

Data Validation Package

**December 2006,
Monument Valley, Arizona**



**U.S. Department of Energy
Office of Legacy Management**

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Sampling Event Summary

Site: Monument Valley, Arizona, Processing Site

Sampling Period: December 11-14, 2006

Nineteen ground water samples were collected at the Monument Valley, Arizona, Processing Site to monitor ground water contaminants as specified in the *Final Site Observational Work Plan for the UMTRA Project Site at Monument Valley, Arizona*. Water levels were measured at each sampled well. Sampling and analysis was conducted as specified in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites* (DOE 2006). One duplicate sample was collected from location 0662.

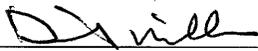
Time concentration plots for ammonium, nitrate, sulfate, uranium, and vanadium are included with the results data. The data from this sampling event are consistent with values previously obtained. Increasing uranium concentrations in well 0662 have been previously noted and continue with the data from this sampling event. There are no corresponding increases in the nitrate or sulfate concentrations that would indicate contaminant movement. Ongoing erosion of a former uranium mine located upgradient from the site may be contributing to the increasing uranium concentrations at this location. The increasing nitrate concentration in wells 0761, 0762, and 0764 as indicated on the time versus concentration graphs, is consistent with downgradient movement of the contaminant plume. Wells with analyte concentrations that exceeded U.S. Environmental Protection Agency (EPA) ground water standards are listed in Table 1 on the following page.

Table 1. Monument Valley Locations That Exceed Standards

Comparison to UMTRCA Maximum Groundwater Concentration Standards
 Laboratory: PARAGON (Fort Collins, CO)
 Report Identification Number (RINs): 06110582
 Report Date: 02/12/2007

Analyte	Standard ^a	Site Code	Location	Concentration
Net Alpha	15	MON01	0662	17
Nitrate as Nitrogen	10	MON01	0606	190
			0655	99
			0656	18
			0662	11
			0761	25
			0762	73
			0764	41
			0765	120
			0770	21
Uranium	0.044	MON01	0662	0.500
			0774	0.048

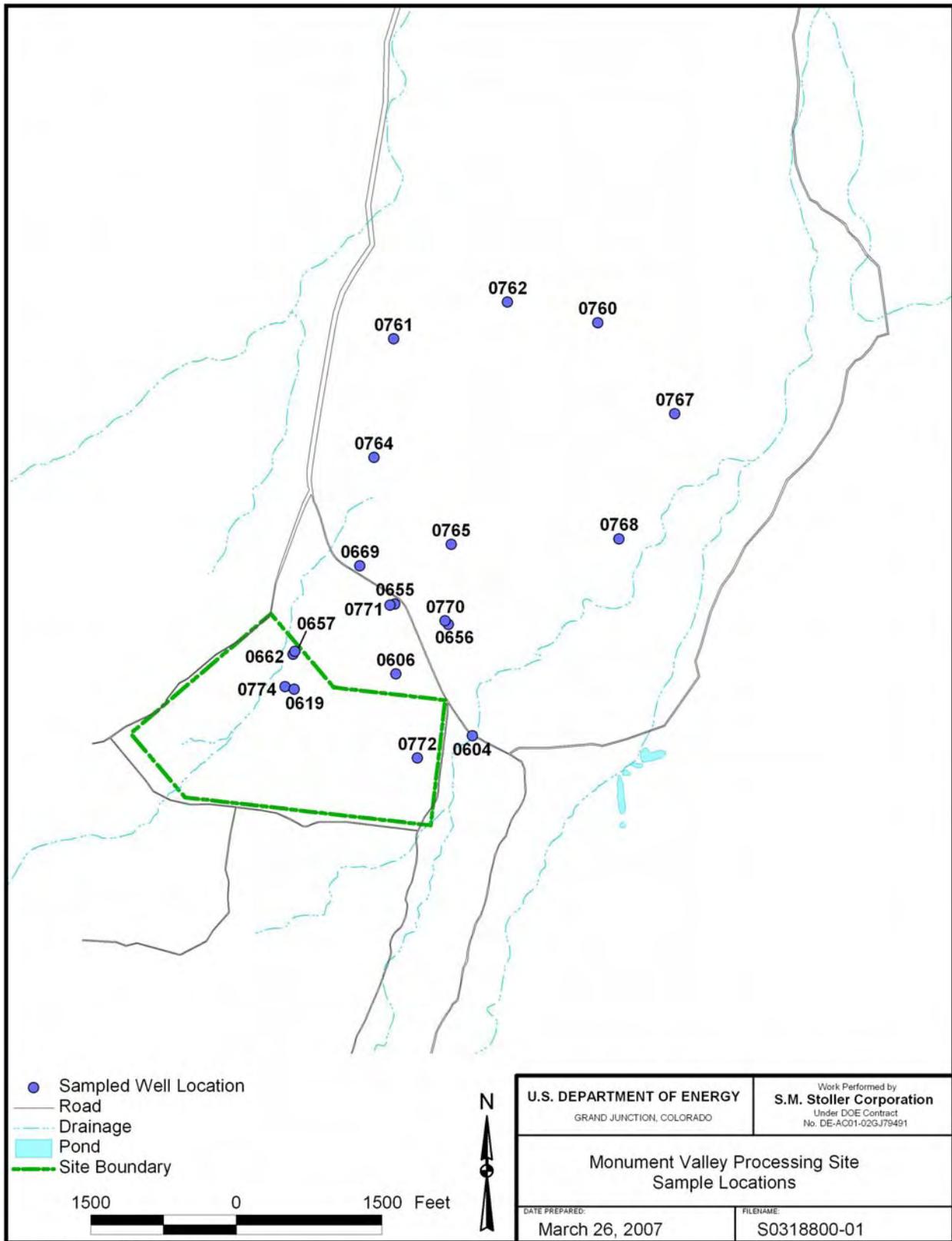
^a Standards are listed in 40 CFR 192.02 Table 1 to Subpart A; units are in mg/L.



David Miller
 Site Lead, S.M. Stoller

3/27/07

Date



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Sample Locations at Monument Valley, Arizona, Processing Site

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Data Assessment Summary

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Water Sampling Field Activities Verification Checklist

Project	Monument Valley Processing Site	Date(s) of Water Sampling	December 11-14, 2006
Date(s) of Verification	February 12, 2007	Name of Verifier	Steve Donovan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures? List other documents, SOP's, instructions.	Yes	Work Order Letter dated November 16, 2006
2. Were the sampling locations specified in the planning documents sampled?	Yes	
3. Was a pre-trip calibration conducted as specified in the above named documents?	Yes	Pre-trip calibration performed on December 11, 2006
4. Was an operational check of the field equipment conducted twice daily? Did the operational checks meet criteria?	Yes	Two checks on December 12 and 13, 2006. One check on December 14, 2006.
5. Were the number and types (alkalinity, temperature, Ec, pH, turbidity, DO, ORP) of field measurements taken as specified?	Yes	
6. Was the Category of the well documented?	Yes	
7. Were the following conditions met when purging a Category I well: Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	Yes	
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	Yes	
Was the flow rate less than 500 mL/min?	Yes	
If a portable pump was used, was there a 4 hour delay between pump installation and sampling?	NA	

Water Sampling Field Activities Verification Checklist (continued)

	Response (Yes, No, NA)	Comments
8. Were the following conditions met when purging a Category II well: Was the flow rate less than 500 mL/min?	Yes	
Was one pump/tubing volume removed prior to sampling?	Yes	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	Duplicate collected at location 0662.
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	NA	Dedicated equipment was used at all locations.
11. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
12. Were QC samples assigned a fictitious site identification number? Was the true identity of the samples recorded on the Quality Assurance Sample Log?	Yes	Duplicate from location 0662 assigned a number of 2417.
	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	Yes	
15. Were the number and types of samples collected as specified?	Yes	
16. Were chain of custody records completed and was sample custody maintained?	Yes	
17. Are field data sheets signed and dated by both team members?	Yes	
18. Was all other pertinent information documented on the field data sheets?	Yes	
19. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
20. Were water levels measured at the locations specified in the planning documents?	Yes	

Laboratory Performance Assessment

General Information

Report Number (RIN): 06110582
Sample Event: December 11-14, 2006
Site(s): Monument Valley, Arizona
Laboratory: Paragon Analytics
Work Order No.: 062122
Analysis: Metals and Inorganics
Validator: Steve Donivan
Review Date: February 1, 2007

This validation was performed according to the *Environmental Procedures Catalog* (STO 6), "Standard Practice for Validation of Laboratory Data," GT-9(P) rev1 (2006). 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 1.

Table 1. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Ammonia as N, NH ₃ -N	WCH-A-005	MCAWW 350.1	MCAWW 350.1
Chloride	MIA-A_039	SW-846 9056	SW-846 9056
Gross Alpha/Beta	GPC-A-001	SOP702R16	SPO724R8
Nitrate + Nitrite as N, NO ₃ +NO ₂ -N	WCH-A-022	MCAWW 353.2	MCAWW 353.2
Radium-226	ASP-A-016	PA SOP774R8	PA SOP774R8
Radium-228	GPC-A-020	PA SOP746R7	PA SOP724R8
Sulfate, SO ₄	MIS-A-044	SW-846 9056	SW-846 9056
Uranium Isotopes	GJO-05	PA SOP776R10	PA SOP714R10
Uranium, U	GJO-01	SW-846 3005A	SW-846 6020A
Vanadium, V	GJO-18	SW-846 3005A	SW-846 6020A

Data Qualifier Summary

Analytical results were qualified as listed in Table 2. Refer to the attached validation worksheets and the sections below for an explanation of the data qualifiers applied.

Table 2. Qualified Results

Sample Number	Location	Analyte	Flag	Reason
0612122-3	0619	Gross Beta	J	Less than 3 times the MDC
0612122-6	0657	U-235	J	Less than 3 times the MDC
0612122-7	0662	Ra-226	J	Less than 3 times the MDC
0612122-15	0768	U	U	Less than 5 times the calibration blank
0612122-19	0774	Ra-228	J	Less than 3 times the MDC

Sample Shipping/Receiving

Paragon Analytics in Fort Collins, Colorado, received 21 water samples on December 19, 2006, accompanied by a Chain of Custody (COC) form. The COC form was checked to confirm that all of the samples were listed on the form with sample collection dates and times, and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents including the COC form and the sample tickets had no errors or omissions.

Preservation and Holding Times

The sample shipment was received cool and intact with a temperature within the chilled cooler of 0.6 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses and all samples were analyzed within the applicable holding times.

Laboratory Instrument Calibration

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

Method MCAWW 350.1

The initial calibration for ammonia as N was performed using six calibration standards on December 29, 2006, resulting in a calibration curve with a correlation coefficient (r^2) value greater than 0.995 and an intercept less than 3 times the method detection limit (MDL). Initial and continuing calibration verification (CCV) checks were made at the required frequency, resulting in four CCVs. All calibration checks were within the acceptance range.

Method SW-846 6020A

Calibrations for uranium were performed on January 4, 2007; and for vanadium on January 10, 2007. The initial calibrations were performed using six calibration standards resulting in calibration curves with correlation coefficient (r^2) values greater than 0.995. The

absolute values of the intercept of the calibration curves were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 13 CCVs. All calibration checks met the acceptance criteria. A reporting limit verification check (CRI) was made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit. The CRI results met the acceptance criteria. The mass calibration and resolution was checked at the beginning of each analytical run in accordance with the procedure. Internal standard recoveries were stable and within acceptance ranges.

Method SW-846 9056

Initial calibrations were performed for sulfate using five calibration standards on December 6, 2006 and for chloride on December 27, 2006. The calibration curve r^2 values were greater than 0.995 and intercepts less than 3 times the MDL. Initial calibration and calibration check standards were prepared from independent sources. Initial and continuing calibration verification checks were made at the required frequency resulting in 13 CCVs. All calibration checks met the acceptance criteria.

Method MCAWW 353.2

The initial calibration for $\text{NO}_3+\text{NO}_2\text{-N}$ was performed using seven calibration standards on December 28, 2006, resulting in a calibration curve r^2 value greater than 0.995 and an intercept less than 3 times the MDL. Initial and continuing calibration checks were made at the required frequency resulting in five CCVs that met the acceptance criteria.

Radiochemical Analysis

Radiochemical results are qualified with a “J” flag (estimated) when the result is greater than the minimum detectable concentration (MDC), but less than 3 times the MDC. Radiochemical results are qualified with a “U” flag (not detected) when the result is greater than the MDC, but less than the two sigma total propagated uncertainty (TPU).

Gross Alpha/Beta

Plateau calibrations were performed on November 6, 2006. Alpha and beta attenuation calibrations were performed on December 2, 2006, covering a range of 0 to 204 milligrams (mg). All standards were counted to a minimum of 10,000 counts. All calibration and background checks met acceptance criteria. The residual mass was between 30 mg and 60 mg for all samples.

Radium-226

Emanation cell plateau voltage determinations were performed on September 19, 2006, and cell efficiency calibrations were performed on September 20, 2006. Daily efficiency calibration and background checks were performed on January 9, 2007. All calibration data met the acceptance criteria. All chemical tracer recoveries were within the acceptance range.

Radium-228

Plateau voltage determinations were performed on January 23, 2006, and detector efficiency calibrations were performed on April 26, 2006. Daily efficiency calibration and background checks were performed on December 15, 2006. All calibration data met the acceptance criteria. All chemical tracer recoveries were within the acceptance range.

Uranium Isotopes

Alpha spectrometry calibrations were performed on December 28, 2006. Instrument background was determined on December 28, 2006. All daily instrument calibration and background checks met the acceptance criteria. The chemical recoveries met the acceptance criteria of 30 to 110 percent for all samples with the exception of sample 2417. The results for this sample are acceptable; elevated levels of uranium present resulted in reduced recovery. The full width at half maximum (FWHM) was reviewed for all analyses to evaluate the spectral resolution. All FWHM values were below 100, demonstrating acceptable resolution. All internal standard peaks were within 50 KeV of the expected position. All isotope results were blank corrected using data from a blank population.

Method and Calibration Blanks

All initial and continuing calibration blank results were below the practical quantitation limits for all analytes. The sulfate, NH₃-N, and NO₃+NO₂-N method blanks were below the method detection limits. The radiochemical method blank results were all below the minimum detectable concentration.

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

ICP interference check samples ICSA and ICSAB 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 samples (MS/MSD) were analyzed for NH₃-N, NO₃+NO₂-N, sulfate, uranium, and vanadium as a measure of method performance in the sample matrix. The MS/MSD data were not evaluated for NO₃+NO₂-N because the concentration of the unspiked sample was greater than 4 times the spike concentration. The MS/MSD analyses resulted in acceptable recovery and precision for all analytes.

Laboratory Replicate Analysis

The laboratory replicate sample results demonstrate acceptable laboratory precision. The relative percent difference (RPD) values for the laboratory replicate samples and matrix spike duplicate sample results for non-radiochemical analytes were less than 20 percent. The radiochemical relative error ratio for all replicates was less than three demonstrating acceptable precision.

