Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 0945 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	N001	110 - 130	113		FQ	#		
Ammonia Total as N	mg/L	08/17/2011	N001	110 - 130	0.1	U	FQ	#	0.1	
Arsenic	mg/L	08/17/2011	N001	110 - 130	0.002		FQ	#	0.000015	
Calcium	mg/L	08/17/2011	N001	110 - 130	51		FQ	#	0.012	
Chloride	mg/L	08/17/2011	N001	110 - 130	41		FQ	#	1	
Iron	mg/L	08/17/2011	N001	110 - 130	0.0049	U	FQJ	#	0.0049	
Magnesium	mg/L	08/17/2011	N001	110 - 130	10		FQ	#	0.013	
Manganese	mg/L	08/17/2011	N001	110 - 130	0.0025	B	UFQ	#	0.00011	
Molybdenum	mg/L	08/17/2011	N001	110 - 130	0.00062		FQ	#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	110 - 130	5		FQ	#	0.05	
Oxidation Reduction Potential	mV	08/17/2011	N001	110 - 130	390		FQ	#		
pH	s.u.	08/17/2011	N001	110 - 130	7.87		FQ	#		
Potassium	mg/L	08/17/2011	N001	110 - 130	1.6		FQ	#	0.11	
Selenium	mg/L	08/17/2011	N001	110 - 130	0.0037		FQ	#	0.000032	
Silica	mg/L	08/17/2011	N001	110 - 130	12		FQ	#	0.0095	
Silicon	mg/L	08/17/2011	N001	110 - 130	5.7		FQ	#	0.0044	
Sodium	mg/L	08/17/2011	N001	110 - 130	14		FQ	#	0.0066	
Specific Conductance	umhos /cm	08/17/2011	N001	110 - 130	400		FQ	#		
Sulfate	mg/L	08/17/2011	N001	110 - 130	31		FQ	#	1	
Temperature	C	08/17/2011	N001	110 - 130	18.6		FQ	#		
Total Dissolved Solids	mg/L	08/17/2011	N001	110 - 130	280		FQJ	#	20	
Turbidity	NTU	08/17/2011	N001	110 - 130	2.39		FQ	#		
Uranium	mg/L	08/17/2011	N001	110 - 130	0.0013		FQ	#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 0946 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	40 - 60	100		F	#		
Ammonia Total as N	mg/L	08/16/2011	N001	40 - 60	0.1	U	F	#	0.1	
Arsenic	mg/L	08/16/2011	N001	40 - 60	0.013		F	#	0.000015	
Calcium	mg/L	08/16/2011	N001	40 - 60	12		F	#	0.012	
Chloride	mg/L	08/16/2011	N001	40 - 60	5.5		F	#	0.2	
Iron	mg/L	08/16/2011	N001	40 - 60	0.016	B	UFJ	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	40 - 60	2.1		F	#	0.013	
Manganese	mg/L	08/16/2011	N001	40 - 60	0.0027	B	F	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	40 - 60	0.00032		F	#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	40 - 60	1.6		F	#	0.01	
Oxidation Reduction Potential	mV	08/16/2011	N001	40 - 60	160		F	#		
pH	s.u.	08/16/2011	N001	40 - 60	8.4		F	#		
Potassium	mg/L	08/16/2011	N001	40 - 60	0.46	B	FJ	#	0.11	
Selenium	mg/L	08/16/2011	N001	40 - 60	0.00041		F	#	0.000032	
Silica	mg/L	08/16/2011	N001	40 - 60	12		F	#	0.0095	
Silicon	mg/L	08/16/2011	N001	40 - 60	5.8		F	#	0.0044	
Sodium	mg/L	08/16/2011	N001	40 - 60	16		F	#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	40 - 60	170		F	#		
Sulfate	mg/L	08/16/2011	N001	40 - 60	20		F	#	0.5	
Temperature	C	08/16/2011	N001	40 - 60	21.7		F	#		
Total Dissolved Solids	mg/L	08/16/2011	N001	40 - 60	130		FJ	#	20	
Turbidity	NTU	08/16/2011	N001	40 - 60	5.35		F	#		
Uranium	mg/L	08/16/2011	N001	40 - 60	0.000084		F	#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 0947 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/15/2011	N001	105	-	125	83		FQ	#		
Ammonia Total as N	mg/L	08/15/2011	N001	105	-	125	0.1	U	FQ	#	0.1	
Arsenic	mg/L	08/15/2011	N001	105	-	125	0.0028		FQ	#	0.000015	
Calcium	mg/L	08/15/2011	N001	105	-	125	34		FQ	#	0.012	
Chloride	mg/L	08/15/2011	N001	105	-	125	12		FQ	#	0.2	
Iron	mg/L	08/15/2011	N001	105	-	125	0.0049	U	FQJ	#	0.0049	
Magnesium	mg/L	08/15/2011	N001	105	-	125	6.7		FQ	#	0.013	
Manganese	mg/L	08/15/2011	N001	105	-	125	0.00022	B	FQJ	#	0.00011	
Molybdenum	mg/L	08/15/2011	N001	105	-	125	0.00041		FQ	#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/15/2011	N001	105	-	125	2.9		FQ	#	0.05	
Oxidation Reduction Potential	mV	08/15/2011	N001	105	-	125	34.9		RFQ	#		
pH	s.u.	08/15/2011	N001	105	-	125	7.8		FQ	#		
Potassium	mg/L	08/15/2011	N001	105	-	125	0.98	B	FQJ	#	0.11	
Selenium	mg/L	08/15/2011	N001	105	-	125	0.0016		FQ	#	0.000032	
Silica	mg/L	08/15/2011	N001	105	-	125	12		FQ	#	0.0095	
Silicon	mg/L	08/15/2011	N001	105	-	125	5.4		FQ	#	0.0044	
Sodium	mg/L	08/15/2011	N001	105	-	125	9.6		FQ	#	0.0066	
Specific Conductance	umhos /cm	08/15/2011	N001	105	-	125	349		FQ	#		
Sulfate	mg/L	08/15/2011	N001	105	-	125	16		FQ	#	0.5	
Temperature	C	08/15/2011	N001	105	-	125	18.56		FQ	#		
Total Dissolved Solids	mg/L	08/15/2011	N001	105	-	125	160		FQJ	#	20	
Turbidity	NTU	08/15/2011	N001	105	-	125	1.28		FQ	#		
Uranium	mg/L	08/15/2011	N001	105	-	125	0.0012		FQ	#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1003 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	N001	55.5	-	105.5	253		FJ	#		
Ammonia Total as N	mg/L	08/17/2011	N001	55.5	-	105.5	0.1	U	F	#	0.1	
Arsenic	mg/L	08/17/2011	N001	55.5	-	105.5	0.0013		F	#	0.000015	
Calcium	mg/L	08/17/2011	N001	55.5	-	105.5	310		F	#	0.012	
Chloride	mg/L	08/17/2011	N001	55.5	-	105.5	56		F	#	4	
Iron	mg/L	08/17/2011	N001	55.5	-	105.5	0.0049	U	FJ	#	0.0049	
Magnesium	mg/L	08/17/2011	N001	55.5	-	105.5	46		F	#	0.013	
Manganese	mg/L	08/17/2011	N001	55.5	-	105.5	0.00011	U	FJ	#	0.00011	
Molybdenum	mg/L	08/17/2011	N001	55.5	-	105.5	0.00014		F	#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	55.5	-	105.5	61		F	#	0.5	
Oxidation Reduction Potential	mV	08/17/2011	N001	55.5	-	105.5	193		F	#		
pH	s.u.	08/17/2011	N001	55.5	-	105.5	7.26		F	#		
Potassium	mg/L	08/17/2011	N001	55.5	-	105.5	4		F	#	0.11	
Selenium	mg/L	08/17/2011	N001	55.5	-	105.5	0.0037		F	#	0.000032	
Silica	mg/L	08/17/2011	N001	55.5	-	105.5	13		F	#	0.0095	
Silicon	mg/L	08/17/2011	N001	55.5	-	105.5	6.3		F	#	0.0044	
Sodium	mg/L	08/17/2011	N001	55.5	-	105.5	34		F	#	0.0066	
Specific Conductance	umhos /cm	08/17/2011	N001	55.5	-	105.5	1734		F	#		
Sulfate	mg/L	08/17/2011	N001	55.5	-	105.5	520		F	#	10	
Temperature	C	08/17/2011	N001	55.5	-	105.5	19.03		F	#		
Total Dissolved Solids	mg/L	08/17/2011	N001	55.5	-	105.5	1400		FJ	#	40	
Turbidity	NTU	08/17/2011	N001	55.5	-	105.5	2.83		F	#		
Uranium	mg/L	08/17/2011	N001	55.5	-	105.5	0.039		F	#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1004 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	N001	45.5	-	95.5	149		FJ	#		
Ammonia Total as N	mg/L	08/17/2011	N001	45.5	-	95.5	0.1	U	F	#	0.1	
Arsenic	mg/L	08/17/2011	N001	45.5	-	95.5	0.0025		F	#	0.000015	
Calcium	mg/L	08/17/2011	N001	45.5	-	95.5	51		F	#	0.012	
Chloride	mg/L	08/17/2011	N001	45.5	-	95.5	13		F	#	0.4	
Iron	mg/L	08/17/2011	N001	45.5	-	95.5	0.0049	U	FJ	#	0.0049	
Magnesium	mg/L	08/17/2011	N001	45.5	-	95.5	9.2		F	#	0.013	
Manganese	mg/L	08/17/2011	N001	45.5	-	95.5	0.00011	U	FJ	#	0.00011	
Molybdenum	mg/L	08/17/2011	N001	45.5	-	95.5	0.00035		F	#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	45.5	-	95.5	6.6		F	#	0.05	
