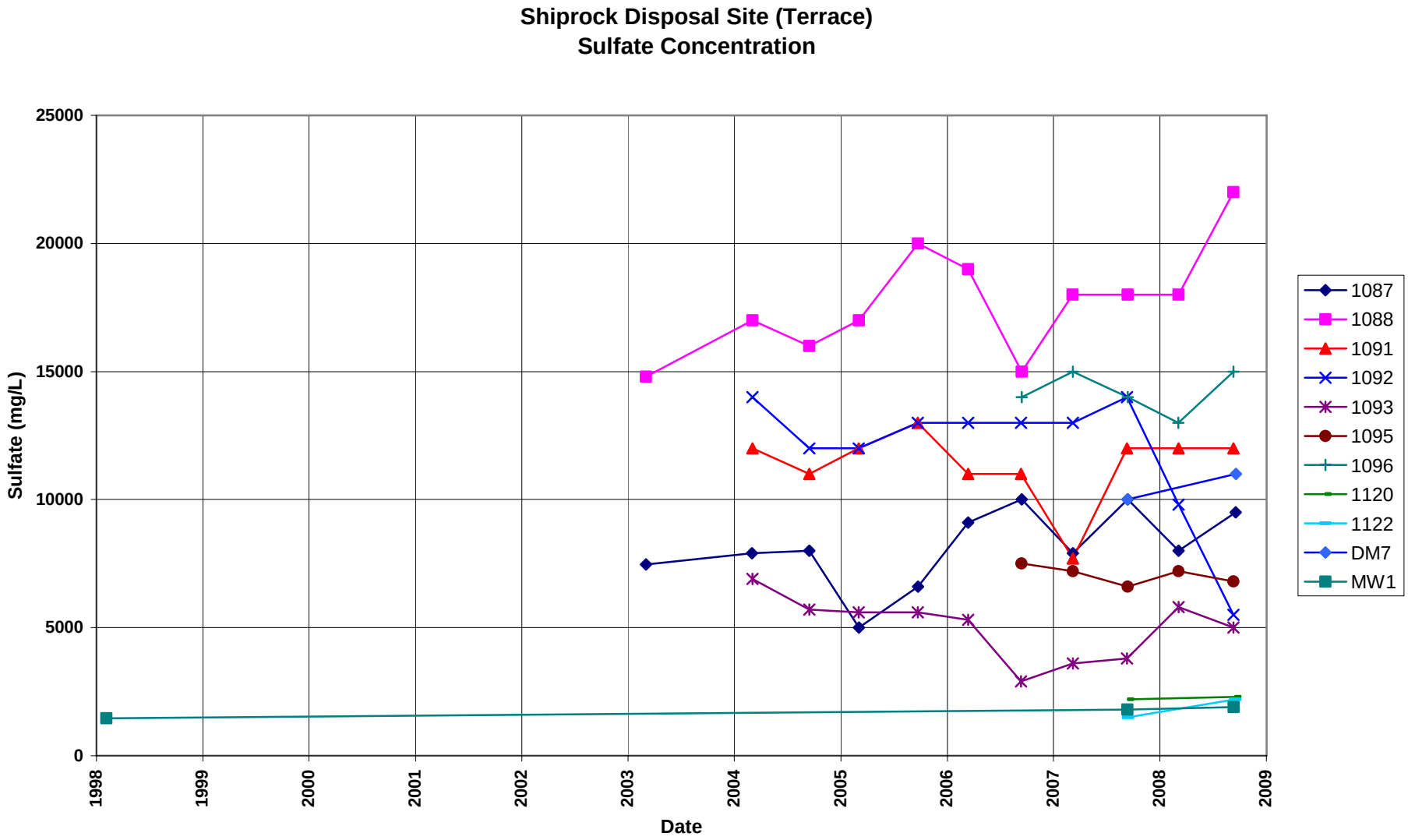
Shiprock Disposal Site (Terrace)
Sulfate Concentration