Laboratory Control Sample

Laboratory control samples (LCS) were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. The LCS results were acceptable for all analysis categories.

Metals Serial Dilution

Serial dilutions were prepared and analyzed for uranium and vanadium to monitor chemical or physical interferences in the sample matrix. The serial dilution data were not evaluated for vanadium because the concentration of the undiluted sample was less than 100 times the practical quantitation limit. The uranium serial dilution results were within the acceptance range.

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 (RDLs) were met for all analytes with the exception of eight radiochemical results. The detection limits reported were above the RDLs because of elevated analyte concentrations and dissolved solids, and are considered acceptable.

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 ion chromatography data. There were no manual integrations performed and all peak integrations were satisfactory.

Electronic Data Deliverable (EDD) File

An EDD file arrived on January 18, 2007. The Sample Management System EDD validation module was used to verify that the EDD file was complete and in compliance with requirements. The module compares the contents of the file to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Worksheet

Page 1 of 1

RIN: 06110582 Lab Code: PAR Validator: Steve Donovan Validation Date: 2/1/2007
 Site: MONUMENT VALLEY Analysis Type: Metals General Chem Rad Organics
 # of Samples: 21 Matrix: WATER Requested Analysis Completed: Yes

Chain of Custody
 Present: OK Signed: OK Dated: OK

Sample
 Integrity: OK Preservation: OK Temperature: OK

Exceptions

Method	Analyte	Location	Ticket	Collection Date	Preparation Date	Analysis Date	Dilution Factor	Holding Time Met	Detection Limit Met
SOP714R10	U-234	662	NFK 662	12/14/2006	12/28/2006	1/2/2007	1	Yes	No
SOP714R10	U-235	662	NFK 662	12/14/2006	12/28/2006	1/2/2007	1	Yes	No
SOP714R10	U-238	662	NFK 662	12/14/2006	12/28/2006	1/2/2007	1	Yes	No
SOP714R10	U-238	2417	NFK 659	12/14/2006	12/28/2006	1/2/2007	1	Yes	No
SOP724R9	Ra-228	657	NFJ 918	12/12/2006	1/10/2007	1/15/2007	1	Yes	No
SOP714R10	U-234	2417	NFK 659	12/14/2006	12/28/2006	1/2/2007	1	Yes	No
SOP724R9	GROSS BETA	662	NFK 662	12/14/2006	12/20/2006	1/1/2007	1	Yes	No
SOP783R7	Ra-226	619	NFJ 920	12/12/2006	1/3/2007	1/9/2007	1	Yes	No

Comments: _____

 All samples were analyzed within the applicable holding times.

SAMPLE MANAGEMENT SYSTEM
Metals Data Validation Worksheet

RIN: 06110582 Lab Code: PAR Date Due: 1/16/2007
 Matrix: Water Site Code: MON Date Completed: 1/19/2007

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								
Uranium	01/04/2007	0.0000	1.0000	OK	OK	OK	OK		107.0	107.0	0.0	100.0		91.7	
Uranium	01/04/2007								113.0	113.0	0.0		6.0		
Vanadium	01/10/2007	0.0000	1.0000	OK	OK	OK	OK		93.0	92.0	1.0	115.0		86.7	
Vanadium	01/10/2007								90.0	92.0	2.0				

Comments: _____

SAMPLE MANAGEMENT SYSTEM
Radiochemistry Data Validation Worksheet

RIN: 06110582 **Lab Code:** PAR **Date Due:** 1/16/2007
Matrix: Water **Site Code:** MON **Date Completed:** 1/19/2007

Sample	Analyte	Date Analyzed	Result	Flag	Tracer %R	LCS %R	MS %R	Duplicate
0619	Uranium-238	01/02/2007			85.4			
0619	Radium-226	01/09/2007			95.2			
0619	Radium-228	01/15/2007			67.3			
0657	Uranium-238	01/02/2007			85.0			
0657	Radium-226	01/09/2007			85.1			
0657	Radium-228	01/15/2007			62.0			
0662	Uranium-238	01/02/2007			33.0			
0662	Radium-226	01/09/2007			93.4			
0662	Radium-228	01/15/2007			63.5			
0662 Duplicate	Uranium-233+234	01/02/2007			33.9			0.47
0662 Duplicate	Uranium-235	01/02/2007						1.13
0662 Duplicate	Uranium-238	01/02/2007						0.40
0774	Uranium-238	01/02/2007			86.0			
0774	Radium-226	01/09/2007			89.9			
0774	Radium-228	01/15/2007			59.8			
2417	Uranium-238	01/02/2007			23.1			
2417	Radium-226	01/09/2007			92.0			
2417	Radium-228	01/15/2007			61.0			
Duplicate	Gross Alpha	01/01/2007						0.16
Duplicate	Gross Beta	01/01/2007						0.39
LCS	Gross Alpha	01/01/2007				104.0		
LCS	Gross Beta	01/01/2007				107.0		
LCS	Uranium-233+234	01/02/2007			90.4	102.0		
LCS	Uranium-238	01/02/2007				103.0		
LCS	Radium-226	01/09/2007			94.8	81.2		
LCS	Radium-228	01/15/2007			68.6	98.4		
LCSD	Radium-226	01/09/2007			92.8	97.0		1.00
Method Blank	Gross Alpha	01/01/2007	0.4210	U				
Method Blank	Gross Beta	01/01/2007	0.5400	U				
Method Blank	Uranium-233+234	01/02/2007	0.0175	U	85.7			
Method Blank	Uranium-235	01/02/2007	-0.0036	U				
Method Blank	Uranium-238	01/02/2007	0.0041	U				

Comments: _____

SAMPLE MANAGEMENT SYSTEM
Radiochemistry Data Validation Worksheet

RIN: 06110582 **Lab Code:** PAR **Date Due:** 1/16/2007
Matrix: Water **Site Code:** MON **Date Completed:** 1/19/2007

Sample	Analyte	Date Analyzed	Result	Flag	Tracer %R	LCS %R	MS %R	Duplicate
Method Blank	Radium-226	01/09/2007	0.3360	U	93.8			
Method Blank	Radium-228	01/15/2007	0.1330	U	67.2			

Comments: _____

SAMPLE MANAGEMENT SYSTEM
Inorganics Data Validation Worksheet

RIN: 06110582 Lab Code: PAR Date Due: 1/16/2007
 Matrix: Water Site Code: MON Date Completed: 1/19/2007

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	12/29/2006	0	0.9994	OK	OK	OK	OK	101.0	91.0	93.0	2.00		
Chloride	12/28/2006	0	1.0000	OK	OK	OK	OK	102.0	96.0	97.0	1.00		
Nitrate+Nitrite as N	12/28/2006	0	1.0000	OK	OK	OK	OK	107.0	89.0	95.0	6.00		
Sulfate	12/20/2006	0	0.9999	OK	OK	OK	OK	93.0	100.0	110.0	1.00		

Comments: _____

Sampling Quality Control Assessment

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

Sampling Protocol

All monitor well sample results were qualified with an “F” flag in the database indicating the wells were purged and sampled using the low-flow sampling method. Additionally, sample results from wells 0764 and 0771 were qualified with a “Q” flag because of water level draw down, and sample results from well 0760 were qualified with a “Q” flag because the turbidity criteria were not met.

Field Duplicate Assessment

Field duplicate samples are collected and analyzed as an indication of the 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. A duplicate sample was collected from well 0662.

The duplicate results for non-radiochemical analytes met the EPA recommended laboratory duplicate criteria of less than 20 percent relative difference for results that are greater than 5 times the practical quantitation limit and are therefore acceptable.

The radiochemical duplicate results were evaluated by calculating the relative error ratio (RER) based on the reported uncertainties associated with the results. The RER was below the maximum acceptable RER of 3 for all radiochemical analytes.

SAMPLE MANAGEMENT SYSTEM
Validation Report: Field Duplicates

RIN: 06110582 Lab Code: PAR Project: MONUMENT VALLEY Validation Date: 3/1/2007

Duplicate: 2417

Sample: 662

Analyte	Sample			Duplicate			RPD	RER	Units
	Result	Flag	Error	Result	Flag	Error			
AMMONIA AS N	0.1	U		0.1	U				MG/L
CHLORIDE	9.9			9.6			3.08		MG/L
GROSS ALPHA	361		58	334		53.8	7.77	0.7	pCi/L
GROSS BETA	103		16.8	105		17.1	1.92	0.2	pCi/L
NITRATE/NITRITE AS N	11			12			8.70		MG/L
Ra-226	0.797		0.455	0.369	U	0.487		1.3	pCi/L
Ra-228	0.76	U	0.482	0.564	U	0.437		0.6	pCi/L
SULFATE	620			630			1.60		MG/L
U-234	173		33.4	164		34.1	5.34	0.4	pCi/L
U-235	8.11		1.76	7.5		1.73	7.82	0.5	pCi/L
U-238	171		33	162		33.9	5.41	0.4	pCi/L
URANIUM	500			500			0		UG/L
VANADIUM	26			25			3.92		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 3-26-2007
Steve Donivan Date

Data Validation Lead: Steve Donivan 3-26-2007
Steve Donivan Date

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Attachment 1
Assessment of Anomalous Data

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Minimums and Maximums Report

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Minimums and Maximums Report

The Minimums and Maximums Report is generated by a data validation application used to query the SEEPro database. The application compares the new data set with historical data and lists all new data that fall outside the historical data range. Data listed in the report require further review if:

- (1) Identified low concentrations are not the result of improved detection limits.
- (2) The concentration detected is not within 50 percent of historical minimum or maximum values.
- (3) There were five or more historical sample results for comparison.

The gross alpha and gross beta results were noted as anomalously high. These data values are substantiated by the elevated uranium concentrations also observed and do not require further review.

The uranium concentration in well 0619 was listed in the September 2006 Data Validation Package as anomalously low. The uranium result obtained during this event for that location remained at the lower concentration indicating the previous result is acceptable.

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Data Validation Minimums and Maximums Report - No Field Parameters
 Laboratory: PARAGON (Fort Collins, CO)
 RIN: 06110582
 Comparison: All Historical Data
 Report Date: 3/1/2007

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count	
				Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect
MON01	0606	12/14/2006	Nitrate + Nitrite as Nitrogen	190		F	1080		F	210		F	10	0
MON01	0619	12/12/2006	Gross Alpha	17.5		F	91			17.78			8	0
MON01	0619	12/12/2006	Gross Beta	6.69		FJ	45			12.03			8	0
MON01	0619	12/12/2006	Radium-226	1.08	U	F	0.13	U	F	0			6	2
MON01	0657	12/12/2006	Gross Beta	2.63	U	F	29		F	2.67		F	13	1
MON01	0657	12/12/2006	Radium-228	1.1	U	F	1	U	F	0		F	11	5
MON01	0662	12/14/2006	Gross Alpha	361		F	34.62			0	N		12	1
MON01	0662	12/14/2006	Gross Beta	105		F	19.61	U		0	N		12	3
MON01	0662	12/11/2006	Uranium	0.52		F	0.47		F	0.013			22	0
MON01	0669	12/13/2006	Uranium	0.0059		F	0.0155			0.0067		F	22	0
MON01	0760	12/13/2006	Chloride	12		FQ	11.5			9.38		F	9	0
MON01	0761	12/13/2006	Chloride	19		F	16.4			15.2			7	0
MON01	0761	12/13/2006	Sulfate	530		F	520			460		F	13	0
MON01	0762	12/13/2006	Sulfate	1600		F	1500		F	761			12	0
MON01	0765	12/13/2006	Uranium	0.01		F	0.015			0.011		F	7	0
MON01	0767	12/13/2006	Chloride	6.2		F	5.86			4.95			9	0
MON01	0767	12/13/2006	Sulfate	34		F	33.2		F	26.9			13	0
MON01	0768	12/13/2006	Chloride	19		F	106			23.8		F	9	0

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 06110582

Comparison: All Historical Data

Report Date: 3/1/2007

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count	
				Result	Qualifiers		Result	Qualifiers		Result	Qualifiers		N	N Below Detect
MON01	0771	12/14/2006	Chloride	25		F	33		L	25.4		F	8	0
MON01	0771	12/14/2006	Uranium	0.014		F	0.0327			0.017		FQ	7	0
MON01	0774	12/12/2006	Uranium	0.048		F	0.0726			0.058		F	12	0

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

Attachment 2
Data Presentation

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Ground Water Quality Data

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Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0604 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/12/2006	0001	13	-	28		F	#		
Ammonia Total as N	mg/L	12/12/2006	0001	13	-	28	0.1	U	F	#	.1
Chloride	mg/L	12/12/2006	0001	13	-	28	13		F	#	1
Nitrate + Nitrite as Nitrogen	mg/L	12/12/2006	0001	13	-	28	0.023		F	#	.01
Oxidation Reduction Potential	mV	12/12/2006	N001	13	-	28	-83		F	#	
pH	s.u.	12/12/2006	N001	13	-	28	8.32		F	#	
Specific Conductance	umhos /cm	12/12/2006	N001	13	-	28	595		F	#	
Sulfate	mg/L	12/12/2006	0001	13	-	28	120		F	#	2.5
Temperature	C	12/12/2006	N001	13	-	28	14.86		F	#	
Turbidity	NTU	12/12/2006	N001	13	-	28	4.32		F	#	
Uranium	mg/L	12/12/2006	0001	13	-	28	0.0021		F	#	.0000048
Vanadium	mg/L	12/12/2006	0001	13	-	28	0.0025		F	#	.00021

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0606 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/14/2006	0001	32	-	42		F	#		
Ammonia Total as N	mg/L	12/14/2006	0001	32	-	42		F	#	10	
Chloride	mg/L	12/14/2006	0001	32	-	42		F	#	1	
Nitrate + Nitrite as Nitrogen	mg/L	12/14/2006	0001	32	-	42		F	#	2	
Oxidation Reduction Potential	mV	12/14/2006	N001	32	-	42		F	#		
pH	s.u.	12/14/2006	N001	32	-	42		F	#		
Specific Conductance	umhos/cm	12/14/2006	N001	32	-	42		F	#		
Sulfate	mg/L	12/14/2006	0001	32	-	42		F	#	25	
Temperature	C	12/14/2006	N001	32	-	42		F	#		
Turbidity	NTU	12/14/2006	N001	32	-	42		F	#		
Uranium	mg/L	12/14/2006	0001	32	-	42		F	#	.0000048	
Vanadium	mg/L	12/14/2006	0001	32	-	42		F	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0619 WELL Water Use Permit No. 92-082.