Oxidation Reduction Potential	mV	08/17/2011	N001	45.5	-	95.5	191.9		F	#		
pH	s.u.	08/17/2011	N001	45.5	-	95.5	7.63		F	#		
Potassium	mg/L	08/17/2011	N001	45.5	-	95.5	1.1		F	#	0.11	
Selenium	mg/L	08/17/2011	N001	45.5	-	95.5	0.0017		F	#	0.000032	
Silica	mg/L	08/17/2011	N001	45.5	-	95.5	12		F	#	0.0095	
Silicon	mg/L	08/17/2011	N001	45.5	-	95.5	5.5		F	#	0.0044	
Sodium	mg/L	08/17/2011	N001	45.5	-	95.5	11		F	#	0.0066	
Specific Conductance	umhos /cm	08/17/2011	N001	45.5	-	95.5	390		F	#		
Sulfate	mg/L	08/17/2011	N001	45.5	-	95.5	43		F	#	1	
Temperature	C	08/17/2011	N001	45.5	-	95.5	17.99		F	#		
Total Dissolved Solids	mg/L	08/17/2011	N001	45.5	-	95.5	240		FJ	#	20	
Turbidity	NTU	08/17/2011	N001	45.5	-	95.5	1.36		F	#		
Uranium	mg/L	08/17/2011	N001	45.5	-	95.5	0.0049		F	#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1006 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	N001	45.74 - 95.74	142		FJ	#		
Ammonia Total as N	mg/L	08/17/2011	N001	45.74 - 95.74	0.11		F	#	0.1	
Arsenic	mg/L	08/17/2011	N001	45.74 - 95.74	0.0017		F	#	0.000015	
Calcium	mg/L	08/17/2011	N001	45.74 - 95.74	26		F	#	0.012	
Chloride	mg/L	08/17/2011	N001	45.74 - 95.74	8.4		F	#	0.2	
Iron	mg/L	08/17/2011	N001	45.74 - 95.74	0.0049	U	FJ	#	0.0049	
Magnesium	mg/L	08/17/2011	N001	45.74 - 95.74	7		F	#	0.013	
Manganese	mg/L	08/17/2011	N001	45.74 - 95.74	0.00016	B	UFJ	#	0.00011	
Molybdenum	mg/L	08/17/2011	N001	45.74 - 95.74	0.00029		F	#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	45.74 - 95.74	3		F	#	0.05	
Oxidation Reduction Potential	mV	08/17/2011	N001	45.74 - 95.74	185.8		F	#		
pH	s.u.	08/17/2011	N001	45.74 - 95.74	8.08		F	#		
Potassium	mg/L	08/17/2011	N001	45.74 - 95.74	1.7		F	#	0.11	
Selenium	mg/L	08/17/2011	N001	45.74 - 95.74	0.0012		F	#	0.000032	
Silica	mg/L	08/17/2011	N001	45.74 - 95.74	12		F	#	0.0095	
Silicon	mg/L	08/17/2011	N001	45.74 - 95.74	5.4		F	#	0.0044	
Sodium	mg/L	08/17/2011	N001	45.74 - 95.74	6.9		F	#	0.0066	
Specific Conductance	umhos /cm	08/17/2011	N001	45.74 - 95.74	236		F	#		
Sulfate	mg/L	08/17/2011	N001	45.74 - 95.74	11		F	#	0.5	
Temperature	C	08/17/2011	N001	45.74 - 95.74	19.59		F	#		
Total Dissolved Solids	mg/L	08/17/2011	N001	45.74 - 95.74	150		FJ	#	20	
Turbidity	NTU	08/17/2011	N001	45.74 - 95.74	0.56		F	#		
Uranium	mg/L	08/17/2011	N001	45.74 - 95.74	0.0013		F	#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

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 $CaCO_3$)	mg/L	08/17/2011	N001	45.79 - 95.99	126		FJ	#		
Ammonia Total as N	mg/L	08/17/2011	N001	45.79 - 95.99	0.1	U	F	#	0.1	
Arsenic	mg/L	08/17/2011	N001	45.79 - 95.99	0.0019		F	#	0.000015	
Calcium	mg/L	08/17/2011	N001	45.79 - 95.99	29		F	#	0.012	
Chloride	mg/L	08/17/2011	N001	45.79 - 95.99	8.4		F	#	0.2	
Iron	mg/L	08/17/2011	N001	45.79 - 95.99	0.0049	U	FJ	#	0.0049	
Magnesium	mg/L	08/17/2011	N001	45.79 - 95.99	7		F	#	0.013	
Manganese	mg/L	08/17/2011	N001	45.79 - 95.99	0.00011	U	FJ	#	0.00011	
Molybdenum	mg/L	08/17/2011	N001	45.79 - 95.99	0.00021		F	#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	45.79 - 95.99	3.3		F	#	0.05	
Oxidation Reduction Potential	mV	08/17/2011	N001	45.79 - 95.99	191.3		F	#		
pH	s.u.	08/17/2011	N001	45.79 - 95.99	8.02		F	#		
Potassium	mg/L	08/17/2011	N001	45.79 - 95.99	1.4		F	#	0.11	
Selenium	mg/L	08/17/2011	N001	45.79 - 95.99	0.0013		F	#	0.000032	
Silica	mg/L	08/17/2011	N001	45.79 - 95.99	12		F	#	0.0095	
Silicon	mg/L	08/17/2011	N001	45.79 - 95.99	5.7		F	#	0.0044	
Sodium	mg/L	08/17/2011	N001	45.79 - 95.99	5.8		F	#	0.0066	
Specific Conductance	umhos /cm	08/17/2011	N001	45.79 - 95.99	243		F	#		
Sulfate	mg/L	08/17/2011	N001	45.79 - 95.99	12		F	#	0.5	
Temperature	C	08/17/2011	N001	45.79 - 95.99	18.43		F	#		
Total Dissolved Solids	mg/L	08/17/2011	N001	45.79 - 95.99	150		FJ	#	20	
Turbidity	NTU	08/17/2011	N001	45.79 - 95.99	1.36		F	#		
Uranium	mg/L	08/17/2011	N001	45.79 - 95.99	0.0014		F	#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1102 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	101.5 - 251.5	508			#		
Ammonia Total as N	mg/L	08/16/2011	N001	101.5 - 251.5	0.94			#	0.1	
Arsenic	mg/L	08/16/2011	N001	101.5 - 251.5	0.0019			#	0.00015	
Calcium	mg/L	08/16/2011	N001	101.5 - 251.5	730			#	0.12	
Chloride	mg/L	08/16/2011	N001	101.5 - 251.5	160			#	10	
Iron	mg/L	08/16/2011	N001	101.5 - 251.5	0.0057	B	UJ	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	101.5 - 251.5	180			#	0.013	
Manganese	mg/L	08/16/2011	N001	101.5 - 251.5	0.16			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	101.5 - 251.5	0.00032	U		#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	101.5 - 251.5	150			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	101.5 - 251.5	80			#		
pH	s.u.	08/16/2011	N001	101.5 - 251.5	6.62			#		
Potassium	mg/L	08/16/2011	N001	101.5 - 251.5	11			#	0.11	
Selenium	mg/L	08/16/2011	N001	101.5 - 251.5	0.037			#	0.00032	
Silica	mg/L	08/16/2011	N001	101.5 - 251.5	16			#	0.0095	
Silicon	mg/L	08/16/2011	N001	101.5 - 251.5	7.4			#	0.0044	
Sodium	mg/L	08/16/2011	N001	101.5 - 251.5	290			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	101.5 - 251.5	4820			#		
Sulfate	mg/L	08/16/2011	N001	101.5 - 251.5	2000			#	25	
Temperature	C	08/16/2011	N001	101.5 - 251.5	18.3			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	101.5 - 251.5	4800		J	#	200	
Turbidity	NTU	08/16/2011	N001	101.5 - 251.5	6.24			#		
Uranium	mg/L	08/16/2011	N001	101.5 - 251.5	0.54			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1103 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	100 - 250	498			#		
Ammonia Total as N	mg/L	08/16/2011	N001	100 - 250	28			#	2	
Arsenic	mg/L	08/16/2011	N001	100 - 250	0.0019			#	0.00015	
Calcium	mg/L	08/16/2011	N001	100 - 250	580			#	0.12	
Chloride	mg/L	08/16/2011	N001	100 - 250	120			#	10	
Iron	mg/L	08/16/2011	N001	100 - 250	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	100 - 250	250			#	0.013	
Manganese	mg/L	08/16/2011	N001	100 - 250	3.8			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	100 - 250	0.005			#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	100 - 250	180			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	100 - 250	140			#		
pH	s.u.	08/16/2011	N001	100 - 250	6.45			#		
Potassium	mg/L	08/16/2011	N001	100 - 250	20			#	0.11	
Selenium	mg/L	08/16/2011	N001	100 - 250	0.035			#	0.00032	
Silica	mg/L	08/16/2011	N001	100 - 250	15			#	0.0095	
Silicon	mg/L	08/16/2011	N001	100 - 250	6.9			#	0.0044	
Sodium	mg/L	08/16/2011	N001	100 - 250	320			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	100 - 250	5140			#		