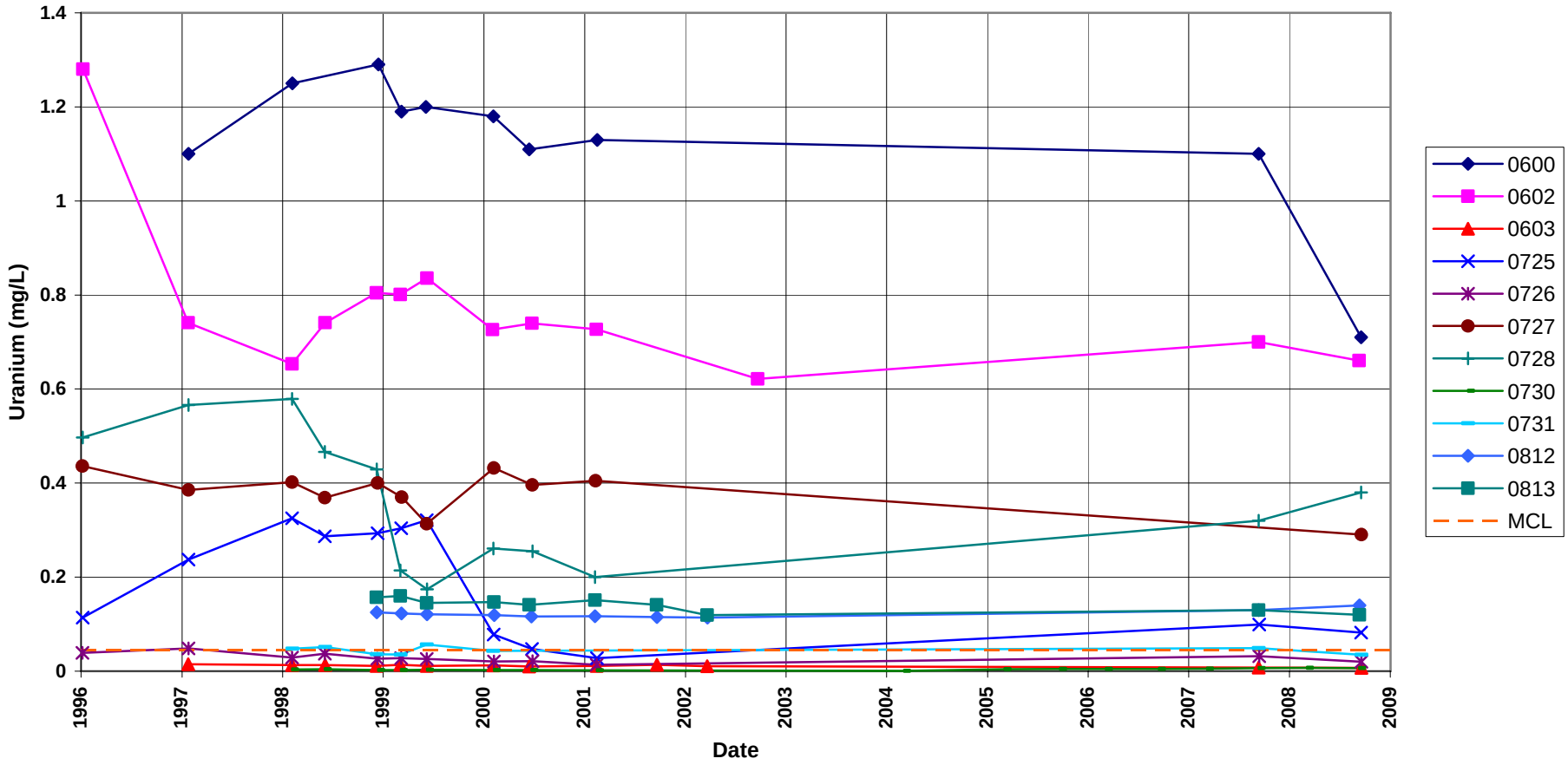

Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
0814
0815
0816
0817
0818
0819
0826
0827
0830
0833


Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
18000
15000
12000
9000
6000
3000
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
0835
0836
0837
0838
0841
0843
0844
0846
0848
1007
1057