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/12/2006	0001	103.9	- 153.9	153		F	#		
Ammonia Total as N	mg/L	12/12/2006	0001	103.9	- 153.9	0.1	U	F	#	.1	
Chloride	mg/L	12/12/2006	0001	103.9	- 153.9	5.7		F	#	.4	
Gross Alpha	pCi/L	12/12/2006	0001	103.9	- 153.9	17.5		F	#	1.53	3.75
Gross Beta	pCi/L	12/12/2006	0001	103.9	- 153.9	6.69		FJ	#	2.8	1.97
Nitrate + Nitrite as Nitrogen	mg/L	12/12/2006	0001	103.9	- 153.9	1.9		F	#	.02	
Oxidation Reduction Potential	mV	12/12/2006	N001	103.9	- 153.9	103		F	#		
pH	s.u.	12/12/2006	N001	103.9	- 153.9	7.83		F	#		
Radium-226	pCi/L	12/12/2006	0001	103.9	- 153.9	1.08	U	F	#	1.08	.564
Radium-228	pCi/L	12/12/2006	0001	103.9	- 153.9	0.762	U	F	#	.762	.359
Specific Conductance	umhos/cm	12/12/2006	N001	103.9	- 153.9	404		F	#		
Sulfate	mg/L	12/12/2006	0001	103.9	- 153.9	51		F	#	1	
Temperature	C	12/12/2006	N001	103.9	- 153.9	14.89		F	#		
Turbidity	NTU	12/12/2006	N001	103.9	- 153.9	0.98		F	#		
Uranium	mg/L	12/12/2006	0001	103.9	- 153.9	0.029		F	#	.0000048	
Uranium-234	pCi/L	12/12/2006	0001	103.9	- 153.9	11.3		F	#	.041	1.9
Uranium-235	pCi/L	12/12/2006	0001	103.9	- 153.9	0.471		F	#	.0379	.123
Uranium-238	pCi/L	12/12/2006	0001	103.9	- 153.9	10.2		F	#	.0445	1.72
Vanadium	mg/L	12/12/2006	0001	103.9	- 153.9	0.021		F	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0655 WELL

Parameter	Units	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID	(Ft BLS)				Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/14/2006	0001	38	-	58	263		F	#		
Ammonia Total as N	mg/L	12/14/2006	0001	38	-	58	39		F	#	5	
Chloride	mg/L	12/14/2006	0001	38	-	58	32		F	#	2	
Nitrate + Nitrite as Nitrogen	mg/L	12/14/2006	0001	38	-	58	99		F	#	1	
Oxidation Reduction Potential	mV	12/14/2006	N001	38	-	58	76		F	#		
pH	s.u.	12/14/2006	N001	38	-	58	7.3		F	#		
Specific Conductance	umhos/cm	12/14/2006	N001	38	-	58	3691		F	#		
Sulfate	mg/L	12/14/2006	0001	38	-	58	1900		F	#	25	
Temperature	C	12/14/2006	N001	38	-	58	14.03		F	#		
Turbidity	NTU	12/14/2006	N001	38	-	58	1.5		F	#		
Uranium	mg/L	12/14/2006	0001	38	-	58	0.016		F	#	.0000048	
Vanadium	mg/L	12/14/2006	0001	38	-	58	0.0084		F	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0656 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	12/14/2006	0001	38	- 58	242		F #		
Ammonia Total as N	mg/L	12/14/2006	0001	38	- 58	58		F #	5	
Chloride	mg/L	12/14/2006	0001	38	- 58	20		F #	2	
Nitrate + Nitrite as Nitrogen	mg/L	12/14/2006	0001	38	- 58	18		F #	.2	
Oxidation Reduction Potential	mV	12/14/2006	N001	38	- 58	72		F #		
pH	s.u.	12/14/2006	N001	38	- 58	7.88		F #		
Specific Conductance	umhos /cm	12/14/2006	N001	38	- 58	1072		F #		
Sulfate	mg/L	12/14/2006	0001	38	- 58	210		F #	5	
Temperature	C	12/14/2006	N001	38	- 58	14.57		F #		
Turbidity	NTU	12/14/2006	N001	38	- 58	0.26		F #		
Uranium	mg/L	12/14/2006	0001	38	- 58	0.0056		F #	.0000048	
Vanadium	mg/L	12/14/2006	0001	38	- 58	0.00083		F #	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0657 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/12/2006	0001	121	- 136	165		F	#		
Ammonia Total as N	mg/L	12/12/2006	0001	121	- 136	0.1	U	F	#	.1	
Chloride	mg/L	12/12/2006	0001	121	- 136	7.2		F	#	.4	
Gross Alpha	pCi/L	12/12/2006	0001	121	- 136	4.06		F	#	1.15	1.37
Gross Beta	pCi/L	12/12/2006	0001	121	- 136	2.63	U	F	#	2.63	1.37
Nitrate + Nitrite as Nitrogen	mg/L	12/12/2006	0001	121	- 136	2.7		F	#	.02	
Oxidation Reduction Potential	mV	12/12/2006	N001	121	- 136	120		F	#		
pH	s.u.	12/12/2006	N001	121	- 136	7.88		F	#		
Radium-226	pCi/L	12/12/2006	0001	121	- 136	0.338	U	F	#	.338	.215
Radium-228	pCi/L	12/12/2006	0001	121	- 136	1.1	U	F	#	1.1	.599
Specific Conductance	umhos/cm	12/12/2006	N001	121	- 136	364		F	#		
Sulfate	mg/L	12/12/2006	0001	121	- 136	30		F	#	1	
Temperature	C	12/12/2006	N001	121	- 136	14.7		F	#		
Turbidity	NTU	12/12/2006	N001	121	- 136	0.9		F	#		
Uranium	mg/L	12/12/2006	0001	121	- 136	0.0047		F	#	.0000048	
Uranium-234	pCi/L	12/12/2006	0001	121	- 136	1.95		F	#	.0423	.367
Uranium-235	pCi/L	12/12/2006	0001	121	- 136	0.0421		FJ	#	.0317	.0315
Uranium-238	pCi/L	12/12/2006	0001	121	- 136	1.26		F	#	.0333	.253
Vanadium	mg/L	12/12/2006	0001	121	- 136	0.063		F	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0662 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/14/2006	0001	37.5	- 67.5	202		F	#		
Ammonia Total as N	mg/L	12/14/2006	0001	37.5	- 67.5	0.1	U	F	#	.1	
Ammonia Total as N	mg/L	12/14/2006	0002	37.5	- 67.5	0.1	U	F	#	.1	
Chloride	mg/L	12/14/2006	0001	37.5	- 67.5	9.9		F	#	1	
Chloride	mg/L	12/14/2006	0002	37.5	- 67.5	9.6		F	#	1	
Gross Alpha	pCi/L	12/14/2006	0001	37.5	- 67.5	361		F	#	1.34	58
Gross Alpha	pCi/L	12/14/2006	0002	37.5	- 67.5	334		F	#	1.53	53.8
Gross Beta	pCi/L	12/14/2006	0001	37.5	- 67.5	103		F	#	4.01	16.8
Gross Beta	pCi/L	12/14/2006	0002	37.5	- 67.5	105		F	#	3.95	17.1
Nitrate + Nitrite as Nitrogen	mg/L	12/14/2006	0001	37.5	- 67.5	11		F	#	.1	
Nitrate + Nitrite as Nitrogen	mg/L	12/14/2006	0002	37.5	- 67.5	12		F	#	.1	
Oxidation Reduction Potential	mV	12/14/2006	N001	37.5	- 67.5	115		F	#		
pH	s.u.	12/14/2006	N001	37.5	- 67.5	7.41		F	#		
Radium-226	pCi/L	12/14/2006	0001	37.5	- 67.5	0.797		FJ	#	.559	.455
Radium-226	pCi/L	12/14/2006	0002	37.5	- 67.5	0.786	U	F	#	.786	.487
Radium-228	pCi/L	12/14/2006	0001	37.5	- 67.5	0.845	U	F	#	.845	.482
Radium-228	pCi/L	12/14/2006	0002	37.5	- 67.5	0.813	U	F	#	.813	.437
Specific Conductance	umhos/cm	12/14/2006	N001	37.5	- 67.5	1389		F	#		
Sulfate	mg/L	12/14/2006	0001	37.5	- 67.5	620		F	#	10	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0662 WELL

Parameter	Units	Sample		Depth Range		Result	Qualifiers			Detection Limit	Uncertainty
		Date	ID	(Ft	BLS)		Lab	Data	QA		
Sulfate	mg/L	12/14/2006	0002	37.5	- 67.5	630		F	#	10	
Temperature	C	12/14/2006	N001	37.5	- 67.5	15.48		F	#		
Turbidity	NTU	12/14/2006	N001	37.5	- 67.5	4.63		F	#		
Uranium	mg/L	12/11/2006	0003	37.5	- 67.5	0.52		F	#	.000048	
Uranium	mg/L	12/14/2006	0001	37.5	- 67.5	0.5		F	#	.000048	
Uranium	mg/L	12/14/2006	0002	37.5	- 67.5	0.5		F	#	.000048	
Uranium-234	pCi/L	12/14/2006	0001	37.5	- 67.5	173		F	#	.139	33.4
Uranium-234	pCi/L	12/14/2006	0002	37.5	- 67.5	164		F	#	.142	34.1
Uranium-235	pCi/L	12/14/2006	0001	37.5	- 67.5	8.11		F	#	.132	1.76
Uranium-235	pCi/L	12/14/2006	0002	37.5	- 67.5	7.5		F	#	.0507	1.73
Uranium-238	pCi/L	12/14/2006	0001	37.5	- 67.5	171		F	#	.192	33
Uranium-238	pCi/L	12/14/2006	0002	37.5	- 67.5	162		F	#	.124	33.9
Vanadium	mg/L	12/11/2006	0003	37.5	- 67.5	0.025		F	#	.00021	
Vanadium	mg/L	12/14/2006	0001	37.5	- 67.5	0.026		F	#	.00021	
Vanadium	mg/L	12/14/2006	0002	37.5	- 67.5	0.025		F	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0669 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	34	- 54	247		F #		
Ammonia Total as N	mg/L	12/13/2006	0001	34	- 54	2.5		F #	.1	
Chloride	mg/L	12/13/2006	0001	34	- 54	11		F #	1	
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	34	- 54	6		F #	.05	
Oxidation Reduction Potential	mV	12/13/2006	N001	34	- 54	94		F #		
pH	s.u.	12/13/2006	N001	34	- 54	7.48		F #		
Specific Conductance	umhos /cm	12/13/2006	N001	34	- 54	657		F #		
Sulfate	mg/L	12/13/2006	0001	34	- 54	120		F #	2.5	
Temperature	C	12/13/2006	N001	34	- 54	15.37		F #		
Turbidity	NTU	12/13/2006	N001	34	- 54	0.23		F #		
Uranium	mg/L	12/13/2006	0001	34	- 54	0.0059		F #	.0000048	
Vanadium	mg/L	12/13/2006	0001	34	- 54	0.053		F #	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0760 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	55	-	75		FQ	#		
Ammonia Total as N	mg/L	12/13/2006	0001	55	-	75	U	FQ	#	.1	
Chloride	mg/L	12/13/2006	0001	55	-	75		FQ	#	1	
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	55	-	75	U	FQ	#	.01	
Oxidation Reduction Potential	mV	12/13/2006	N001	55	-	75		FQ	#		
pH	s.u.	12/13/2006	N001	55	-	75		FQ	#		
Specific Conductance	umhos/cm	12/13/2006	N001	55	-	75		FQ	#		
Sulfate	mg/L	12/13/2006	0001	55	-	75		FQ	#	2.5	
Temperature	C	12/13/2006	N001	55	-	75		FQ	#		
Turbidity	NTU	12/13/2006	N001	55	-	75		FQ	#		
Uranium	mg/L	12/13/2006	0001	55	-	75		FQ	#	.000048	
Vanadium	mg/L	12/13/2006	0001	55	-	75	U	FQ	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0761 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	39	-	49		F	#		
Ammonia Total as N	mg/L	12/13/2006	0001	39	-	49	0.1	U	F	#	.1
Chloride	mg/L	12/13/2006	0001	39	-	49	19		F	#	1
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	39	-	49	25		F	#	.2
Oxidation Reduction Potential	mV	12/13/2006	N001	39	-	49	37		F	#	
pH	s.u.	12/13/2006	N001	39	-	49	7.49		F	#	
Specific Conductance	umhos/cm	12/13/2006	N001	39	-	49	1375		F	#	
Sulfate	mg/L	12/13/2006	0001	39	-	49	530		F	#	10
Temperature	C	12/13/2006	N001	39	-	49	15.95		F	#	
Turbidity	NTU	12/13/2006	N001	39	-	49	9.77		F	#	
Uranium	mg/L	12/13/2006	0001	39	-	49	0.027		F	#	.0000048
Vanadium	mg/L	12/13/2006	0001	39	-	49	0.0019		F	#	.00021

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0762 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	29	-	49		F	#		
Ammonia Total as N	mg/L	12/13/2006	0001	29	-	49	0.1	U	F	#	.1
Chloride	mg/L	12/13/2006	0001	29	-	49	81		F	#	10
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	29	-	49	73		F	#	.5
Oxidation Reduction Potential	mV	12/13/2006	N001	29	-	49	-24		F	#	
pH	s.u.	12/13/2006	N001	29	-	49	7.6		F	#	
Specific Conductance	umhos/cm	12/13/2006	N001	29	-	49	3461		F	#	
Sulfate	mg/L	12/13/2006	0001	29	-	49	1600		F	#	25
Temperature	C	12/13/2006	N001	29	-	49	15.29		F	#	
Turbidity	NTU	12/13/2006	N001	29	-	49	9.46		F	#	
Uranium	mg/L	12/13/2006	0001	29	-	49	0.01		F	#	.0000048
Vanadium	mg/L	12/13/2006	0001	29	-	49	0.0085		F	#	.00021

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0764 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	47	-	52		FQ	#		
Ammonia Total as N	mg/L	12/13/2006	0001	47	-	52	0.1	U	FQ	#	.1
Chloride	mg/L	12/13/2006	0001	47	-	52	15		FQ	#	1
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	47	-	52	41		FQ	#	.5
Oxidation Reduction Potential	mV	12/13/2006	N001	47	-	52	100		FQ	#	
pH	s.u.	12/13/2006	N001	47	-	52	7.76		FQ	#	
Specific Conductance	umhos/cm	12/13/2006	N001	47	-	52	1276		FQ	#	
Sulfate	mg/L	12/13/2006	0001	47	-	52	350		FQ	#	10
Temperature	C	12/13/2006	N001	47	-	52	15.63		FQ	#	
Turbidity	NTU	12/13/2006	N001	47	-	52	2.98		FQ	#	
Uranium	mg/L	12/13/2006	0001	47	-	52	0.013		FQ	#	.0000048
Vanadium	mg/L	12/13/2006	0001	47	-	52	0.014		FQ	#	.00021