Sulfate	mg/L	08/16/2011	N001	100 - 250	2000			#	25	
Temperature	C	08/16/2011	N001	100 - 250	17			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	100 - 250	4900		J	#	200	
Turbidity	NTU	08/16/2011	N001	100 - 250	4.52			#		
Uranium	mg/L	08/16/2011	N001	100 - 250	0.45			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

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 $CaCO_3$)	mg/L	08/16/2011	N001	90 - 245	626			#		
Ammonia Total as N	mg/L	08/16/2011	N001	90 - 245	52			#	5	
Arsenic	mg/L	08/16/2011	N001	90 - 245	0.0029			#	0.000074	
Calcium	mg/L	08/16/2011	N001	90 - 245	650			#	0.12	
Chloride	mg/L	08/16/2011	N001	90 - 245	140			#	10	
Iron	mg/L	08/16/2011	N001	90 - 245	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	90 - 245	270			#	0.013	
Manganese	mg/L	08/16/2011	N001	90 - 245	1.3			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	90 - 245	0.029			#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	90 - 245	170			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	90 - 245	210			#		
pH	s.u.	08/16/2011	N001	90 - 245	6.62			#		
Potassium	mg/L	08/16/2011	N001	90 - 245	24			#	0.11	
Selenium	mg/L	08/16/2011	N001	90 - 245	0.047			#	0.0016	
Silica	mg/L	08/16/2011	N001	90 - 245	16			#	0.0095	
Silicon	mg/L	08/16/2011	N001	90 - 245	7.5			#	0.0044	
Sodium	mg/L	08/16/2011	N001	90 - 245	420			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	90 - 245	5860			#		
Sulfate	mg/L	08/16/2011	N001	90 - 245	2400			#	25	
Temperature	C	08/16/2011	N001	90 - 245	17.2			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	90 - 245	5400		J	#	200	
Turbidity	NTU	08/16/2011	N001	90 - 245	3.7			#		
Uranium	mg/L	08/16/2011	N001	90 - 245	1.4			#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1105 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	90	-	245	779			#		
Ammonia Total as N	mg/L	08/16/2011	N001	90	-	245	33			#	2	
Arsenic	mg/L	08/16/2011	N001	90	-	245	1			#	0.003	
Calcium	mg/L	08/16/2011	N001	90	-	245	730			#	0.12	
Chloride	mg/L	08/16/2011	N001	90	-	245	150			#	10	
Iron	mg/L	08/16/2011	N001	90	-	245	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	90	-	245	290			#	0.013	
Manganese	mg/L	08/16/2011	N001	90	-	245	0.3			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	90	-	245	1			#	0.0064	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	90	-	245	240			#	2	
Oxidation Reduction Potential	mV	08/16/2011	N001	90	-	245	210			#		
pH	s.u.	08/16/2011	N001	90	-	245	6.53			#		
Potassium	mg/L	08/16/2011	N001	90	-	245	21			#	0.11	
Selenium	mg/L	08/16/2011	N001	90	-	245	0.071			#	0.0065	
Silica	mg/L	08/16/2011	N001	90	-	245	16			#	0.0095	
Silicon	mg/L	08/16/2011	N001	90	-	245	7.3			#	0.0044	
Sodium	mg/L	08/16/2011	N001	90	-	245	500			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	90	-	245	6320			#		
Sulfate	mg/L	08/16/2011	N001	90	-	245	2400			#	25	
Temperature	C	08/16/2011	N001	90	-	245	17			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	90	-	245	6200		J	#	200	
Turbidity	NTU	08/16/2011	N001	90	-	245	2.93			#		
Uranium	mg/L	08/16/2011	N001	90	-	245	2.1			#	0.00058	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1106 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	96.5 - 251.1	435			#		
Ammonia Total as N	mg/L	08/16/2011	N001	96.5 - 251.1	35			#	2	
Arsenic	mg/L	08/16/2011	N001	96.5 - 251.1	0.32			#	0.003	
Calcium	mg/L	08/16/2011	N001	96.5 - 251.1	360			#	0.012	
Chloride	mg/L	08/16/2011	N001	96.5 - 251.1	90			#	10	
Iron	mg/L	08/16/2011	N001	96.5 - 251.1	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	96.5 - 251.1	95			#	0.013	
Manganese	mg/L	08/16/2011	N001	96.5 - 251.1	0.1			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	96.5 - 251.1	0.092			#	0.0064	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	96.5 - 251.1	97			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	96.5 - 251.1	200			#		
pH	s.u.	08/16/2011	N001	96.5 - 251.1	6.84			#		
Potassium	mg/L	08/16/2011	N001	96.5 - 251.1	15			#	0.11	
Selenium	mg/L	08/16/2011	N001	96.5 - 251.1	0.05			#	0.0065	
Silica	mg/L	08/16/2011	N001	96.5 - 251.1	15			#	0.0095	
Silicon	mg/L	08/16/2011	N001	96.5 - 251.1	7.2			#	0.0044	
Sodium	mg/L	08/16/2011	N001	96.5 - 251.1	240			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	96.5 - 251.1	3450			#		
Sulfate	mg/L	08/16/2011	N001	96.5 - 251.1	1100			#	25	
Temperature	C	08/16/2011	N001	96.5 - 251.1	17.1			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	96.5 - 251.1	2900		J	#	80	
Turbidity	NTU	08/16/2011	N001	96.5 - 251.1	0.94			#		
Uranium	mg/L	08/16/2011	N001	96.5 - 251.1	2			#	0.00058	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1107 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	91.1	-	245.5	525			#		
Ammonia Total as N	mg/L	08/16/2011	N001	91.1	-	245.5	1.4			#	0.1	
Arsenic	mg/L	08/16/2011	N001	91.1	-	245.5	0.0025			#	0.00015	
Calcium	mg/L	08/16/2011	N001	91.1	-	245.5	610			#	0.12	
Chloride	mg/L	08/16/2011	N001	91.1	-	245.5	110			#	10	
Iron	mg/L	08/16/2011	N001	91.1	-	245.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	91.1	-	245.5	120			#	0.013	
Manganese	mg/L	08/16/2011	N001	91.1	-	245.5	0.1			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	91.1	-	245.5	0.097			#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	91.1	-	245.5	160			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	91.1	-	245.5	190			#		
pH	s.u.	08/16/2011	N001	91.1	-	245.5	6.6			#		
Potassium	mg/L	08/16/2011	N001	91.1	-	245.5	10			#	0.11	
Selenium	mg/L	08/16/2011	N001	91.1	-	245.5	0.056			#	0.00032	
Silica	mg/L	08/16/2011	N001	91.1	-	245.5	16			#	0.0095	
Silicon	mg/L	08/16/2011	N001	91.1	-	245.5	7.3			#	0.0044	
Sodium	mg/L	08/16/2011	N001	91.1	-	245.5	240			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	91.1	-	245.5	4190			#		
Sulfate	mg/L	08/16/2011	N001	91.1	-	245.5	1200			#	25	
Temperature	C	08/16/2011	N001	91.1	-	245.5	17.8			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	91.1	-	245.5	4100		J	#	200	
Turbidity	NTU	08/16/2011	N001	91.1	-	245.5	1.48			#		
Uranium	mg/L	08/16/2011	N001	91.1	-	245.5	0.26			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1108 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	96.3	-	246.3	551			#		
Ammonia Total as N	mg/L	08/16/2011	N001	96.3	-	246.3	47			#	5	
Arsenic	mg/L	08/16/2011	N001	96.3	-	246.3	0.0013			#	0.00015	
Calcium	mg/L	08/16/2011	N001	96.3	-	246.3	490			#	0.012	
Chloride	mg/L	08/16/2011	N001	96.3	-	246.3	82			#	10	
Iron	mg/L	08/16/2011	N001	96.3	-	246.3	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	96.3	-	246.3	170			#	0.013	