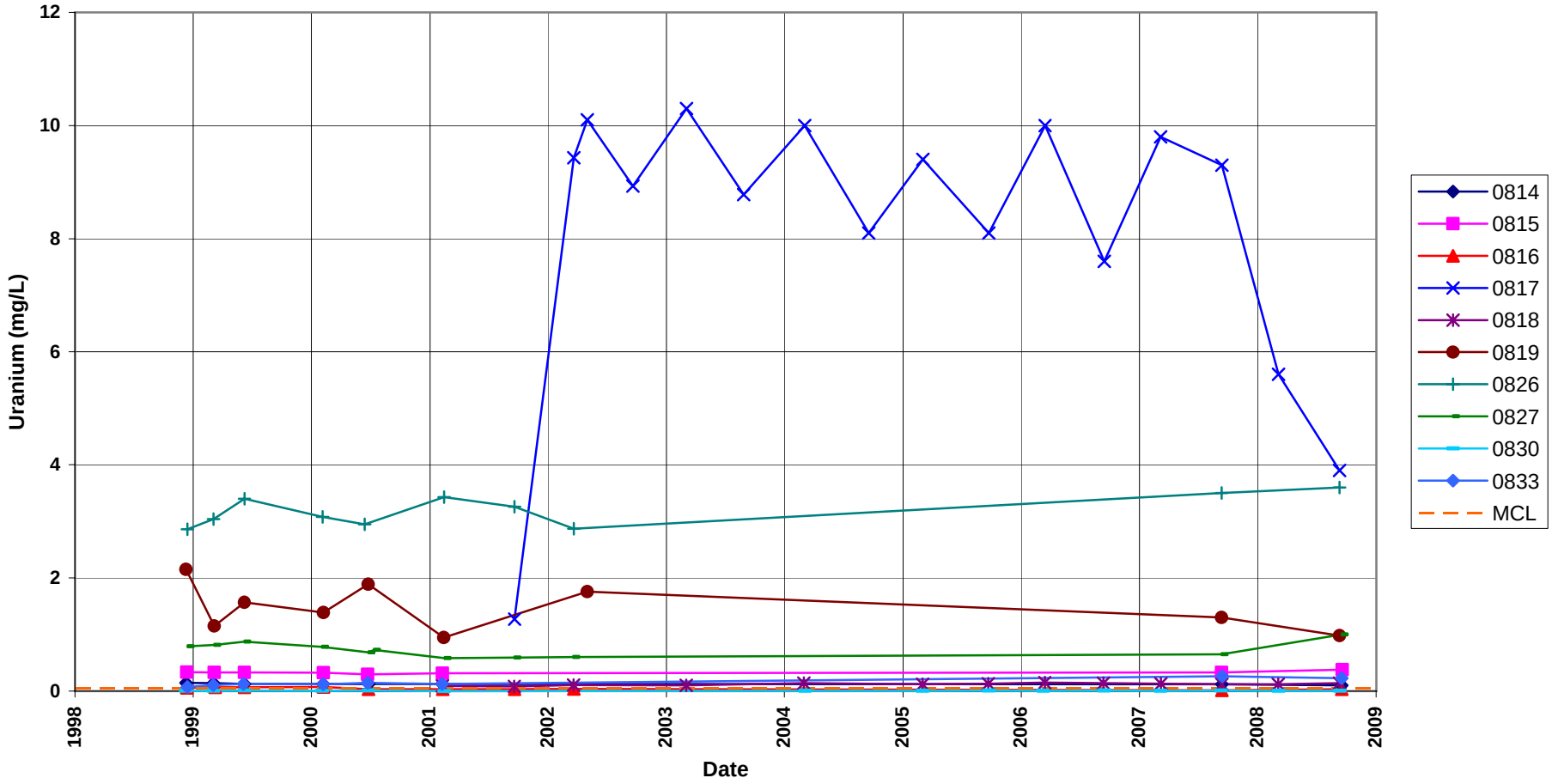

Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
40000
35000
30000
25000
20000
15000
10000
5000
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
1058
1059
1060
1068
1070
1071
1072
1073
1074
1078
1079


Shiprock Disposal Site (Terrace)
Sulfate Concentration
Sulfate (mg/L)
25000
20000
15000
10000
5000
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Date
1087
1088
1091
1092
1093
1095
1096
1120
1122
DM7
MW1