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0765 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	58.6	- 88.7	152		F #		
Ammonia Total as N	mg/L	12/13/2006	0001	58.6	- 88.7	140		F #	10	
Chloride	mg/L	12/13/2006	0001	58.6	- 88.7	22		F #	2	
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	58.6	- 88.7	120		F #	1	
Oxidation Reduction Potential	mV	12/13/2006	N001	58.6	- 88.7	111		F #		
pH	s.u.	12/13/2006	N001	58.6	- 88.7	7.47		F #		
Specific Conductance	umhos /cm	12/13/2006	N001	58.6	- 88.7	2668		F #		
Sulfate	mg/L	12/13/2006	0001	58.6	- 88.7	690		F #	25	
Temperature	C	12/13/2006	N001	58.6	- 88.7	14.54		F #		
Turbidity	NTU	12/13/2006	N001	58.6	- 88.7	0.29		F #		
Uranium	mg/L	12/13/2006	0001	58.6	- 88.7	0.01		F #	.0000048	
Vanadium	mg/L	12/13/2006	0001	58.6	- 88.7	0.0071		F #	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0767 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	43.5	- 63.5	183		F	#		
Ammonia Total as N	mg/L	12/13/2006	0001	43.5	- 63.5	0.1	U	F	#	.1	
Chloride	mg/L	12/13/2006	0001	43.5	- 63.5	6.2		F	#	.4	
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	43.5	- 63.5	0.01	U	F	#	.01	
Oxidation Reduction Potential	mV	12/13/2006	N001	43.5	- 63.5	-140		F	#		
pH	s.u.	12/13/2006	N001	43.5	- 63.5	8.12		F	#		
Specific Conductance	umhos /cm	12/13/2006	N001	43.5	- 63.5	392		F	#		
Sulfate	mg/L	12/13/2006	0001	43.5	- 63.5	34		F	#	1	
Temperature	C	12/13/2006	N001	43.5	- 63.5	14.44		F	#		
Turbidity	NTU	12/13/2006	N001	43.5	- 63.5	7.69		F	#		
Uranium	mg/L	12/13/2006	0001	43.5	- 63.5	0.00052		F	#	.0000048	
Vanadium	mg/L	12/13/2006	0001	43.5	- 63.5	0.00021	U	F	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0768 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty
							Lab	Data	QA		
Alkalinity, Total (As CaCO3)	mg/L	12/13/2006	0001	24.4	- 44.4	218		F	#		
Ammonia Total as N	mg/L	12/13/2006	0001	24.4	- 44.4	0.42		F	#	.1	
Chloride	mg/L	12/13/2006	0001	24.4	- 44.4	19		F	#	1	
Nitrate + Nitrite as Nitrogen	mg/L	12/13/2006	0001	24.4	- 44.4	0.01	U	F	#	.01	
Oxidation Reduction Potential	mV	12/13/2006	N001	24.4	- 44.4	-182.2		F	#		
pH	s.u.	12/13/2006	N001	24.4	- 44.4	8.31		F	#		
Specific Conductance	umhos /cm	12/13/2006	N001	24.4	- 44.4	461		F	#		
Sulfate	mg/L	12/13/2006	0001	24.4	- 44.4	100		F	#	2.5	
Temperature	C	12/13/2006	N001	24.4	- 44.4	14.12		F	#		
Turbidity	NTU	12/13/2006	N001	24.4	- 44.4	4.97		F	#		
Uranium	mg/L	12/13/2006	0001	24.4	- 44.4	0.000071	B	UF	#	.0000048	
Vanadium	mg/L	12/13/2006	0001	24.4	- 44.4	0.00032		F	#	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0770 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	12/14/2006	0001	54.9	- 64.9	224		F #		
Ammonia Total as N	mg/L	12/14/2006	0001	54.9	- 64.9	36		F #	1	
Chloride	mg/L	12/14/2006	0001	54.9	- 64.9	17		F #	2	
Nitrate + Nitrite as Nitrogen	mg/L	12/14/2006	0001	54.9	- 64.9	21		F #	.2	
Oxidation Reduction Potential	mV	12/14/2006	N001	54.9	- 64.9	70		F #		
pH	s.u.	12/14/2006	N001	54.9	- 64.9	7.7		F #		
Specific Conductance	umhos /cm	12/14/2006	N001	54.9	- 64.9	1097		F #		
Sulfate	mg/L	12/14/2006	0001	54.9	- 64.9	250		F #	5	
Temperature	C	12/14/2006	N001	54.9	- 64.9	14.42		F #		
Turbidity	NTU	12/14/2006	N001	54.9	- 64.9	0.81		F #		
Uranium	mg/L	12/14/2006	0001	54.9	- 64.9	0.0057		F #	.0000048	
Vanadium	mg/L	12/14/2006	0001	54.9	- 64.9	0.00078		F #	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0771 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	12/14/2006	0001	57.4	- 77.4	301		F #		
Ammonia Total as N	mg/L	12/14/2006	0001	57.4	- 77.4	240		F #	20	
Chloride	mg/L	12/14/2006	0001	57.4	- 77.4	25		F #	2	
Nitrate + Nitrite as Nitrogen	mg/L	12/14/2006	0001	57.4	- 77.4	160		F #	2	
Oxidation Reduction Potential	mV	12/14/2006	N001	57.4	- 77.4	70		F #		
pH	s.u.	12/14/2006	N001	57.4	- 77.4	7.34		F #		
Specific Conductance	umhos/cm	12/14/2006	N001	57.4	- 77.4	4518		F #		
Sulfate	mg/L	12/14/2006	0001	57.4	- 77.4	1800		F #	25	
Temperature	C	12/14/2006	N001	57.4	- 77.4	14.63		F #		
Turbidity	NTU	12/14/2006	N001	57.4	- 77.4	0.26		F #		
Uranium	mg/L	12/14/2006	0001	57.4	- 77.4	0.014		F #	.0000048	
Vanadium	mg/L	12/14/2006	0001	57.4	- 77.4	0.0092		F #	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0772 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)		Result	Qualifiers		Detection Limit	Uncertainty
							Lab	Data QA		
Alkalinity, Total (As CaCO3)	mg/L	12/12/2006	0001	7.4	- 27.4	138		F #		
Ammonia Total as N	mg/L	12/12/2006	0001	7.4	- 27.4	7.7		F #	.2	
Chloride	mg/L	12/12/2006	0001	7.4	- 27.4	19		F #	2	
Nitrate + Nitrite as Nitrogen	mg/L	12/12/2006	0001	7.4	- 27.4	1.3		F #	.02	
Oxidation Reduction Potential	mV	12/12/2006	N001	7.4	- 27.4	31.4		F #		
pH	s.u.	12/12/2006	N001	7.4	- 27.4	8.04		F #		
Specific Conductance	umhos /cm	12/12/2006	N001	7.4	- 27.4	757		F #		
Sulfate	mg/L	12/12/2006	0001	7.4	- 27.4	140		F #	5	
Temperature	C	12/12/2006	N001	7.4	- 27.4	15.48		F #		
Turbidity	NTU	12/12/2006	N001	7.4	- 27.4	1.1		F #		
Uranium	mg/L	12/12/2006	0001	7.4	- 27.4	0.0075		F #	.0000048	
Vanadium	mg/L	12/12/2006	0001	7.4	- 27.4	0.018		F #	.00021	

Ground Water Quality Data by Location (USEE100) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007
 Location: 0774 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)		Result	Qualifiers			Detection Limit	Uncertainty	
							Lab	Data	QA			
Alkalinity, Total (As CaCO3)	mg/L	12/12/2006	0001	45	-	55		F	#			
Ammonia Total as N	mg/L	12/12/2006	0001	45	-	55	0.1	U	F	#	.1	
Chloride	mg/L	12/12/2006	0001	45	-	55	5.8		F	#	.4	
Gross Alpha	pCi/L	12/12/2006	0001	45	-	55	30.4		F	#	.656	5.17
Gross Beta	pCi/L	12/12/2006	0001	45	-	55	10.3		F	#	1.71	2.01
Nitrate + Nitrite as Nitrogen	mg/L	12/12/2006	0001	45	-	55	2		F	#	.02	
Oxidation Reduction Potential	mV	12/12/2006	N001	45	-	55	104		F	#		
pH	s.u.	12/12/2006	N001	45	-	55	7.86		F	#		
Radium-226	pCi/L	12/12/2006	0001	45	-	55	0.36	U	F	#	.36	.192
Radium-228	pCi/L	12/12/2006	0001	45	-	55	0.93		FJ	#	.848	.514
Specific Conductance	umhos/cm	12/12/2006	N001	45	-	55	413		F	#		
Sulfate	mg/L	12/12/2006	0001	45	-	55	54		F	#	1	
Temperature	C	12/12/2006	N001	45	-	55	15.51		F	#		
Turbidity	NTU	12/12/2006	N001	45	-	55	4.31		F	#		
Uranium	mg/L	12/12/2006	0001	45	-	55	0.048		F	#	.0000048	
Uranium-234	pCi/L	12/12/2006	0001	45	-	55	16.9		F	#	.041	2.8
Uranium-235	pCi/L	12/12/2006	0001	45	-	55	0.676		F	#	.0132	.159
Uranium-238	pCi/L	12/12/2006	0001	45	-	55	16.2		F	#	.037	2.7
Vanadium	mg/L	12/12/2006	0001	45	-	55	0.018		F	#	.00021	

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

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STATIC WATER LEVELS (USEE700) FOR SITE MON01, Monument Valley Processing Site
 REPORT DATE: 3/1/2007

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0604	C	4840.42	12-DEC-06	16:06:00	9.34	4831.08	
0606	D	4864.73	14-DEC-06	12:52:00	36.45	4828.28	
0619	O	4888.63	12-DEC-06	13:58:00	57.89	4830.74	
0655	D	4862.06	14-DEC-06	11:13:00	40.23	4821.83	
0656	D	4856.33	14-DEC-06	12:21:00	36.83	4819.5	
0657	O	4878.99	12-DEC-06	09:57:00	50.51	4828.48	
0662	D	4878.56	14-DEC-06	14:10:00	49.68	4828.88	
0669	D	4867.19	13-DEC-06	15:24:00	50.04	4817.15	
0760	D	4814.8	13-DEC-06	10:40:00	25.63	4789.17	
0761	D	4835.02	13-DEC-06	12:57:00	43.09	4791.93	
0762	D	4820.74	13-DEC-06	12:02:00	32.44	4788.3	
0764	D	4851.53	13-DEC-06	14:50:00	49.7	4801.83	
0765	D	4848.45	13-DEC-06	16:09:00	35.69	4812.76	
0767	D	4808.25	13-DEC-06	11:30:00	6.96	4801.29	
0768	D	4820.73	13-DEC-06	09:56:00	14.39	4806.34	
0770	D	4857.26	14-DEC-06	11:48:00	33.48	4823.78	
0771	D	4863.26	14-DEC-06	10:25:00	42.03	4821.23	
0772	O	4847.6	12-DEC-06	15:33:00	12.35	4835.25	
0774	O	4880.14	12-DEC-06	13:00:00	49.65	4830.49	