Manganese	mg/L	08/16/2011	N001	96.3	-	246.3	3.3			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	96.3	-	246.3	0.00043	B		#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	96.3	-	246.3	110			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	96.3	-	246.3	215			#		
pH	s.u.	08/16/2011	N001	96.3	-	246.3	6.69			#		
Potassium	mg/L	08/16/2011	N001	96.3	-	246.3	17			#	0.11	
Selenium	mg/L	08/16/2011	N001	96.3	-	246.3	0.034			#	0.00032	
Silica	mg/L	08/16/2011	N001	96.3	-	246.3	16			#	0.0095	
Silicon	mg/L	08/16/2011	N001	96.3	-	246.3	7.3			#	0.0044	
Sodium	mg/L	08/16/2011	N001	96.3	-	246.3	250			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	96.3	-	246.3	4230			#		
Sulfate	mg/L	08/16/2011	N001	96.3	-	246.3	1500			#	25	
Temperature	C	08/16/2011	N001	96.3	-	246.3	17.1			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	96.3	-	246.3	3800		J	#	200	
Turbidity	NTU	08/16/2011	N001	96.3	-	246.3	1.97			#		
Uranium	mg/L	08/16/2011	N001	96.3	-	246.3	0.76			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1111 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	90.68	-	245.1	422			#		
Ammonia Total as N	mg/L	08/16/2011	N001	90.68	-	245.1	17			#	1	
Arsenic	mg/L	08/16/2011	N001	90.68	-	245.1	0.0011			#	0.00015	
Calcium	mg/L	08/16/2011	N001	90.68	-	245.1	460			#	0.012	
Chloride	mg/L	08/16/2011	N001	90.68	-	245.1	56			#	10	
Iron	mg/L	08/16/2011	N001	90.68	-	245.1	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	90.68	-	245.1	150			#	0.013	
Manganese	mg/L	08/16/2011	N001	90.68	-	245.1	0.98			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	90.68	-	245.1	0.00032	U		#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	90.68	-	245.1	110			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	90.68	-	245.1	170			#		
pH	s.u.	08/16/2011	N001	90.68	-	245.1	6.82			#		
Potassium	mg/L	08/16/2011	N001	90.68	-	245.1	12	EN		#	0.11	
Selenium	mg/L	08/16/2011	N001	90.68	-	245.1	0.012			#	0.00032	
Silica	mg/L	08/16/2011	N001	90.68	-	245.1	16			#	0.0095	
Silicon	mg/L	08/16/2011	N001	90.68	-	245.1	7.3			#	0.0044	
Sodium	mg/L	08/16/2011	N001	90.68	-	245.1	150	E		#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	90.68	-	245.1	3530			#		
Sulfate	mg/L	08/16/2011	N001	90.68	-	245.1	1200			#	25	
Temperature	C	08/16/2011	N001	90.68	-	245.1	17.8			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	90.68	-	245.1	3200		J	#	80	
Turbidity	NTU	08/16/2011	N001	90.68	-	245.1	2.34			#		
Uranium	mg/L	08/16/2011	N001	90.68	-	245.1	0.16			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1112 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	90.5 - 245.5	225			#		
Ammonia Total as N	mg/L	08/16/2011	N001	90.5 - 245.5	0.1	U		#	0.1	
Ammonia Total as N	mg/L	08/16/2011	N002	90.5 - 245.5	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	90.5 - 245.5	0.0015			#	0.000074	
Arsenic	mg/L	08/16/2011	N002	90.5 - 245.5	0.0013			#	0.000015	
Calcium	mg/L	08/16/2011	N001	90.5 - 245.5	150			#	0.012	
Calcium	mg/L	08/16/2011	N002	90.5 - 245.5	150			#	0.012	
Chloride	mg/L	08/16/2011	N001	90.5 - 245.5	23			#	4	
Chloride	mg/L	08/16/2011	N002	90.5 - 245.5	20			#	2	
Iron	mg/L	08/16/2011	N001	90.5 - 245.5	0.0049	U	J	#	0.0049	
Iron	mg/L	08/16/2011	N002	90.5 - 245.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	90.5 - 245.5	41			#	0.013	
Magnesium	mg/L	08/16/2011	N002	90.5 - 245.5	40			#	0.013	
Manganese	mg/L	08/16/2011	N001	90.5 - 245.5	0.0028	B	U	#	0.00011	
Manganese	mg/L	08/16/2011	N002	90.5 - 245.5	0.0052		U	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	90.5 - 245.5	0.00024	B		#	0.00016	
Molybdenum	mg/L	08/16/2011	N002	90.5 - 245.5	0.00016			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	90.5 - 245.5	48			#	0.5	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N002	90.5 - 245.5	50			#	0.5	
Oxidation Reduction Potential	mV	08/16/2011	N001	90.5 - 245.5	200			#		
pH	s.u.	08/16/2011	N001	90.5 - 245.5	6.99			#		
Potassium	mg/L	08/16/2011	N001	90.5 - 245.5	2.7			#	0.11	
Potassium	mg/L	08/16/2011	N002	90.5 - 245.5	2.6			#	0.11	
Selenium	mg/L	08/16/2011	N001	90.5 - 245.5	0.0052			#	0.00016	
Selenium	mg/L	08/16/2011	N002	90.5 - 245.5	0.0051			#	0.000032	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1112 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Silica	mg/L	08/16/2011	N001	90.5	-	245.5	12			#	0.0095	
Silica	mg/L	08/16/2011	N002	90.5	-	245.5	12			#	0.0095	
Silicon	mg/L	08/16/2011	N001	90.5	-	245.5	5.7			#	0.0044	
Silicon	mg/L	08/16/2011	N002	90.5	-	245.5	5.6			#	0.0044	
Sodium	mg/L	08/16/2011	N001	90.5	-	245.5	24			#	0.0066	
Sodium	mg/L	08/16/2011	N002	90.5	-	245.5	24			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	90.5	-	245.5	1065			#		
Sulfate	mg/L	08/16/2011	N001	90.5	-	245.5	300			#	10	
Sulfate	mg/L	08/16/2011	N002	90.5	-	245.5	260			#	5	
Temperature	C	08/16/2011	N001	90.5	-	245.5	18			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	90.5	-	245.5	1100		J	#	40	
Total Dissolved Solids	mg/L	08/16/2011	N002	90.5	-	245.5	910		J	#	40	
Turbidity	NTU	08/16/2011	N001	90.5	-	245.5	1.34			#		
Uranium	mg/L	08/16/2011	N001	90.5	-	245.5	0.052			#	0.000015	
Uranium	mg/L	08/16/2011	N002	90.5	-	245.5	0.049			#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1113 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	90.5 - 245.5	191			#		
Ammonia Total as N	mg/L	08/16/2011	N001	90.5 - 245.5	0.1	U		#	0.1	
Ammonia Total as N	mg/L	08/16/2011	N002	90.5 - 245.5	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	90.5 - 245.5	0.0015			#	0.000015	
Arsenic	mg/L	08/16/2011	N002	90.5 - 245.5	0.0015			#	0.000015	
Calcium	mg/L	08/16/2011	N001	90.5 - 245.5	95			#	0.012	
Calcium	mg/L	08/16/2011	N002	90.5 - 245.5	95			#	0.012	
Chloride	mg/L	08/16/2011	N001	90.5 - 245.5	15			#	1	
Chloride	mg/L	08/16/2011	N002	90.5 - 245.5	15			#	1	
Iron	mg/L	08/16/2011	N001	90.5 - 245.5	0.0049	U	J	#	0.0049	
Iron	mg/L	08/16/2011	N002	90.5 - 245.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	90.5 - 245.5	20			#	0.013	
Magnesium	mg/L	08/16/2011	N002	90.5 - 245.5	20			#	0.013	
Manganese	mg/L	08/16/2011	N001	90.5 - 245.5	0.00011	U	J	#	0.00011	
Manganese	mg/L	08/16/2011	N002	90.5 - 245.5	0.00011	U	J	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	90.5 - 245.5	0.00029			#	0.000032	
Molybdenum	mg/L	08/16/2011	N002	90.5 - 245.5	0.00037			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	90.5 - 245.5	22			#	0.2	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N002	90.5 - 245.5	23			#	0.2	
Oxidation Reduction Potential	mV	08/16/2011	N001	90.5 - 245.5	180			#		
pH	s.u.	08/16/2011	N001	90.5 - 245.5	8.14			#		