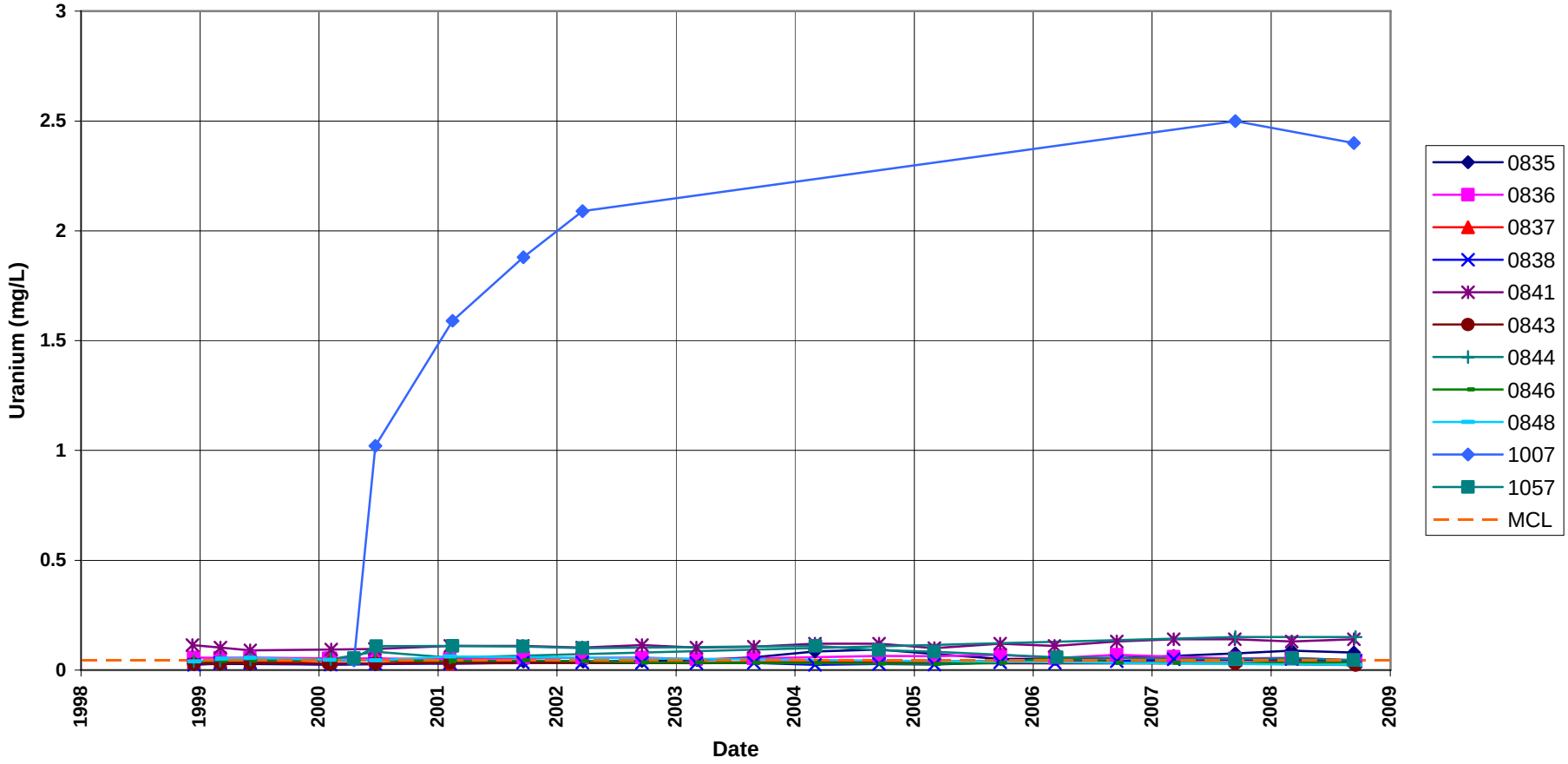
Shiprock Disposal Site (Terrace)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