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

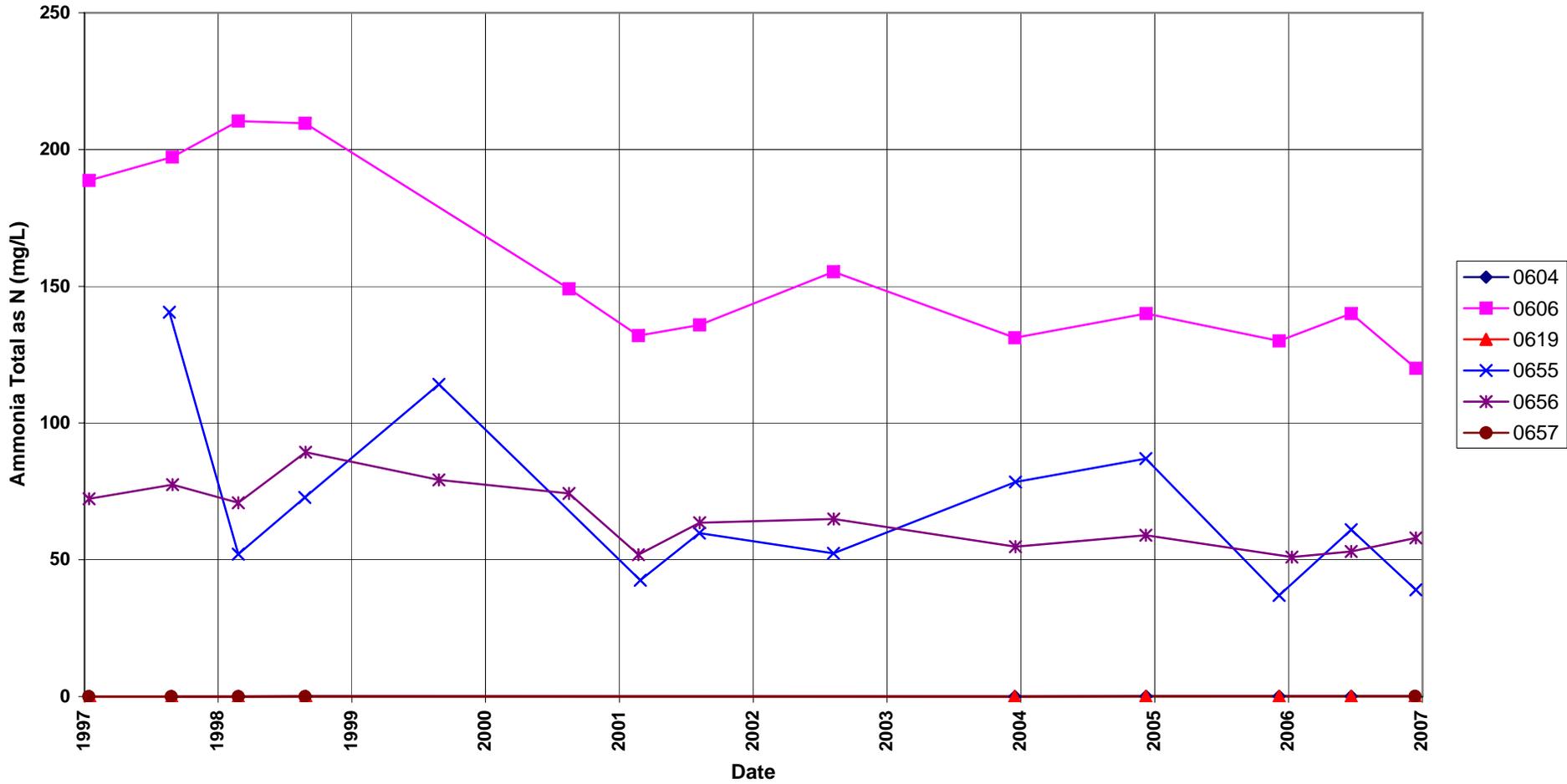
WATER LEVEL FLAGS: D Dry

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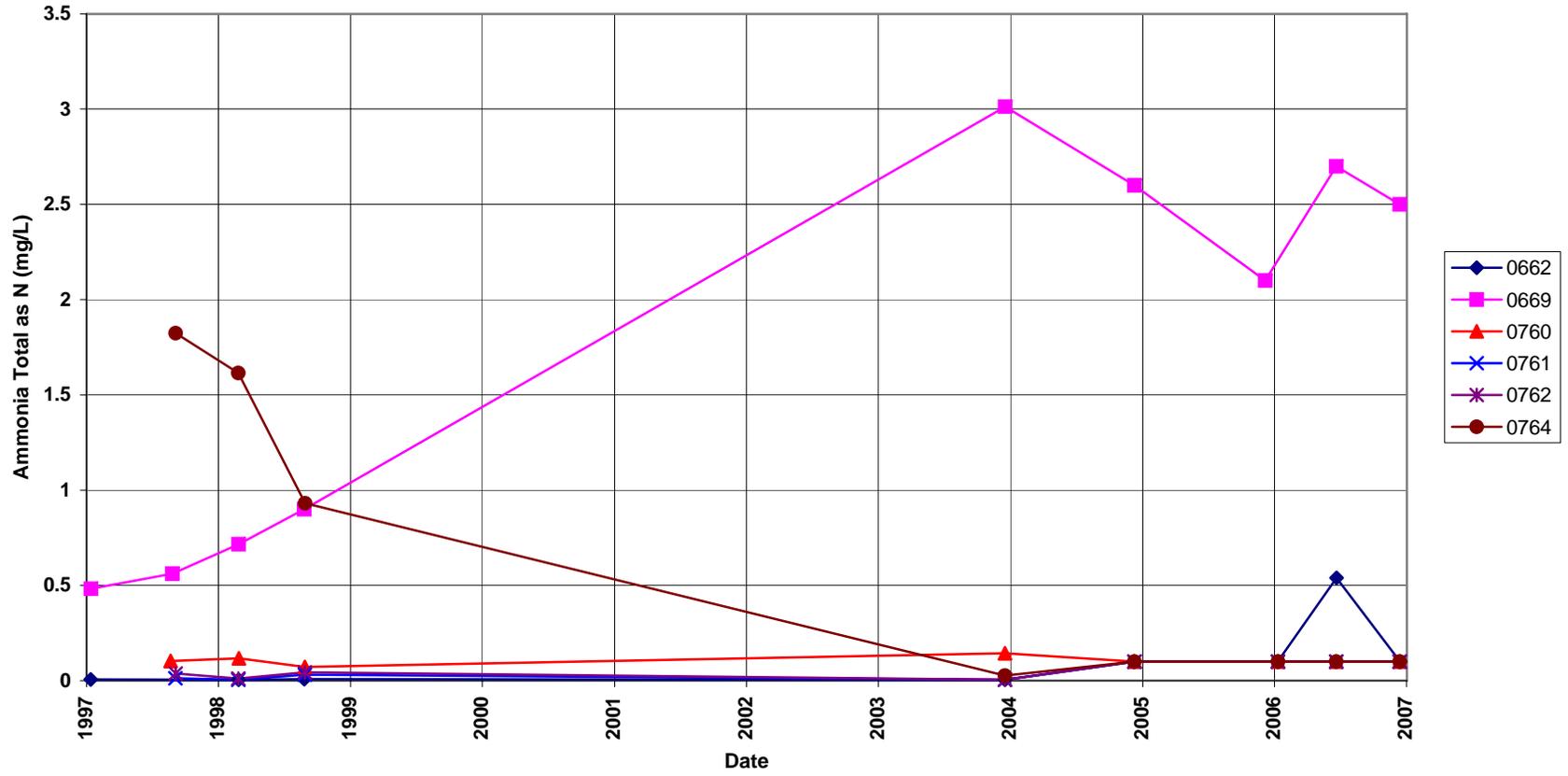
Time Versus Concentration Graphs

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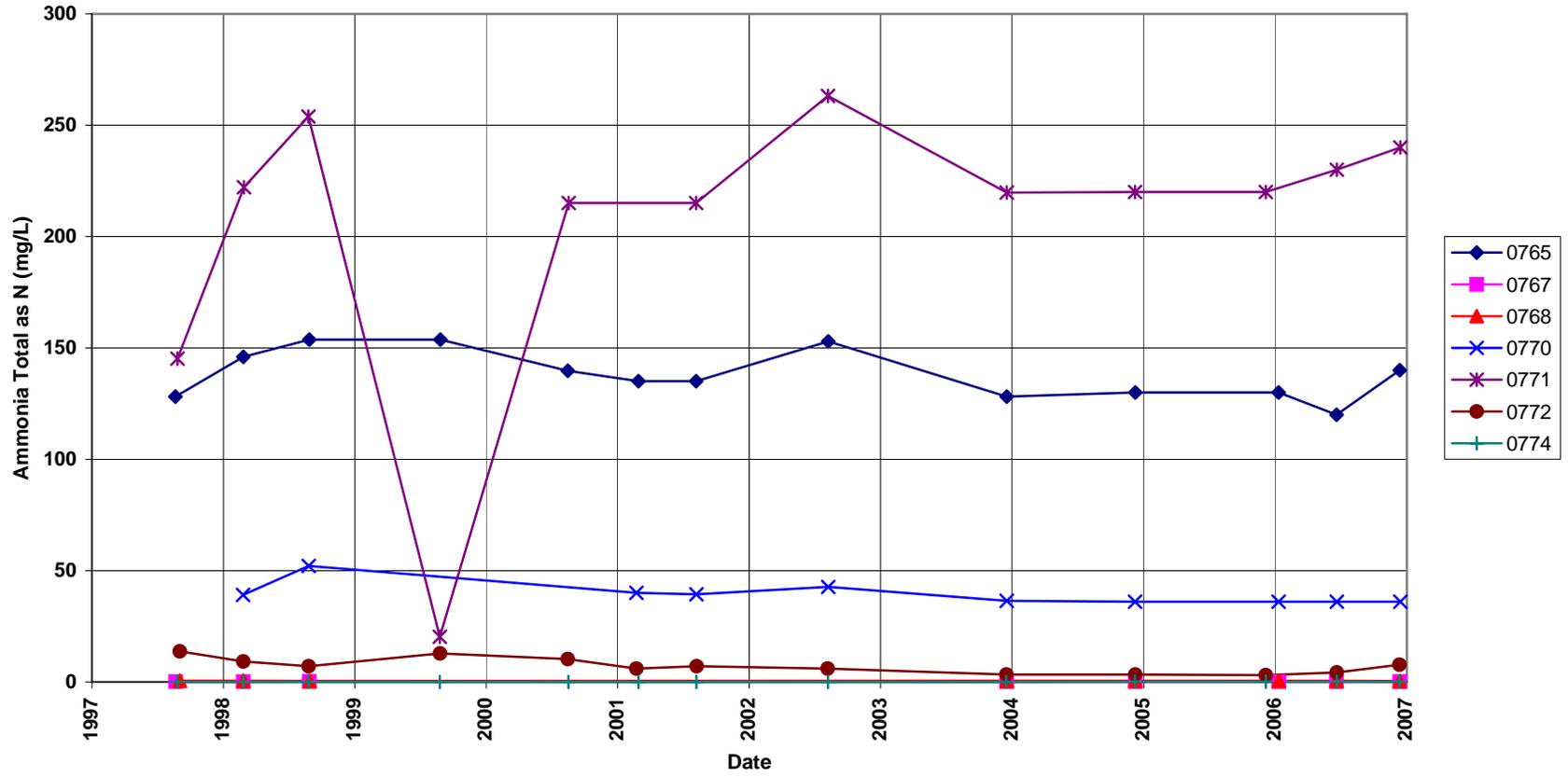
Monument Valley Processing Site
Ammonia Total as N Concentration



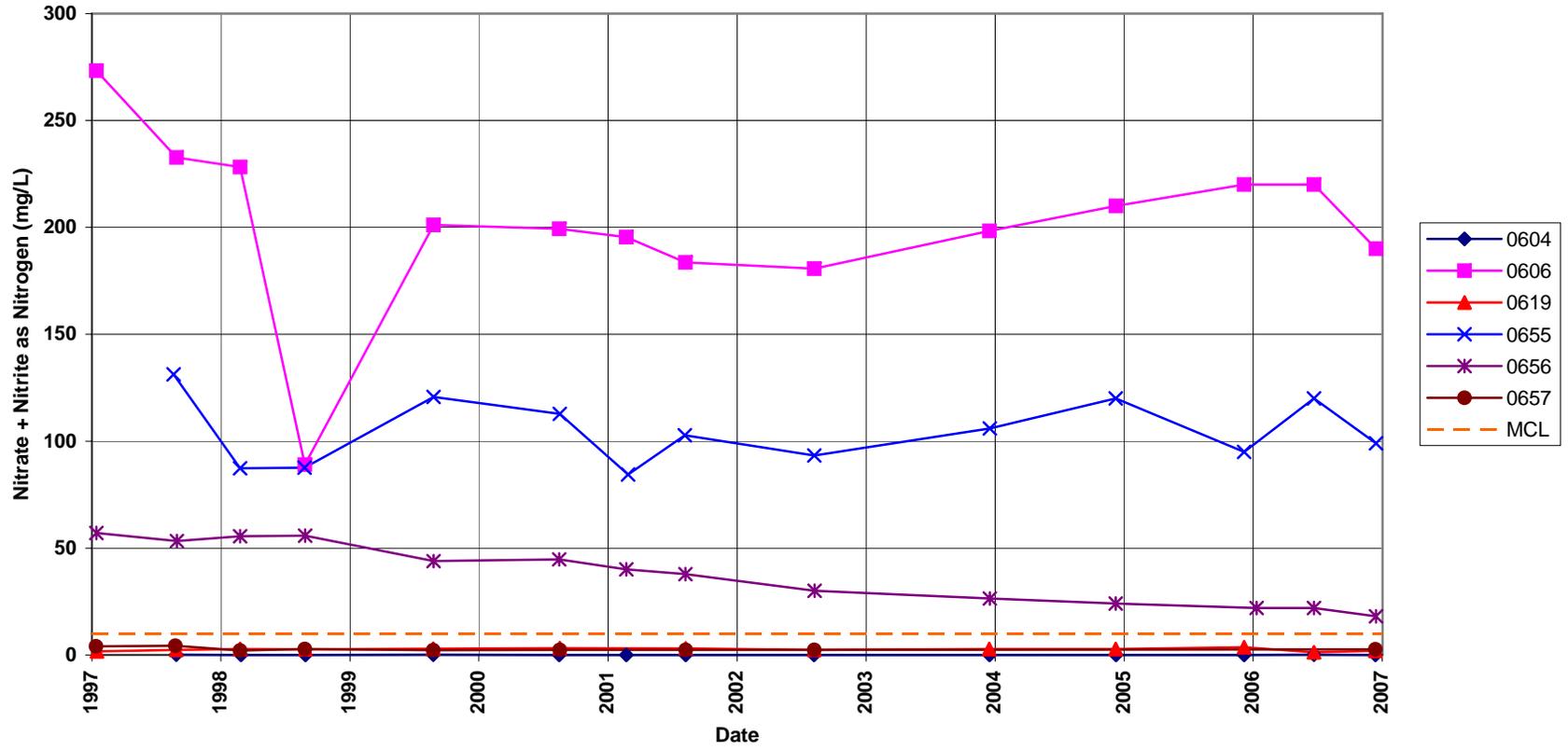
Monument Valley Processing Site
Ammonia Total as N Concentration



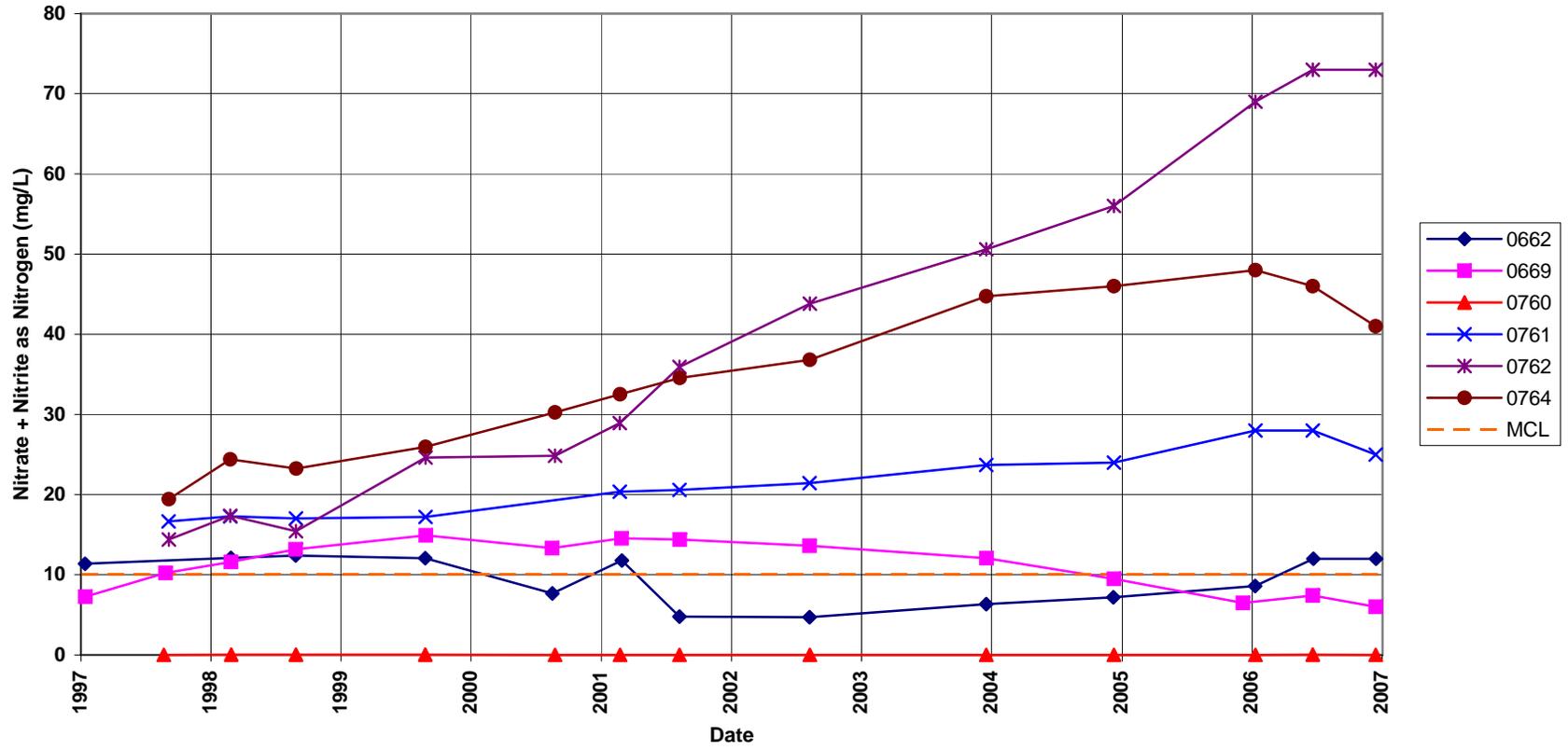
Monument Valley Processing Site
Ammonia Total as N Concentration