Potassium	mg/L	08/16/2011	N001	90.5 - 245.5	2.4			#	0.11	
Potassium	mg/L	08/16/2011	N002	90.5 - 245.5	2.4			#	0.11	
Selenium	mg/L	08/16/2011	N001	90.5 - 245.5	0.0024			#	0.000032	
Selenium	mg/L	08/16/2011	N002	90.5 - 245.5	0.0024			#	0.000032	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1113 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Silica	mg/L	08/16/2011	N001	90.5	-	245.5	12			#	0.0095	
Silica	mg/L	08/16/2011	N002	90.5	-	245.5	12			#	0.0095	
Silicon	mg/L	08/16/2011	N001	90.5	-	245.5	5.6			#	0.0044	
Silicon	mg/L	08/16/2011	N002	90.5	-	245.5	5.5			#	0.0044	
Sodium	mg/L	08/16/2011	N001	90.5	-	245.5	11			#	0.0066	
Sodium	mg/L	08/16/2011	N002	90.5	-	245.5	11			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	90.5	-	245.5	760			#		
Sulfate	mg/L	08/16/2011	N001	90.5	-	245.5	100			#	2.5	
Sulfate	mg/L	08/16/2011	N002	90.5	-	245.5	100			#	2.5	
Temperature	C	08/16/2011	N001	90.5	-	245.5	17.3			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	90.5	-	245.5	500		J	#	20	
Total Dissolved Solids	mg/L	08/16/2011	N002	90.5	-	245.5	490		J	#	40	
Turbidity	NTU	08/16/2011	N001	90.5	-	245.5	1.24			#		
Uranium	mg/L	08/16/2011	N001	90.5	-	245.5	0.014			#	0.0000029	
Uranium	mg/L	08/16/2011	N002	90.5	-	245.5	0.014			#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1116 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	92.37 - 195.5	110			#		
Ammonia Total as N	mg/L	08/16/2011	N001	92.37 - 195.5	0.1	U		#	0.1	
Ammonia Total as N	mg/L	08/16/2011	N002	92.37 - 195.5	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	92.37 - 195.5	0.0017			#	0.000015	
Arsenic	mg/L	08/16/2011	N002	92.37 - 195.5	0.002			#	0.000015	
Calcium	mg/L	08/16/2011	N001	92.37 - 195.5	30			#	0.012	
Calcium	mg/L	08/16/2011	N002	92.37 - 195.5	32			#	0.012	
Chloride	mg/L	08/16/2011	N001	92.37 - 195.5	8.3			#	0.2	
Chloride	mg/L	08/16/2011	N002	92.37 - 195.5	7.6			#	0.2	
Iron	mg/L	08/16/2011	N001	92.37 - 195.5	0.0049	U	J	#	0.0049	
Iron	mg/L	08/16/2011	N002	92.37 - 195.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	92.37 - 195.5	7.1			#	0.013	
Magnesium	mg/L	08/16/2011	N002	92.37 - 195.5	7.3			#	0.013	
Manganese	mg/L	08/16/2011	N001	92.37 - 195.5	0.00011	U	J	#	0.00011	
Manganese	mg/L	08/16/2011	N002	92.37 - 195.5	0.00011	U	J	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	92.37 - 195.5	0.00019			#	0.000032	
Molybdenum	mg/L	08/16/2011	N002	92.37 - 195.5	0.00021			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	92.37 - 195.5	3.6			#	0.05	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N002	92.37 - 195.5	3.8			#	0.05	
Oxidation Reduction Potential	mV	08/16/2011	N001	92.37 - 195.5	180			#		
pH	s.u.	08/16/2011	N001	92.37 - 195.5	8.09			#		
Potassium	mg/L	08/16/2011	N001	92.37 - 195.5	1.6			#	0.11	
Potassium	mg/L	08/16/2011	N002	92.37 - 195.5	1.4			#	0.11	
Selenium	mg/L	08/16/2011	N001	92.37 - 195.5	0.0011			#	0.000032	
Selenium	mg/L	08/16/2011	N002	92.37 - 195.5	0.0012			#	0.000032	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1116 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Silica	mg/L	08/16/2011	N001	92.37	-	195.5	11			#	0.0095	
Silica	mg/L	08/16/2011	N002	92.37	-	195.5	11			#	0.0095	
Silicon	mg/L	08/16/2011	N001	92.37	-	195.5	5.3			#	0.0044	
Silicon	mg/L	08/16/2011	N002	92.37	-	195.5	5.3			#	0.0044	
Sodium	mg/L	08/16/2011	N001	92.37	-	195.5	5.7			#	0.0066	
Sodium	mg/L	08/16/2011	N002	92.37	-	195.5	6			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	92.37	-	195.5	260			#		
Sulfate	mg/L	08/16/2011	N001	92.37	-	195.5	14			#	0.5	
Sulfate	mg/L	08/16/2011	N002	92.37	-	195.5	12			#	0.5	
Temperature	C	08/16/2011	N001	92.37	-	195.5	17.1			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	92.37	-	195.5	170		J	#	20	
Total Dissolved Solids	mg/L	08/16/2011	N002	92.37	-	195.5	150		J	#	20	
Turbidity	NTU	08/16/2011	N001	92.37	-	195.5	1.3			#		
Uranium	mg/L	08/16/2011	N001	92.37	-	195.5	0.0018			#	0.0000029	
Uranium	mg/L	08/16/2011	N002	92.37	-	195.5	0.0016			#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1117 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	92.3	-	195.5	195			#		
Ammonia Total as N	mg/L	08/16/2011	N001	92.3	-	195.5	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	92.3	-	195.5	0.0022			#	0.000015	
Calcium	mg/L	08/16/2011	N001	92.3	-	195.5	140			#	0.012	
Chloride	mg/L	08/16/2011	N001	92.3	-	195.5	20			#	4	
Iron	mg/L	08/16/2011	N001	92.3	-	195.5	0.087	B		#	0.0049	
Magnesium	mg/L	08/16/2011	N001	92.3	-	195.5	54			#	0.013	
Manganese	mg/L	08/16/2011	N001	92.3	-	195.5	0.3			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	92.3	-	195.5	0.00033			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	92.3	-	195.5	36			#	0.5	
Oxidation Reduction Potential	mV	08/16/2011	N001	92.3	-	195.5	215			#		
pH	s.u.	08/16/2011	N001	92.3	-	195.5	7.38			#		
Potassium	mg/L	08/16/2011	N001	92.3	-	195.5	3.2			#	0.11	
Selenium	mg/L	08/16/2011	N001	92.3	-	195.5	0.0049			#	0.000032	
Silica	mg/L	08/16/2011	N001	92.3	-	195.5	12			#	0.0095	
Silicon	mg/L	08/16/2011	N001	92.3	-	195.5	5.7			#	0.0044	
Sodium	mg/L	08/16/2011	N001	92.3	-	195.5	38			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	92.3	-	195.5	1175			#		
Sulfate	mg/L	08/16/2011	N001	92.3	-	195.5	280			#	10	
Temperature	C	08/16/2011	N001	92.3	-	195.5	17.2			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	92.3	-	195.5	920		J	#	40	
Turbidity	NTU	08/16/2011	N001	92.3	-	195.5	1.4			#		
Uranium	mg/L	08/16/2011	N001	92.3	-	195.5	0.011			#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1118 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	89.93	-	195.5	200			#		
Ammonia Total as N	mg/L	08/16/2011	N001	89.93	-	195.5	1.1			#	0.1	
Arsenic	mg/L	08/16/2011	N001	89.93	-	195.5	0.0016			#	0.000015	
Calcium	mg/L	08/16/2011	N001	89.93	-	195.5	140			#	0.012	
Chloride	mg/L	08/16/2011	N001	89.93	-	195.5	19			#	2	
Iron	mg/L	08/16/2011	N001	89.93	-	195.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	89.93	-	195.5	56			#	0.013	
Manganese	mg/L	08/16/2011	N001	89.93	-	195.5	0.019			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	89.93	-	195.5	0.00016			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	89.93	-	195.5	36			#	0.2	
Oxidation Reduction Potential	mV	08/16/2011	N001	89.93	-	195.5	215			#		
pH	s.u.	08/16/2011	N001	89.93	-	195.5	7.23			#		
Potassium	mg/L	08/16/2011	N001	89.93	-	195.5	4.1			#	0.11	
Selenium	mg/L	08/16/2011	N001	89.93	-	195.5	0.0039			#	0.000032	
Silica	mg/L	08/16/2011	N001	89.93	-	195.5	12			#	0.0095	
Silicon	mg/L	08/16/2011	N001	89.93	-	195.5	5.8			#	0.0044	