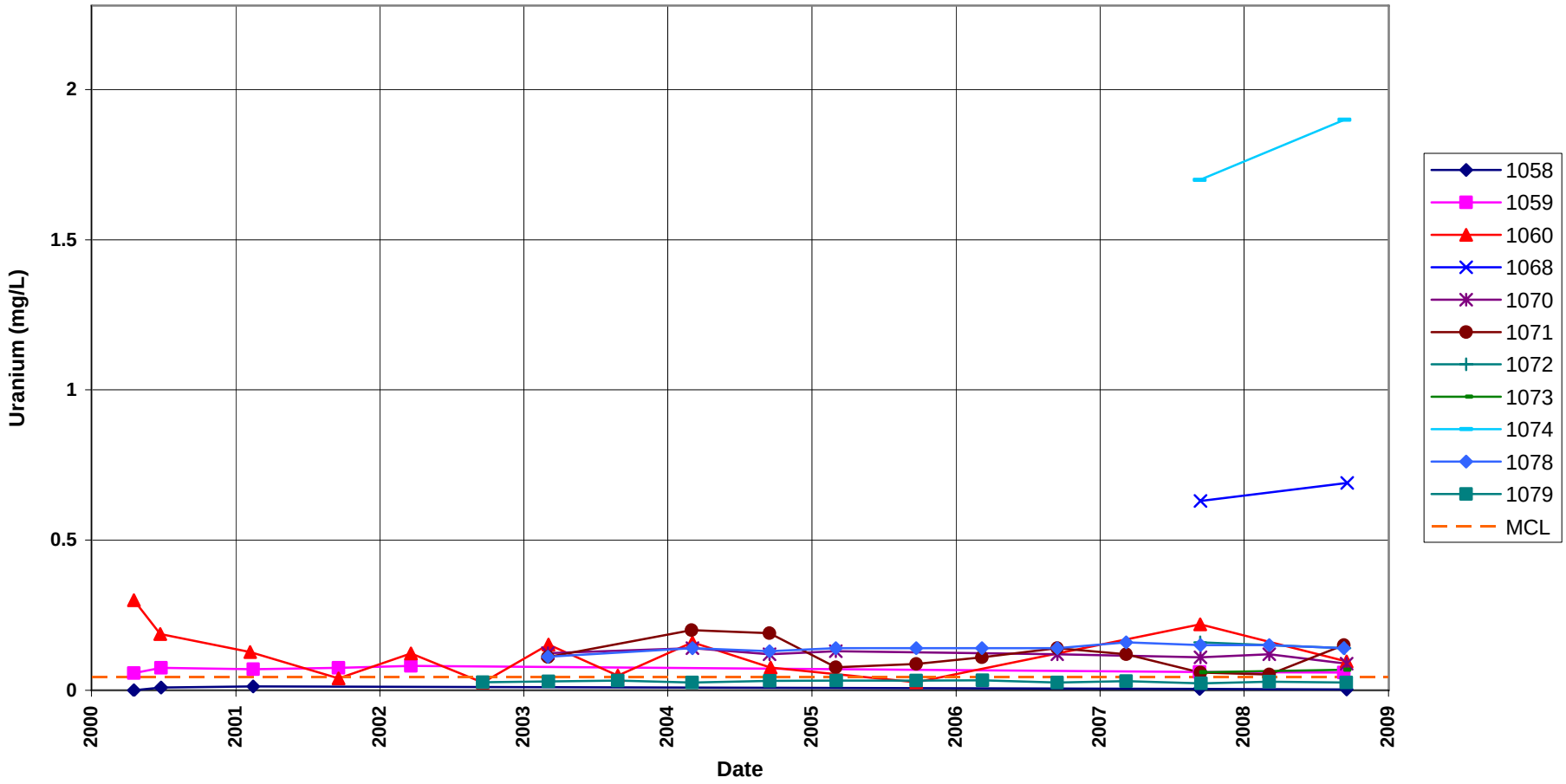
Shiprock Disposal Site (Terrace)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