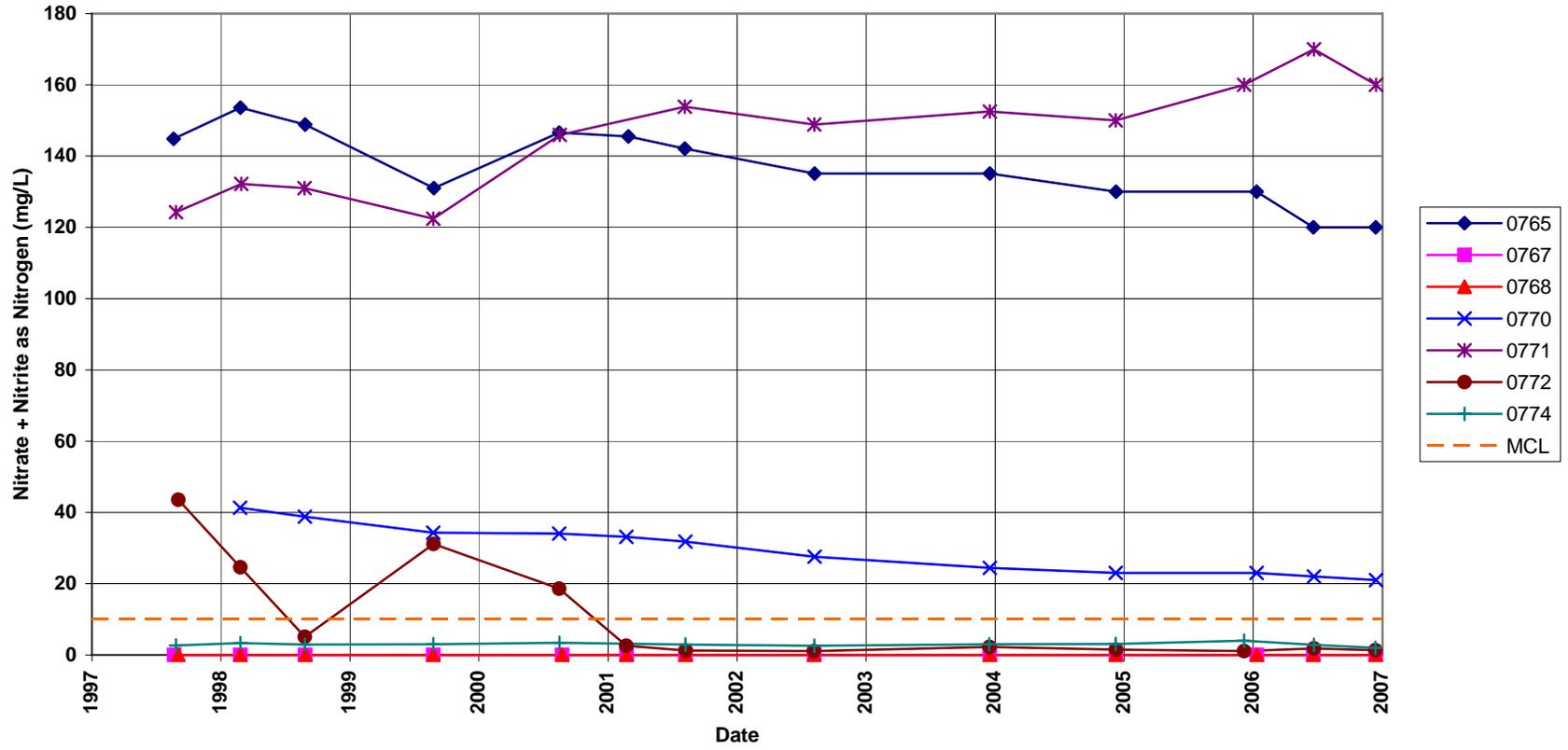
Monument Valley Processing Site
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level = 10.0 mg/L



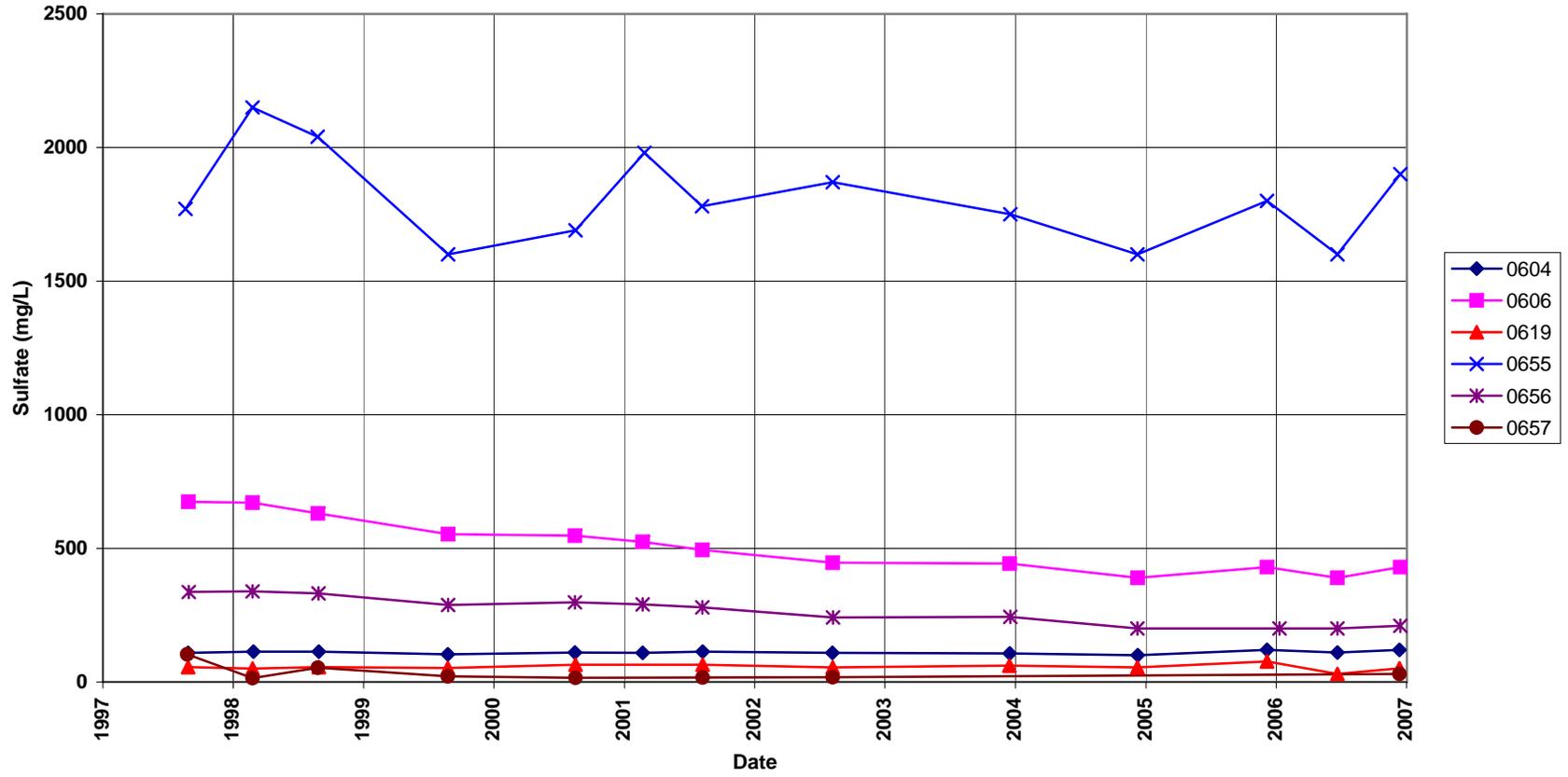
Monument Valley Processing Site
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level = 10.0 mg/L



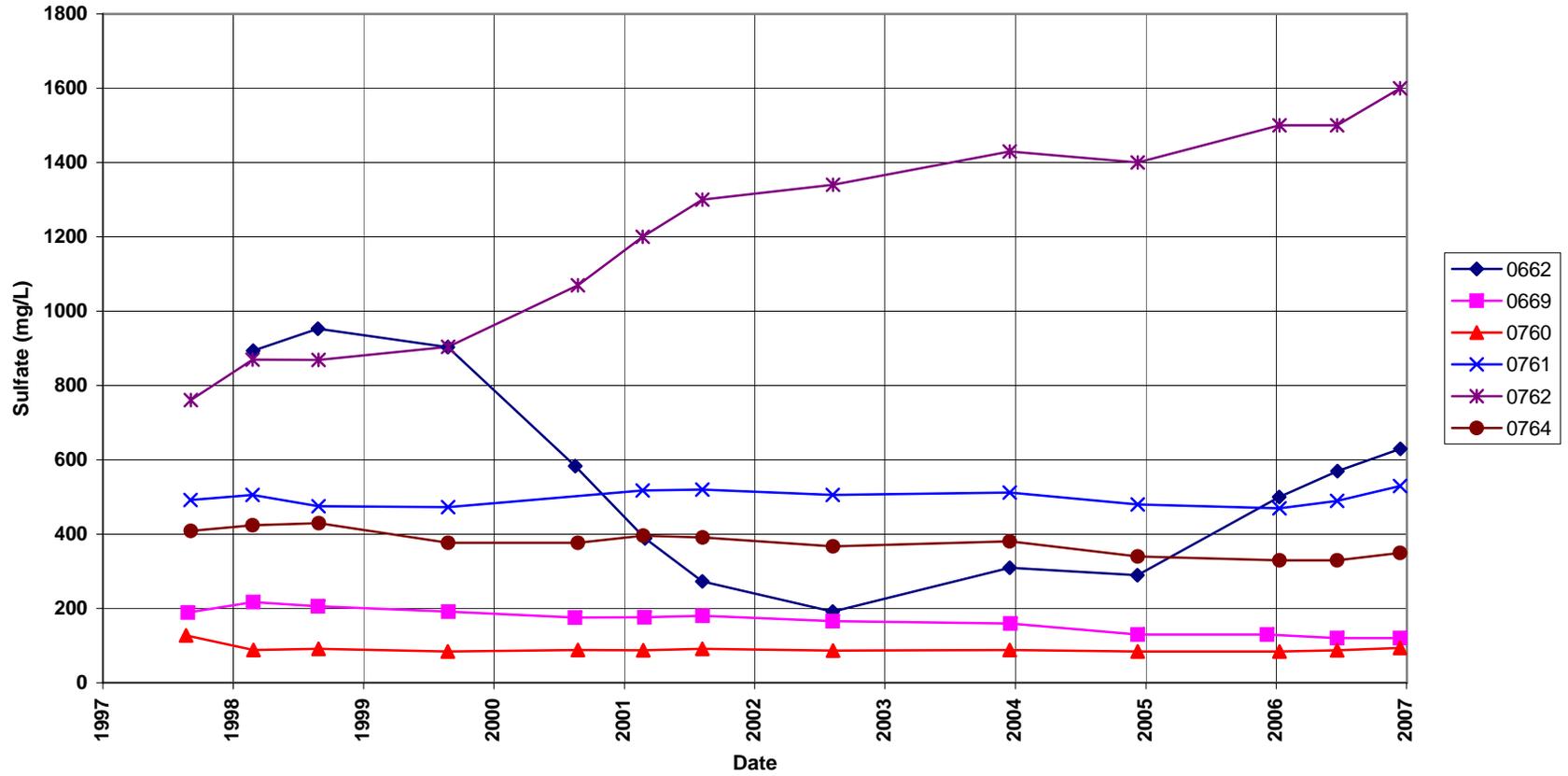
Monument Valley Processing Site
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level = 10.0 mg/L



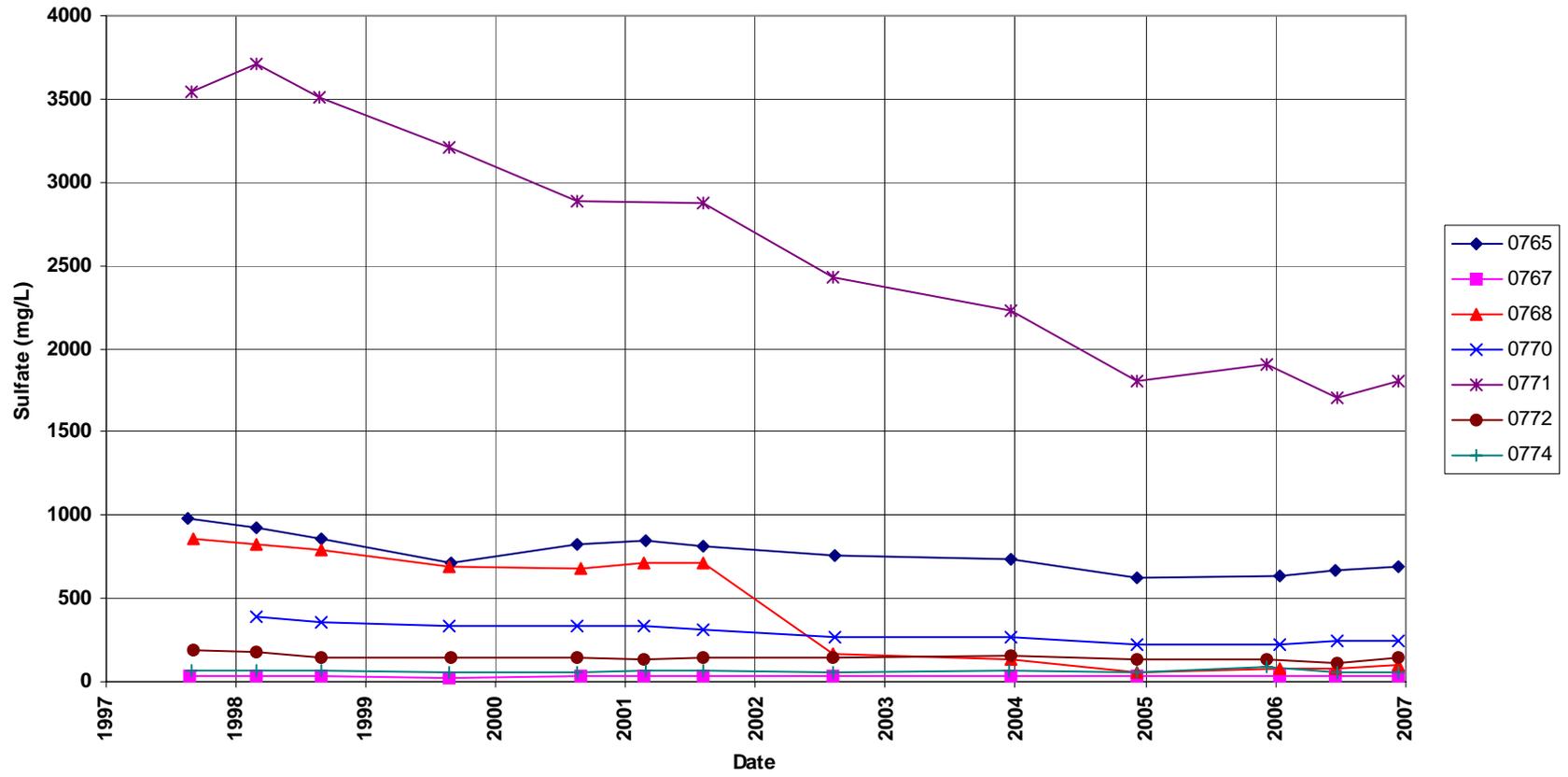
Monument Valley Processing Site Sulfate Concentration