Sodium	mg/L	08/16/2011	N001	89.93	-	195.5	36			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	89.93	-	195.5	1065			#		
Sulfate	mg/L	08/16/2011	N001	89.93	-	195.5	250			#	5	
Temperature	C	08/16/2011	N001	89.93	-	195.5	17.6			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	89.93	-	195.5	860		J	#	40	
Turbidity	NTU	08/16/2011	N001	89.93	-	195.5	1.14			#		
Uranium	mg/L	08/16/2011	N001	89.93	-	195.5	0.013			#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1119 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	95.33 - 245.33	226			#		
Ammonia Total as N	mg/L	08/16/2011	N001	95.33 - 245.33	9.3			#	0.5	
Arsenic	mg/L	08/16/2011	N001	95.33 - 245.33	0.0022			#	0.00015	
Calcium	mg/L	08/16/2011	N001	95.33 - 245.33	200			#	0.012	
Chloride	mg/L	08/16/2011	N001	95.33 - 245.33	54			#	4	
Iron	mg/L	08/16/2011	N001	95.33 - 245.33	0.0079	B	UJ	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	95.33 - 245.33	110			#	0.013	
Manganese	mg/L	08/16/2011	N001	95.33 - 245.33	3			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	95.33 - 245.33	0.0027			#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	95.33 - 245.33	37			#	0.5	
Oxidation Reduction Potential	mV	08/16/2011	N001	95.33 - 245.33	134			#		
pH	s.u.	08/16/2011	N001	95.33 - 245.33	6.89			#		
Potassium	mg/L	08/16/2011	N001	95.33 - 245.33	6.5			#	0.11	
Selenium	mg/L	08/16/2011	N001	95.33 - 245.33	0.011			#	0.00032	
Silica	mg/L	08/16/2011	N001	95.33 - 245.33	15			#	0.0095	
Silicon	mg/L	08/16/2011	N001	95.33 - 245.33	6.8			#	0.0044	
Sodium	mg/L	08/16/2011	N001	95.33 - 245.33	130			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	95.33 - 245.33	2265			#		
Sulfate	mg/L	08/16/2011	N001	95.33 - 245.33	900			#	10	
Temperature	C	08/16/2011	N001	95.33 - 245.33	17.1			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	95.33 - 245.33	1900		J	#	80	
Turbidity	NTU	08/16/2011	N001	95.33 - 245.33	2.07			#		
Uranium	mg/L	08/16/2011	N001	95.33 - 245.33	0.14			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1120 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	95.5 - 245.5	218			#		
Ammonia Total as N	mg/L	08/16/2011	N001	95.5 - 245.5	32			#	1	
Arsenic	mg/L	08/16/2011	N001	95.5 - 245.5	0.0015			#	0.00015	
Calcium	mg/L	08/16/2011	N001	95.5 - 245.5	500			#	0.12	
Chloride	mg/L	08/16/2011	N001	95.5 - 245.5	51			#	10	
Iron	mg/L	08/16/2011	N001	95.5 - 245.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	95.5 - 245.5	190			#	0.013	
Manganese	mg/L	08/16/2011	N001	95.5 - 245.5	52			#	0.0011	
Molybdenum	mg/L	08/16/2011	N001	95.5 - 245.5	0.037			#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	95.5 - 245.5	31			#	0.2	
Oxidation Reduction Potential	mV	08/16/2011	N001	95.5 - 245.5	160			#		
pH	s.u.	08/16/2011	N001	95.5 - 245.5	6.63			#		
Potassium	mg/L	08/16/2011	N001	95.5 - 245.5	15			#	0.11	
Selenium	mg/L	08/16/2011	N001	95.5 - 245.5	0.013			#	0.00032	
Silica	mg/L	08/16/2011	N001	95.5 - 245.5	21			#	0.0095	
Silicon	mg/L	08/16/2011	N001	95.5 - 245.5	9.9			#	0.0044	
Sodium	mg/L	08/16/2011	N001	95.5 - 245.5	210			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	95.5 - 245.5	3975			#		
Sulfate	mg/L	08/16/2011	N001	95.5 - 245.5	2300			#	25	
Temperature	C	08/16/2011	N001	95.5 - 245.5	16.8			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	95.5 - 245.5	4200		J	#	200	
Turbidity	NTU	08/16/2011	N001	95.5 - 245.5	4.54			#		
Uranium	mg/L	08/16/2011	N001	95.5 - 245.5	0.13			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1122 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	96.94 - 251.1	302			#		
Ammonia Total as N	mg/L	08/16/2011	N001	96.94 - 251.1	16			#	1	
Arsenic	mg/L	08/16/2011	N001	96.94 - 251.1	0.0019			#	0.00015	
Calcium	mg/L	08/16/2011	N001	96.94 - 251.1	410			#	0.012	
Chloride	mg/L	08/16/2011	N001	96.94 - 251.1	120			#	10	
Iron	mg/L	08/16/2011	N001	96.94 - 251.1	0.092	B		#	0.0049	
Magnesium	mg/L	08/16/2011	N001	96.94 - 251.1	180			#	0.013	
Manganese	mg/L	08/16/2011	N001	96.94 - 251.1	12			#	0.0011	
Molybdenum	mg/L	08/16/2011	N001	96.94 - 251.1	0.00076	B		#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	96.94 - 251.1	42			#	0.5	
Oxidation Reduction Potential	mV	08/16/2011	N001	96.94 - 251.1	104			#		
pH	s.u.	08/16/2011	N001	96.94 - 251.1	6.46			#		
Potassium	mg/L	08/16/2011	N001	96.94 - 251.1	17			#	0.11	
Selenium	mg/L	08/16/2011	N001	96.94 - 251.1	0.025			#	0.00032	
Silica	mg/L	08/16/2011	N001	96.94 - 251.1	18			#	0.0095	
Silicon	mg/L	08/16/2011	N001	96.94 - 251.1	8.5			#	0.0044	
Sodium	mg/L	08/16/2011	N001	96.94 - 251.1	260			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	96.94 - 251.1	3770			#		
Sulfate	mg/L	08/16/2011	N001	96.94 - 251.1	1900			#	25	
Temperature	C	08/16/2011	N001	96.94 - 251.1	17.6			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	96.94 - 251.1	3700		J	#	200	
Turbidity	NTU	08/16/2011	N001	96.94 - 251.1	8.14			#		
Uranium	mg/L	08/16/2011	N001	96.94 - 251.1	0.2			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1123 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	91	-	245	358			#		
Ammonia Total as N	mg/L	08/16/2011	N001	91	-	245	23			#	1	
Arsenic	mg/L	08/16/2011	N001	91	-	245	0.0026			#	0.00015	
Calcium	mg/L	08/16/2011	N001	91	-	245	440			#	0.012	
Chloride	mg/L	08/16/2011	N001	91	-	245	120			#	10	
Iron	mg/L	08/16/2011	N001	91	-	245	0.13			#	0.0049	
Magnesium	mg/L	08/16/2011	N001	91	-	245	240			#	0.013	
Manganese	mg/L	08/16/2011	N001	91	-	245	0.41			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	91	-	245	0.00032	U		#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	91	-	245	16			#	0.2	
Oxidation Reduction Potential	mV	08/16/2011	N001	91	-	245	115			#		
pH	s.u.	08/16/2011	N001	91	-	245	6.81			#		
Potassium	mg/L	08/16/2011	N001	91	-	245	20			#	0.11	
Selenium	mg/L	08/16/2011	N001	91	-	245	0.014			#	0.00032	
Silica	mg/L	08/16/2011	N001	91	-	245	17			#	0.0095	
Silicon	mg/L	08/16/2011	N001	91	-	245	8			#	0.0044	
Sodium	mg/L	08/16/2011	N001	91	-	245	270			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	91	-	245	4150			#		
Sulfate	mg/L	08/16/2011	N001	91	-	245	2200			#	25	
Temperature	C	08/16/2011	N001	91	-	245	17.6			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	91	-	245	4100		J	#	200	
Turbidity	NTU	08/16/2011	N001	91	-	245	3.19			#		
Uranium	mg/L	08/16/2011	N001	91	-	245	0.27			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1124 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	87.9 - 245.5	471			#		
Ammonia Total as N	mg/L	08/16/2011	N001	87.9 - 245.5	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	87.9 - 245.5	0.002			#	0.00015	