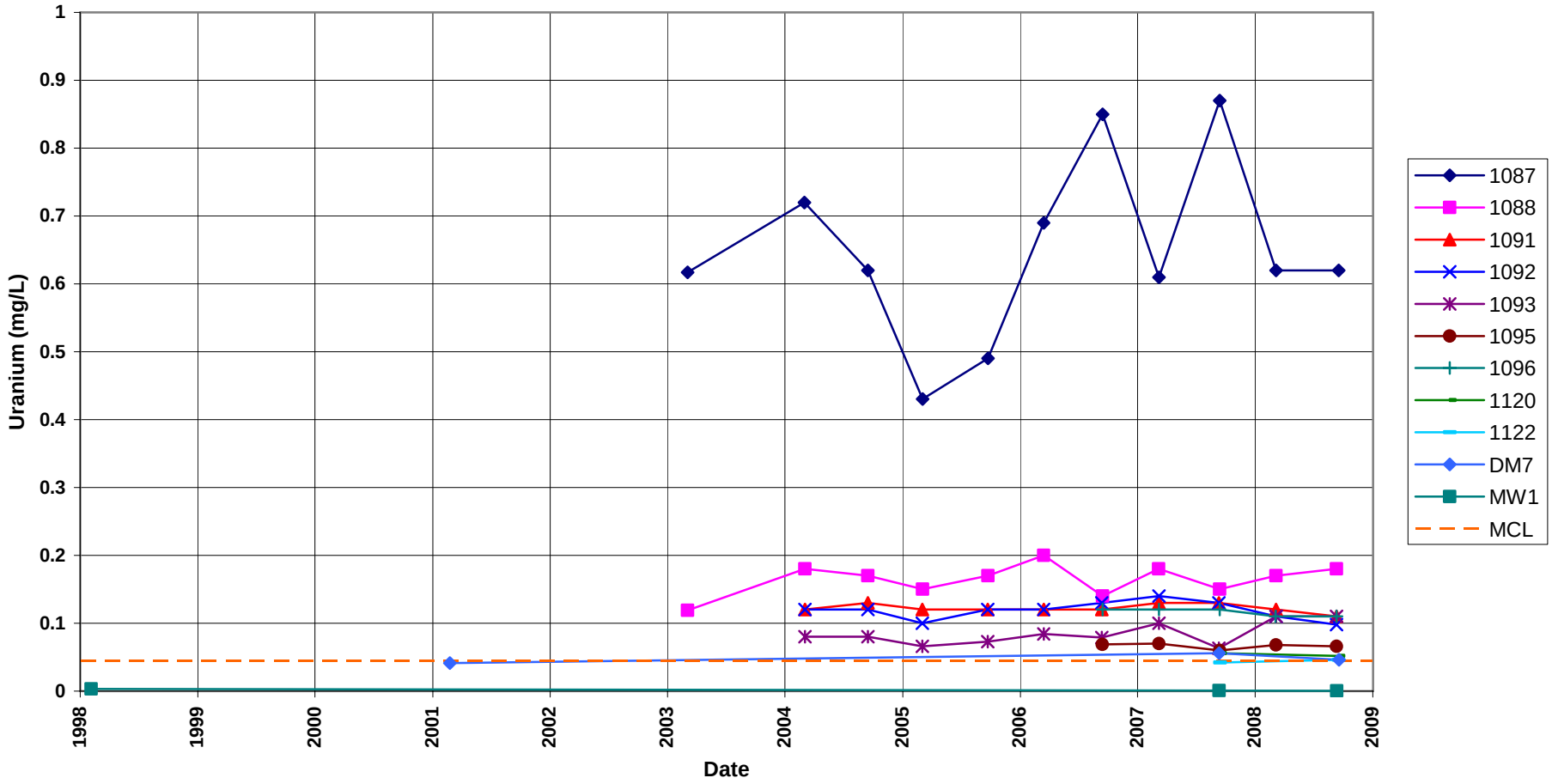
Shiprock Disposal Site (Terrace)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



Shiprock Disposal Site (Terrace)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



Shiprock Disposal Site (Terrace)
Uranium Concentration
Maximum Contaminant Limit = 0.044 mg/L



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Sampling and Analysis
Work Order

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Stoller

established 1959

Task Order LM00-501
Control Number 08-0651

August 18, 2008

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

SUBJECT: Contract No. DE-AM01-07LM00060, Stoller
September 2008 Environmental Sampling at Shiprock, New Mexico - Revised

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

Dear Ms. Ribeiro:

The purpose of this letter is to inform you of the upcoming sampling event at Shiprock, New Mexico. Enclosed are the map and tables specifying sample locations and analytes for routine monitoring at the Shiprock Disposal Site. Water quality data will be collected at this site as part of the routine environmental sampling currently scheduled to begin the week of September 8, 2008.