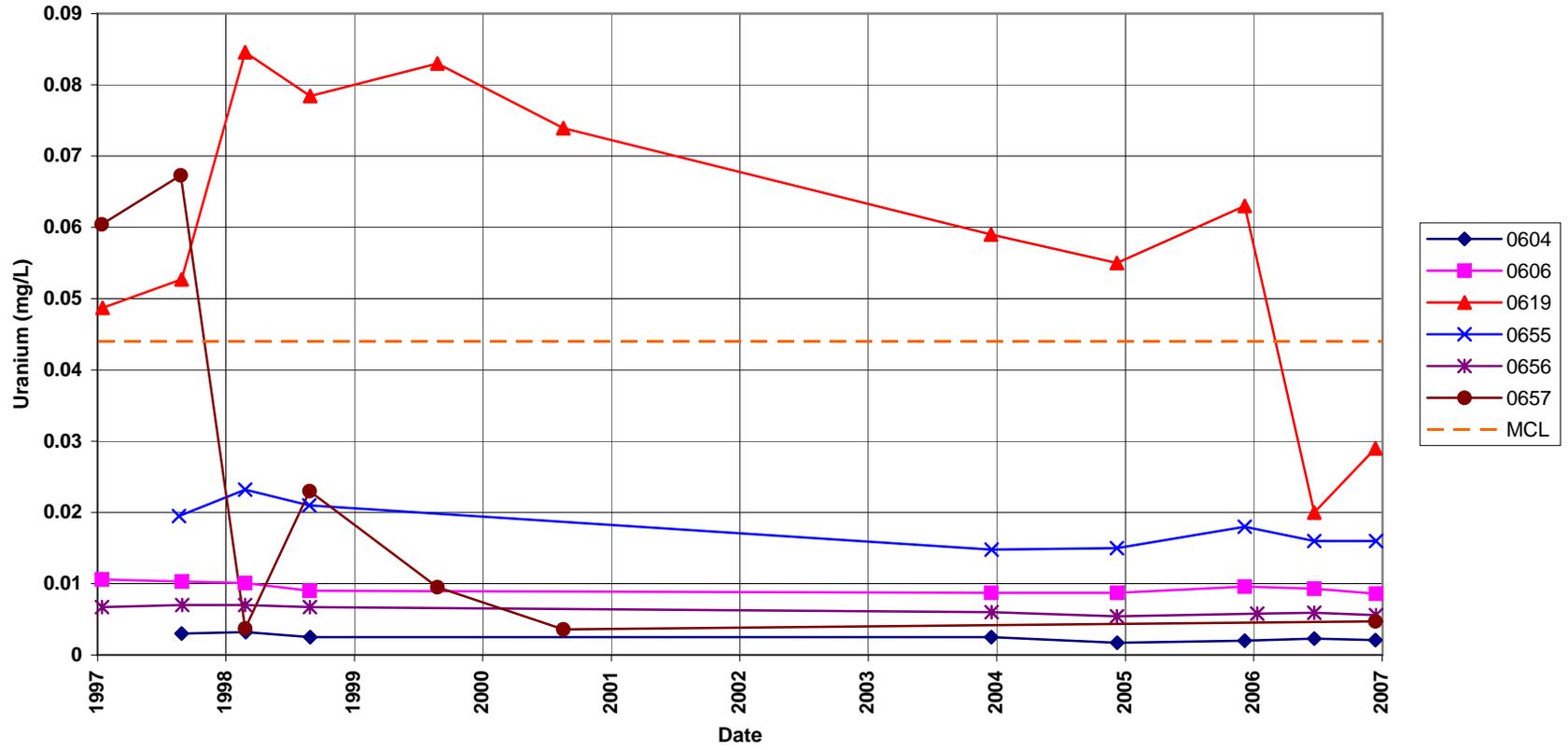
Monument Valley Processing Site Sulfate Concentration



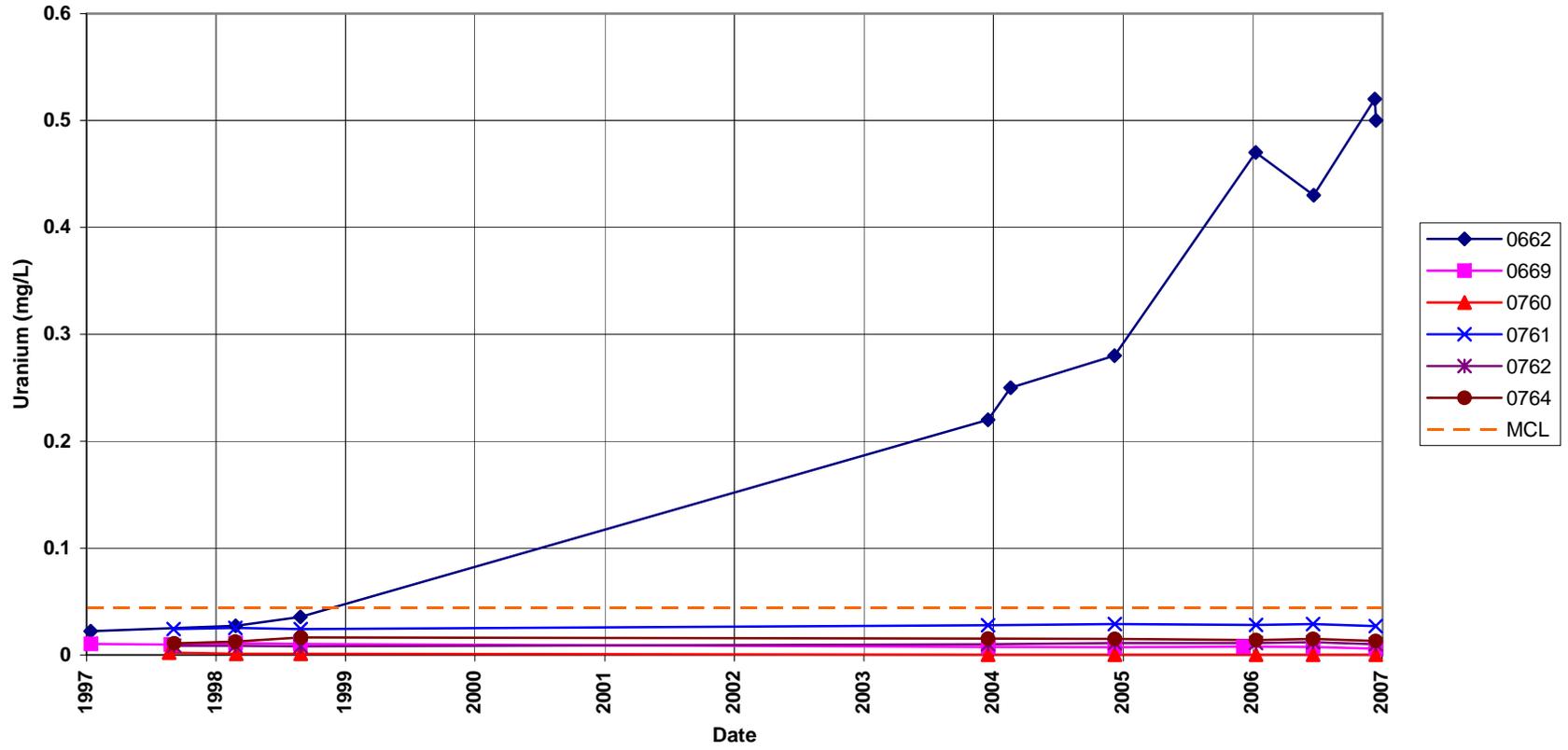
Monument Valley Processing Site Sulfate Concentration



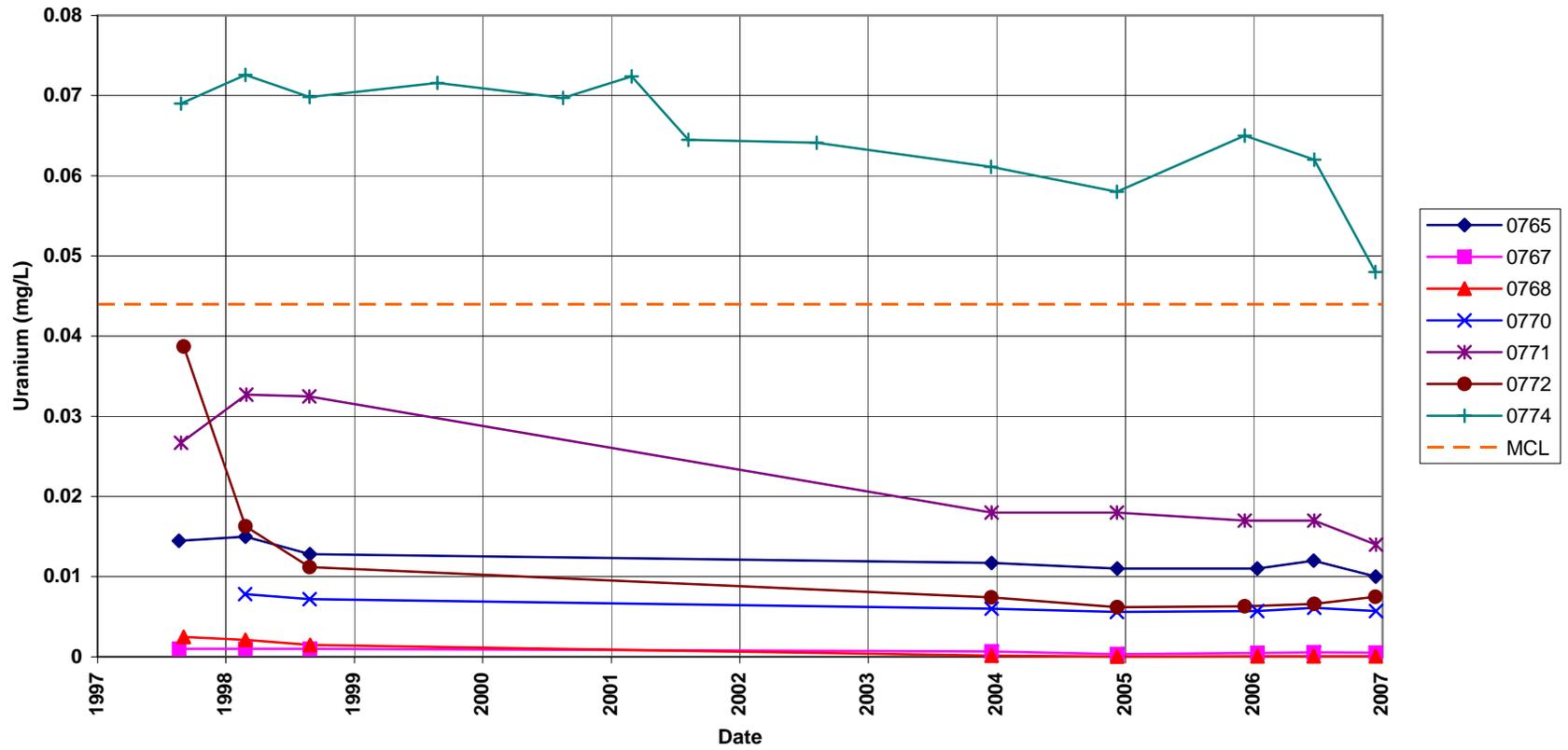
Monument Valley Processing Site
Uranium Concentration
Maximum Contaminant Level = 0.044 mg/L



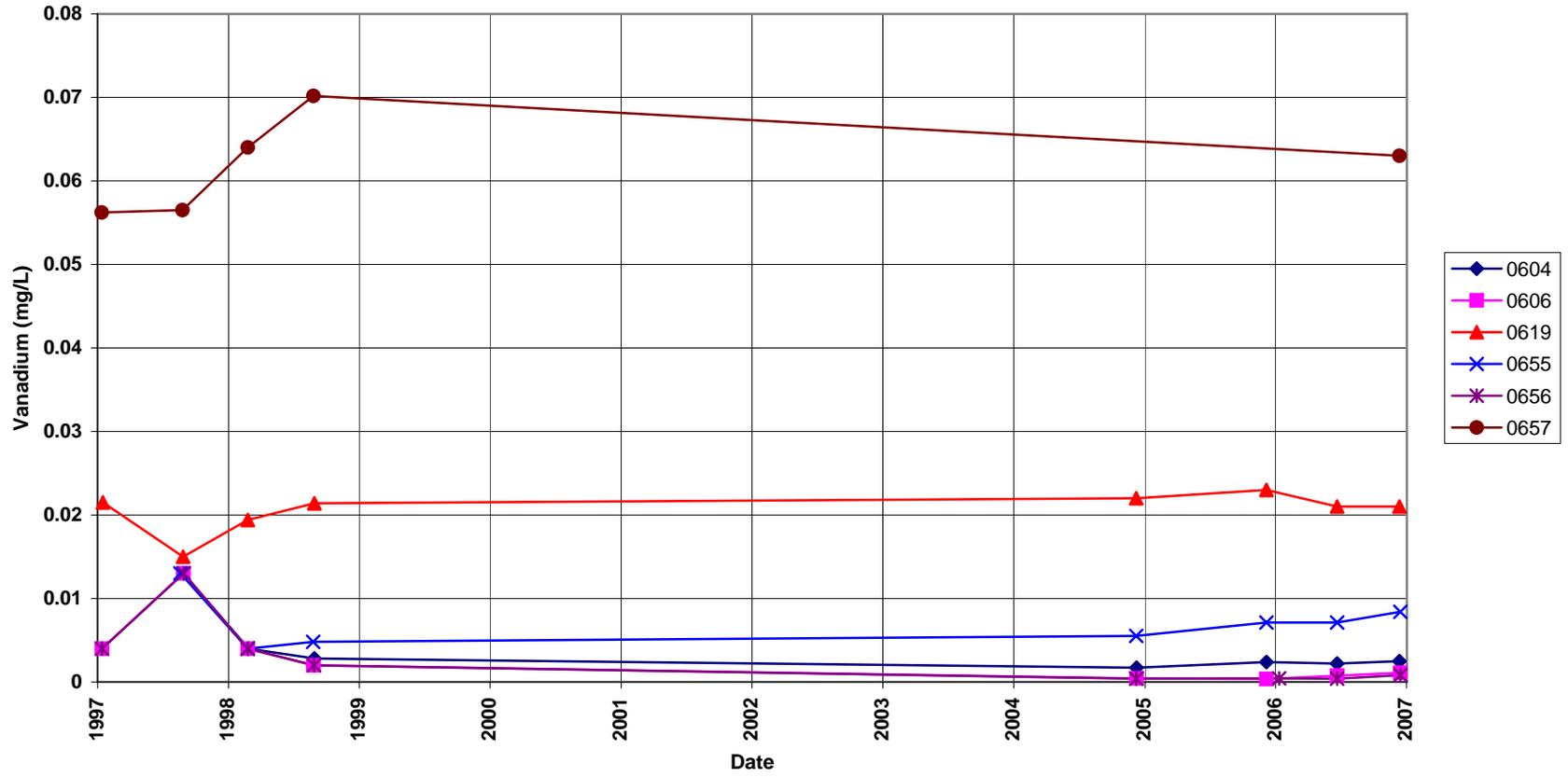
Monument Valley Processing Site
Uranium Concentration
Maximum Contaminant Level = 0.044 mg/L