Calcium	mg/L	08/16/2011	N001	87.9 - 245.5	780			#	0.12	
Chloride	mg/L	08/16/2011	N001	87.9 - 245.5	130			#	10	
Iron	mg/L	08/16/2011	N001	87.9 - 245.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	87.9 - 245.5	120			#	0.013	
Manganese	mg/L	08/16/2011	N001	87.9 - 245.5	0.00016	B	UJ	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	87.9 - 245.5	0.00032	U		#	0.00032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	87.9 - 245.5	110			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	87.9 - 245.5	105			#		
pH	s.u.	08/16/2011	N001	87.9 - 245.5	6.8			#		
Potassium	mg/L	08/16/2011	N001	87.9 - 245.5	9.1			#	0.11	
Selenium	mg/L	08/16/2011	N001	87.9 - 245.5	0.033			#	0.00032	
Silica	mg/L	08/16/2011	N001	87.9 - 245.5	16			#	0.0095	
Silicon	mg/L	08/16/2011	N001	87.9 - 245.5	7.3			#	0.0044	
Sodium	mg/L	08/16/2011	N001	87.9 - 245.5	340			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	87.9 - 245.5	5690			#		
Sulfate	mg/L	08/16/2011	N001	87.9 - 245.5	2100			#	25	
Temperature	C	08/16/2011	N001	87.9 - 245.5	17.8			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	87.9 - 245.5	4800		J	#	200	
Turbidity	NTU	08/16/2011	N001	87.9 - 245.5	2.68			#		
Uranium	mg/L	08/16/2011	N001	87.9 - 245.5	0.33			#	0.000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1125 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	95.5 - 245.5	130			#		
Ammonia Total as N	mg/L	08/16/2011	N001	95.5 - 245.5	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	95.5 - 245.5	0.0021			#	0.000015	
Calcium	mg/L	08/16/2011	N001	95.5 - 245.5	56			#	0.012	
Chloride	mg/L	08/16/2011	N001	95.5 - 245.5	14			#	0.4	
Iron	mg/L	08/16/2011	N001	95.5 - 245.5	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	95.5 - 245.5	11			#	0.013	
Manganese	mg/L	08/16/2011	N001	95.5 - 245.5	0.0026	B	U	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	95.5 - 245.5	0.00032			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	95.5 - 245.5	8.3			#	0.05	
Oxidation Reduction Potential	mV	08/16/2011	N001	95.5 - 245.5	10			#		
pH	s.u.	08/16/2011	N001	95.5 - 245.5	8.16			#		
Potassium	mg/L	08/16/2011	N001	95.5 - 245.5	1.4			#	0.11	
Selenium	mg/L	08/16/2011	N001	95.5 - 245.5	0.0023			#	0.000032	
Silica	mg/L	08/16/2011	N001	95.5 - 245.5	12			#	0.0095	
Silicon	mg/L	08/16/2011	N001	95.5 - 245.5	5.6			#	0.0044	
Sodium	mg/L	08/16/2011	N001	95.5 - 245.5	15			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	95.5 - 245.5	540			#		
Sulfate	mg/L	08/16/2011	N001	95.5 - 245.5	61			#	1	
Temperature	C	08/16/2011	N001	95.5 - 245.5	27			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	95.5 - 245.5	340		J	#	20	
Turbidity	NTU	08/16/2011	N001	95.5 - 245.5	5.62			#		
Uranium	mg/L	08/16/2011	N001	95.5 - 245.5	0.0073			#	0.0000029	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1129 WELL

Parameter	Units	Sample Date	ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	68.2 - 98.2	338			#		
Ammonia Total as N	mg/L	08/16/2011	N001	68.2 - 98.2	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	68.2 - 98.2	0.0019			#	0.000074	
Calcium	mg/L	08/16/2011	N001	68.2 - 98.2	520			#	0.12	
Chloride	mg/L	08/16/2011	N001	68.2 - 98.2	64			#	10	
Iron	mg/L	08/16/2011	N001	68.2 - 98.2	0.021	B	UJ	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	68.2 - 98.2	120			#	0.013	
Manganese	mg/L	08/16/2011	N001	68.2 - 98.2	0.0049	B	U	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	68.2 - 98.2	1.1			#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	68.2 - 98.2	140			#	1	
Oxidation Reduction Potential	mV	08/16/2011	N001	68.2 - 98.2	220			#		
pH	s.u.	08/16/2011	N001	68.2 - 98.2	7			#		
Potassium	mg/L	08/16/2011	N001	68.2 - 98.2	6.8			#	0.11	
Selenium	mg/L	08/16/2011	N001	68.2 - 98.2	0.082			#	0.0016	
Silica	mg/L	08/16/2011	N001	68.2 - 98.2	15			#	0.0095	
Silicon	mg/L	08/16/2011	N001	68.2 - 98.2	7.2			#	0.0044	
Sodium	mg/L	08/16/2011	N001	68.2 - 98.2	140			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	68.2 - 98.2	3290			#		
Sulfate	mg/L	08/16/2011	N001	68.2 - 98.2	1100			#	25	
Temperature	C	08/16/2011	N001	68.2 - 98.2	17.7			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	68.2 - 98.2	3000		J	#	80	
Turbidity	NTU	08/16/2011	N001	68.2 - 98.2	2.37			#		
Uranium	mg/L	08/16/2011	N001	68.2 - 98.2	1			#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1130 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	71.7	-	121.7	746			#		
Ammonia Total as N	mg/L	08/16/2011	N001	71.7	-	121.7	73			#	5	
Arsenic	mg/L	08/16/2011	N001	71.7	-	121.7	0.0016			#	0.000074	
Calcium	mg/L	08/16/2011	N001	71.7	-	121.7	700			#	0.12	
Chloride	mg/L	08/16/2011	N001	71.7	-	121.7	180			#	20	
Iron	mg/L	08/16/2011	N001	71.7	-	121.7	0.0052	B	UJ	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	71.7	-	121.7	420			#	0.013	
Manganese	mg/L	08/16/2011	N001	71.7	-	121.7	0.91			#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	71.7	-	121.7	0.051			#	0.0016	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	71.7	-	121.7	280			#	2	
Oxidation Reduction Potential	mV	08/16/2011	N001	71.7	-	121.7	260			#		
pH	s.u.	08/16/2011	N001	71.7	-	121.7	6.45			#		
Potassium	mg/L	08/16/2011	N001	71.7	-	121.7	32			#	0.11	
Selenium	mg/L	08/16/2011	N001	71.7	-	121.7	0.046			#	0.0016	
Silica	mg/L	08/16/2011	N001	71.7	-	121.7	15			#	0.0095	
Silicon	mg/L	08/16/2011	N001	71.7	-	121.7	6.9			#	0.0044	
Sodium	mg/L	08/16/2011	N001	71.7	-	121.7	440			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	71.7	-	121.7	6910			#		
Sulfate	mg/L	08/16/2011	N001	71.7	-	121.7	2600			#	50	
Temperature	C	08/16/2011	N001	71.7	-	121.7	18.5			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	71.7	-	121.7	6400		J	#	200	
Turbidity	NTU	08/16/2011	N001	71.7	-	121.7	1.65			#		
Uranium	mg/L	08/16/2011	N001	71.7	-	121.7	0.5			#	0.00015	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1132 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	49.7 - 99.7	706			#		
Ammonia Total as N	mg/L	08/16/2011	N001	49.7 - 99.7	0.1	U		#	0.1	
Ammonia Total as N	mg/L	08/16/2011	N002	49.7 - 99.7	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	49.7 - 99.7	0.0019			#	0.000074	
Arsenic	mg/L	08/16/2011	N002	49.7 - 99.7	0.0019			#	0.000074	
Calcium	mg/L	08/16/2011	N001	49.7 - 99.7	1100			#	0.12	
Calcium	mg/L	08/16/2011	N002	49.7 - 99.7	920			#	0.12	
Chloride	mg/L	08/16/2011	N001	49.7 - 99.7	140			#	20	
Chloride	mg/L	08/16/2011	N002	49.7 - 99.7	150			#	10	
Iron	mg/L	08/16/2011	N001	49.7 - 99.7	0.0049	U	J	#	0.0049	
Iron	mg/L	08/16/2011	N002	49.7 - 99.7	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	49.7 - 99.7	220			#	0.013	