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

Monitor Wells*

SHP01

608 Km	622 Al	736 Al	792 Al	852 Al	1089 Al	1112 Nr
610 Al	623 Al	766 Al	793 Al	853 Al	1104 Nr	1113 Nr
612 Al	626 Al	768 Al	797 Al	855 Al	1105 Nr	1114 Nr
614 Al	628 Al	775 Al	798 Al	856 Al	1109 Nr	1115 Nr
615 Al	630 Al	782 Al	850 Al	857 Al	1110 Nr	1116 Nr
618 Al	734 Al	783 Al	851 Al	1009 Al	1111 Nr	1117 Nr
619 Al	735 Al	784 Al				

SHP02

600 Km	804 Km	822 Km	836 Al	1006 Al/Km	1070 Al/Km	1091 Al
602 Km	812 Al/Km	826 Al/Km	837 Al	1007 Al/Km	1071 Al/Km	1092 Al
603 Al/Km	813 Al/Km	827 Al/Km	838 Al	1057 Al/Km	1072 Al/Km	1093 Al
725 Al/Km	814 Al/Km	828 Al/Km	839 Al	1058 Km	1073 Al/Km	1095 Nr
726 Km	815 Al/Km	829 Km	841 Al	1059 Km	1074 Al/Km	1096 Nr
727 Km	816 Al/Km	830 Km	843 Al	1060 Al	1078 Al/Km	1120 Nr
728 Al/Km	817 Km	832 Al	844 Al/Km	1067 Al	1079 Al	1122 Nr
730 Al	818 Al	833 Al	846 Al	1068 Al	1087 Nr	DM7 Km
731 Al/Km	819 Km	835 Al	848 Al/Km	1069 Al/Km	1088 Nr	MW1 Km

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

Constituent Sampling Breakdown

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

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

Attachment 4
Trip Report

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Stoller established 1959
Grand Junction Office

Memorandum

DATE: October 28, 2008

TO: David Miller

FROM: Jeff Price

SUBJECT: Sampling Trip Report

Site: Shiprock, NM

Dates of Sampling Event: September 8 – 18, 2008

Team Members: Kent Moe, Joe Trevino, David Miller, and Jeff Price

Number of Locations Sampled: Water samples for metals, anions, and (NO_2+NO_3)-N, were collected from 94 wells and 13 surface water locations.

Locations Not Sampled/Reason: 12 surface water locations and 15 wells were dry; well 0622 was purged dry prior to sample collection. At the direction of the project manager, well 0820 was sampled instead of 0822.

Location Specific Information: Surface location 0949 (new) was established to replace 0942 (dry). Wells 0782 and 0783, which had been destroyed by vandals some time ago, were replaced using the Geoprobe. The wells were given the identifiers 0782-R and 0783-R and were installed as close a possible to the original wells. Surface location 1215 (evaporation pond) was also sampled.

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

False Id	True Id	Sample Type	Associated Matrix	Ticket Number
2659	01-0619	Duplicate	Groundwater	GJQ-474
2660	01-0623	Duplicate	Groundwater	GJQ-475
2661	01-1110	Duplicate	Groundwater	GJQ-476
2662	02-1087	Duplicate	Groundwater	GJQ-477
2664	02-1079	Duplicate	Groundwater	GJQ-479
2665	02-0818	Duplicate	Groundwater	GJQ-480
2666	02-1096	Duplicate	Groundwater	GJQ-481

RIN Number Assigned: All samples were assigned to RIN 08081803.

Sample Shipment: Samples were shipped overnight via FedEx to Paragon Analytics, Inc.on September 22, 2008.

Well Inspection Summary: Well inspections were conducted at all sampled wells. With the exception of well 0622 needing re-development, all wells were in good condition.

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

Water Level Measurements: Water levels were collected in all sampled wells.

Field Variance: None.

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

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

Site Issues:

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

Corrective Action Taken: None.

(JP/lcg)

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