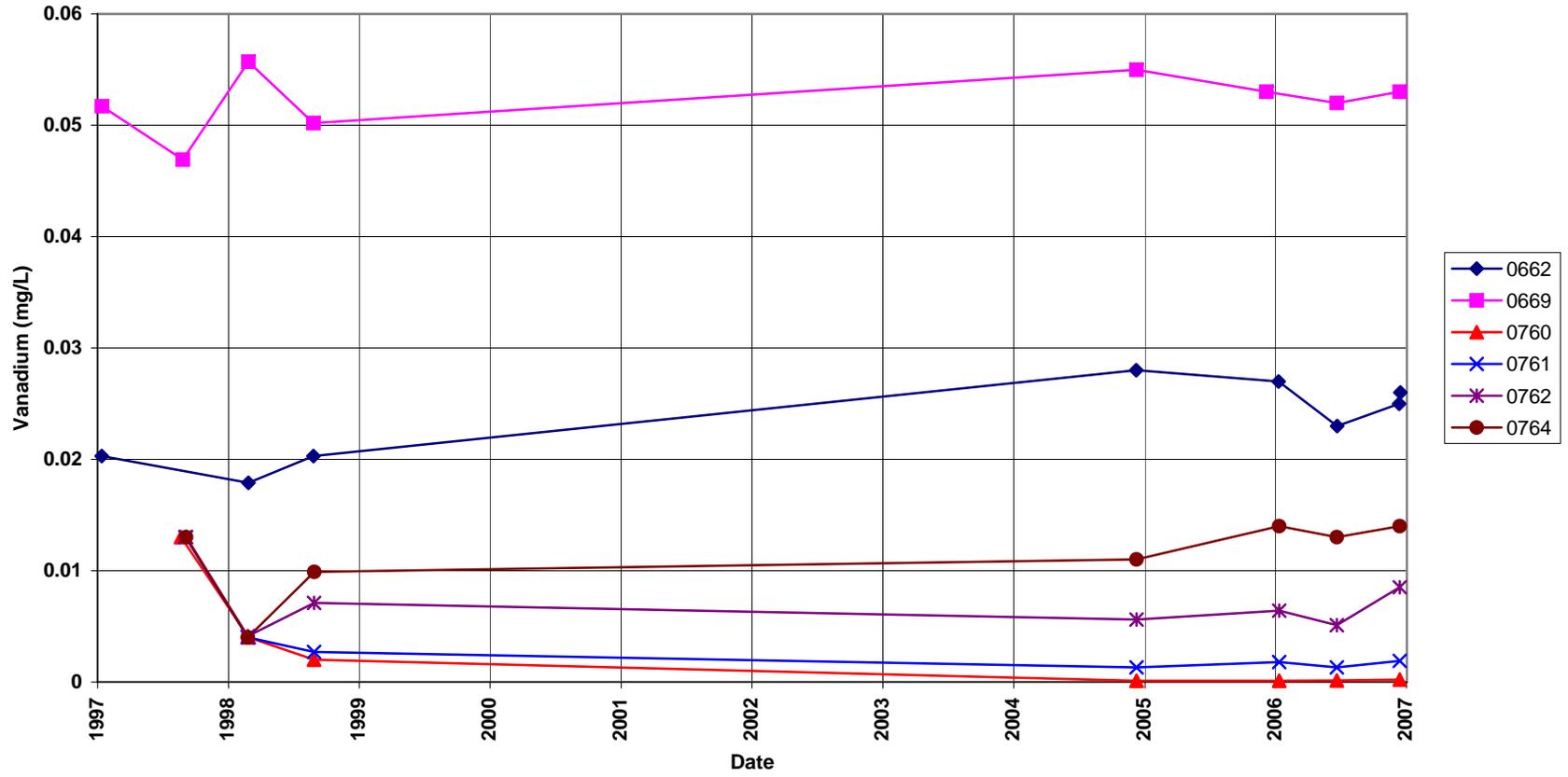
**Monument Valley Processing Site
Uranium Concentration**
Maximum Contaminant Level = 0.044 mg/L



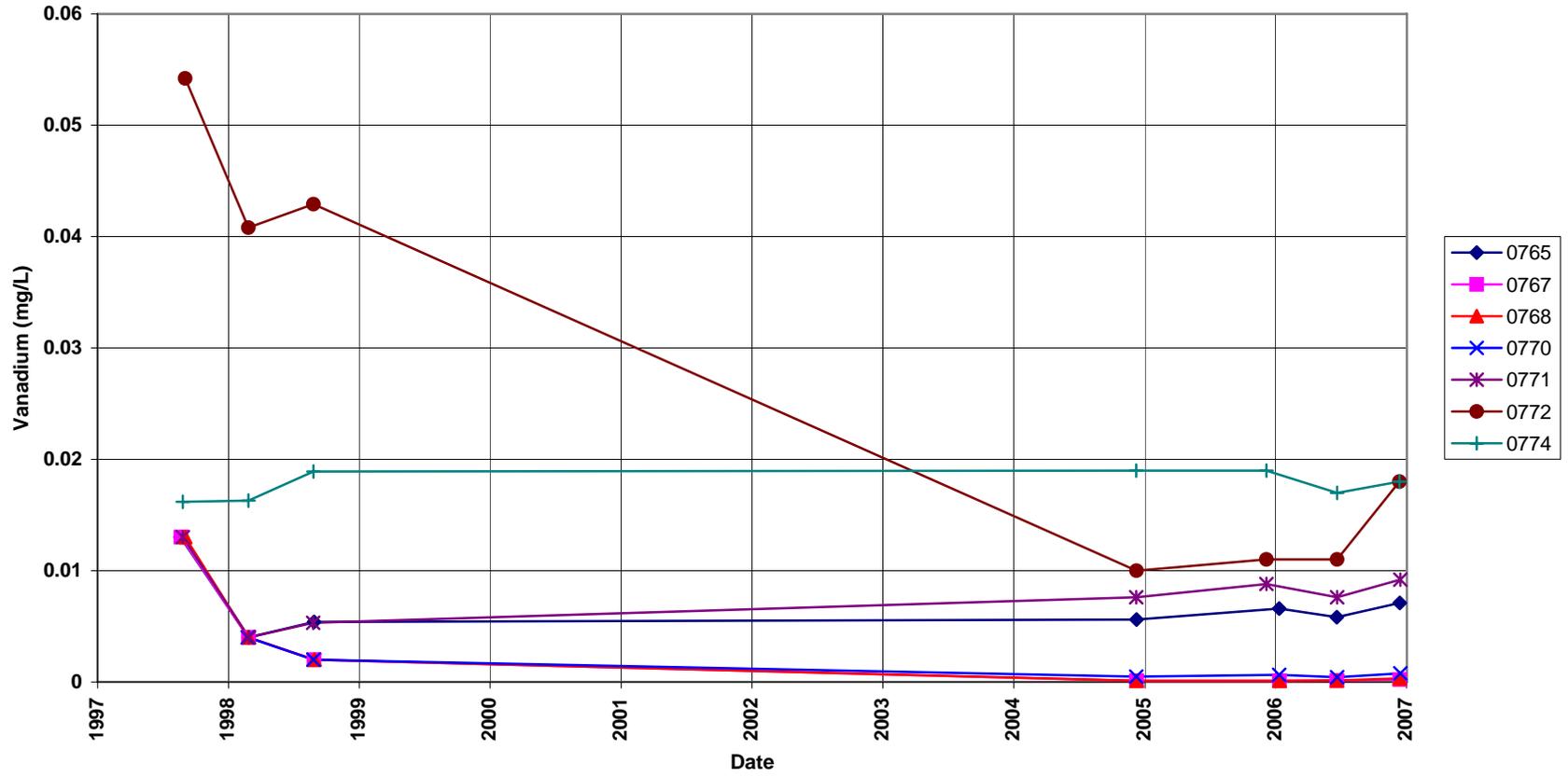
Monument Valley Processing Site Vanadium Concentration



Monument Valley Processing Site Vanadium Concentration



Monument Valley Processing Site Vanadium Concentration



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Attachment 3
Sampling and Analysis Work Order

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November 16, 2006

Richard P. Bush
Program Manager
U.S. Department of Energy
Grand Junction Office
2597 B $\frac{3}{4}$ Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AC13-02GJ79491, Stoller
December 2006 Environmental Sampling at Monument Valley, Arizona

Reference: FY 2007 LM Task Order No. ST07-100-02-0502

Dear Mr. Bush:

The purpose of this letter is to inform you of the upcoming sampling event at Monument Valley, Arizona. Enclosed are the map and tables specifying sample locations and analytes for routine monitoring. Water quality data will be collected from monitor and domestic wells at this site as part of the routine environmental sampling scheduled to begin the week of December 11, 2006.

The following lists show the monitor and domestic well locations scheduled to be sampled during this event.

Well locations (filtered)

604	655	662	762	767	770	772
606	656	669	764	768	771	774
619	657	760	761	765		

QA/QC samples will be collected as directed in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites*. Access agreements are covered under the cooperative agreement.

If you have any questions, please call me at extension 6588 or Dave Miller at extension 6652.

Sincerely,

Clay Carpenter
Project Manager

CC/lcg/mat

Enclosures (3)

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

cc w/o enclosures:

Correspondence Control File (Thru B. Bonnet) (e)

Site	Monument Valley	
	Analyte	Ground Water
Approx. No. Samples/yr	38	0
Field Measurements		
Alkalinity	X	
Dissolved Oxygen		
Redox Potential	X	
Residual Chlorine		
pH	X	
Specific Conductance	X	
Turbidity	X	
Temperature	X	
Laboratory Measurements		
Aluminum		
Ammonia as N (NH3-N)	X	
Antimony		
Arsenic		
Barium		
Bromide		
Cadmium		
Calcium		
Chloride	X	
Chromium		
Cobalt		
Copper		
Fluoride		
Gamma Spec		
Gross Alpha	0619, 0657, 0662, and 0774 only	
Gross Beta		
Iron		
Lead		
Lead-210		
Magnesium		
Manganese		
Molybdenum		
Nickel		
Nickel-63		
Nitrate + Nitrite as N (NO3+NO2)-N	X	
Nitrite		
PCBs		
Phosphate		
Polonium-210		
Potassium		
Radium-226	0619, 0657, 0662, and 0774 only	

Laboratory Measurements (Continued)		
Radium-228	0619, 0657, 0662, and 0774 only	
Selenium		
Silica		
Sodium		
Strontium		
Sulfate	X	
Sulfide		
Thallium		
Total Dissolved Solids		
Uranium	X	
Uranium-234, -238	0619, 0657, 0662, and 0774 only	
Vanadium	X	
Zinc		
Total Analytes	5	0

Note: All analyte samples are considered filtered 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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Memorandum

DATE: December 27, 2006
TO: David Miller
FROM: Jeff W. Walters
SUBJECT: Sampling Trip Report

Site: Monument Valley Processing Site.

Date of Sampling Event: December 11 through 15, 2006

Team Members: Emile A. Bettez and Jeff Walters

Number of Locations Sampled: Water samples for U, V, SO₄, Cl, (NO₃+NO₂)-N (NH₃-N), Gross Alpha, Ra-226/228, U-234, U-238 were collected from 4 monitor wells. One duplicate sample was also collected for the above list. Water samples for U, V, SO₄, Cl, (NO₃+NO₂)-N (NH₃-N) were collected from 15 monitor wells. In addition, one sample was collected from location 0662 for U, V prior to redeveloping it (another sample was collected from 0662 after redeveloping. It is included in the list above). No Equipment Blank was required. All equipment is dedicated. A total of 21 samples were submitted to the Laboratory.

Locations Not Sampled/Reason: None.

Location Specific Information:

Ticket Number	Sample Date	Location	Description
NFK 663	12/11/06	2418	This sample was collected from well 0662 before it was redeveloped. It is only for comparison with the sample taken from 0662 after redevelopment. This sample should not go into any data bank.
NFJ 918	12/12/06	0657	CAT I, Dedicated Bladder; check valve leaky
NFJ 919	12/12/06	0774	CAT I, Dedicated Bladder
NFJ 920	12/12/06	0619	CAT I, Dedicated Bladder; check valve leaky
NFJ 921	12/12/06	0772	CAT I, Peristaltic
NFJ 922	12/12/06	0604	CAT I, Peristaltic
NFJ 923	12/13/06	0768	CAT I, Peristaltic
NFJ 924	12/13/06	0760	CAT I, Dedicated Bladder
NFJ 925	12/13/06	0767	CAT I, Peristaltic
NFK 651	12/13/06	0762	CAT I, Dedicated Bladder
NFK 652	12/13/06	0761	CAT I, Dedicated Bladder
NFK 653	12/13/06	0764	CAT II, Dedicated Bladder
NFK 654	12/13/06	0669	CAT I, Dedicated Bladder
NFK 655	12/13/06	0765	CAT I, Dedicated Bladder
NFK 656	12/14/06	0771	CAT I, Dedicated Bladder
NFK 657	12/14/06	0655	CAT I, Dedicated Bladder
NFK 658	12/14/06	0770	CAT I, Dedicated Bladder
NFK 659	12/14/06	2417	Duplicate of 0662
NFK 660	12/14/06	0656	CAT I, Dedicated Bladder
NFK 661	12/14/06	0606	CAT I, Dedicated Bladder
NFK 662	12/14/06	0662	CAT I, Dedicated Bladder

Field Variance: None.

Quality Control Sample Cross Reference: The following is the false identification assigned to the quality control sample:

False ID	True ID	Sample Type	Associated Matrix	Ticket Number
2417	0662	Duplicate	Ground water	NFK 659

RIN Number Assigned: All samples were assigned to RIN 06110582.

Sample Shipment: Samples were shipped overnight by FedEx to Paragon Analytics, Inc. from the Grand Junction office on December 18, 2006.

Well Inspection Summary: Well inspections were conducted at all sampled wells. Wells 0918 and 0619 bladder pumps have check valves that won't seat. Well 0662 was redeveloped. All other wells were in good condition.

Equipment: 15 wells were sampled using the low-flow procedure with dedicated bladder pumps. 4 wells were sampled using the low-flow procedure with peristaltic pumps.

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

Date	Location	Water Level (ft. BTOC)	Date	Location	Water Level (ft. BTOC)
12/12/06	0657	50.51	12/13/06	0764	49.70
12/12/06	0774	49.65	12/13/06	0669	50.04
12/12/06	0619	57.89	12/13/06	0765	35.69
12/12/06	0772	12.35	12/14/06	0771	42.03
12/12/06	0604	9.34	12/14/06	0655	40.23
12/13/06	0768	14.39	12/14/06	0770	33.48
12/13/06	0760	25.63	12/14/06	0656	36.83
12/13/06	0767	6.96	12/14/06	0606	36.45
12/13/06	0762	32.44	12/14/06	0662	49.68
12/13/06	0761	43.09			

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

Fences, Gates, 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: N/A

Maintenance Requirements: N/A

Corrective Action Taken: N/A

(JWW/lcg)

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

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