Magnesium	mg/L	08/16/2011	N002	49.7 - 99.7	220			#	0.013	
Manganese	mg/L	08/16/2011	N001	49.7 - 99.7	0.0073		U	#	0.00011	
Manganese	mg/L	08/16/2011	N002	49.7 - 99.7	0.0071		U	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	49.7 - 99.7	2.6			#	0.0064	
Molybdenum	mg/L	08/16/2011	N002	49.7 - 99.7	2.8			#	0.0064	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	49.7 - 99.7	290			#	2	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N002	49.7 - 99.7	290			#	2	
Oxidation Reduction Potential	mV	08/16/2011	N001	49.7 - 99.7	230			#		
pH	s.u.	08/16/2011	N001	49.7 - 99.7	6.6			#		
Potassium	mg/L	08/16/2011	N001	49.7 - 99.7	13			#	0.11	
Potassium	mg/L	08/16/2011	N002	49.7 - 99.7	13			#	0.11	
Selenium	mg/L	08/16/2011	N001	49.7 - 99.7	0.22			#	0.0065	
Selenium	mg/L	08/16/2011	N002	49.7 - 99.7	0.21			#	0.0065	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1132 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	QA	Detection Limit	Uncertainty
Silica	mg/L	08/16/2011	N001	49.7	-	99.7	15			#	0.0095	
Silica	mg/L	08/16/2011	N002	49.7	-	99.7	15			#	0.0095	
Silicon	mg/L	08/16/2011	N001	49.7	-	99.7	7.1			#	0.0044	
Silicon	mg/L	08/16/2011	N002	49.7	-	99.7	7.2			#	0.0044	
Sodium	mg/L	08/16/2011	N001	49.7	-	99.7	470			#	0.066	
Sodium	mg/L	08/16/2011	N002	49.7	-	99.7	410			#	0.066	
Specific Conductance	umhos /cm	08/16/2011	N001	49.7	-	99.7	5800			#		
Sulfate	mg/L	08/16/2011	N001	49.7	-	99.7	2000			#	50	
Sulfate	mg/L	08/16/2011	N002	49.7	-	99.7	2200			#	25	
Temperature	C	08/16/2011	N001	49.7	-	99.7	17.8			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	49.7	-	99.7	5900		J	#	200	
Total Dissolved Solids	mg/L	08/16/2011	N002	49.7	-	99.7	6000		J	#	200	
Turbidity	NTU	08/16/2011	N001	49.7	-	99.7	1.62			#		
Uranium	mg/L	08/16/2011	N001	49.7	-	99.7	3.4			#	0.00058	
Uranium	mg/L	08/16/2011	N002	49.7	-	99.7	3.5			#	0.00058	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1133 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/16/2011	N001	59.7 - 99.7	190			#		
Ammonia Total as N	mg/L	08/16/2011	N001	59.7 - 99.7	0.1	U		#	0.1	
Arsenic	mg/L	08/16/2011	N001	59.7 - 99.7	0.0016			#	0.000074	
Arsenic	mg/L	08/16/2011	N002	59.7 - 99.7	0.0016			#	0.000074	
Calcium	mg/L	08/16/2011	N001	59.7 - 99.7	130			#	0.012	
Calcium	mg/L	08/16/2011	N002	59.7 - 99.7	130			#	0.012	
Chloride	mg/L	08/16/2011	N001	59.7 - 99.7	23			#	2	
Chloride	mg/L	08/16/2011	N002	59.7 - 99.7	23			#	2	
Iron	mg/L	08/16/2011	N001	59.7 - 99.7	0.0049	U	J	#	0.0049	
Iron	mg/L	08/16/2011	N002	59.7 - 99.7	0.0049	U	J	#	0.0049	
Magnesium	mg/L	08/16/2011	N001	59.7 - 99.7	23			#	0.013	
Magnesium	mg/L	08/16/2011	N002	59.7 - 99.7	23			#	0.013	
Manganese	mg/L	08/16/2011	N001	59.7 - 99.7	0.00085	B	U	#	0.00011	
Manganese	mg/L	08/16/2011	N002	59.7 - 99.7	0.00056	B	U	#	0.00011	
Molybdenum	mg/L	08/16/2011	N001	59.7 - 99.7	0.012			#	0.00016	
Molybdenum	mg/L	08/16/2011	N002	59.7 - 99.7	0.012			#	0.00016	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N001	59.7 - 99.7	30			#	0.2	
Nitrate + Nitrite as Nitrogen	mg/L	08/16/2011	N002	59.7 - 99.7	31			#	0.2	
Oxidation Reduction Potential	mV	08/16/2011	N001	59.7 - 99.7	185			#		
pH	s.u.	08/16/2011	N001	59.7 - 99.7	7.48			#		
Potassium	mg/L	08/16/2011	N001	59.7 - 99.7	2.2			#	0.11	
Potassium	mg/L	08/16/2011	N002	59.7 - 99.7	2.1			#	0.11	
Selenium	mg/L	08/16/2011	N001	59.7 - 99.7	0.015			#	0.00016	
Selenium	mg/L	08/16/2011	N002	59.7 - 99.7	0.015			#	0.00016	
Silica	mg/L	08/16/2011	N001	59.7 - 99.7	13			#	0.0095	
Silicon	mg/L	08/16/2011	N001	59.7 - 99.7	6.1			#	0.0044	

Groundwater Quality Data by Location (USEE100) FOR SITE TUB01, Tuba City Disposal Site

REPORT DATE: 11/1/2011

Location: 1133 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Sodium	mg/L	08/16/2011	N001	59.7	-	99.7	20			#	0.0066	
Sodium	mg/L	08/16/2011	N002	59.7	-	99.7	20			#	0.0066	
Specific Conductance	umhos /cm	08/16/2011	N001	59.7	-	99.7	915			#		
Sulfate	mg/L	08/16/2011	N001	59.7	-	99.7	150			#	5	
Sulfate	mg/L	08/16/2011	N002	59.7	-	99.7	140			#	5	
Temperature	C	08/16/2011	N001	59.7	-	99.7	17.9			#		
Total Dissolved Solids	mg/L	08/16/2011	N001	59.7	-	99.7	630		J	#	40	
Total Dissolved Solids	mg/L	08/16/2011	N002	59.7	-	99.7	640		J	#	40	
Turbidity	NTU	08/16/2011	N001	59.7	-	99.7	1.81			#		
Uranium	mg/L	08/16/2011	N001	59.7	-	99.7	0.064			#	0.000015	
Uranium	mg/L	08/16/2011	N002	59.7	-	99.7	0.064			#	0.000015	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

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Surface Water Quality Data

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Surface Water Quality Data by Location (USEE102) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/1/2011
Location: 0759 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Arsenic	mg/L	08/17/2011	0001	0.0007			#	0.000015	
Calcium	mg/L	08/17/2011	0001	220			#	0.012	
Chloride	mg/L	08/17/2011	0001	14			#	4	
Iron	mg/L	08/17/2011	0001	0.03	B		#	0.0049	
Magnesium	mg/L	08/17/2011	0001	53			#	0.013	
Manganese	mg/L	08/17/2011	0001	0.0047	B	U	#	0.00011	
Molybdenum	mg/L	08/17/2011	0001	0.0027			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	0001	1.3			#	0.01	
Oxidation Reduction Potential	mV	08/17/2011	N001	66.4		R	#		
pH	s.u.	08/17/2011	N001	6.22			#		
Potassium	mg/L	08/17/2011	0001	12			#	0.11	
Selenium	mg/L	08/17/2011	0001	0.0011			#	0.000032	
Sodium	mg/L	08/17/2011	0001	75			#	0.0066	
Specific Conductance	umhos/cm	08/17/2011	N001	2758			#		
Sulfate	mg/L	08/17/2011	0001	770			#	10	
Temperature	C	08/17/2011	N001	24.04			#		
Total Dissolved Solids	mg/L	08/17/2011	0001	1300		J	#	40	
Uranium	mg/L	08/17/2011	0001	0.0044			#	0.0000029	

Surface Water Quality Data by Location (USEE102) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/1/2011
Location: 0778 SURFACE LOCATION

Parameter	Units	Sample Date	ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	0001	162			#		
Arsenic	mg/L	08/17/2011	0001	0.00081			#	0.000015	
Calcium	mg/L	08/17/2011	0001	210			#	0.012	
Chloride	mg/L	08/17/2011	0001	13			#	4	
Iron	mg/L	08/17/2011	0001	0.0065	B	J	#	0.0049	
Magnesium	mg/L	08/17/2011	0001	51			#	0.013	
Manganese	mg/L	08/17/2011	0001	0.0017	B	U	#	0.00011	
Molybdenum	mg/L	08/17/2011	0001	0.0028			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	0001	1.7			#	0.01	
Oxidation Reduction Potential	mV	08/17/2011	N001	-79.8		R	#		
pH	s.u.	08/17/2011	N001	7.8			#		
Potassium	mg/L	08/17/2011	0001	12			#	0.11	
Selenium	mg/L	08/17/2011	0001	0.0011			#	0.000032	
Sodium	mg/L	08/17/2011	0001	73			#	0.0066	
Specific Conductance	umhos/cm	08/17/2011	N001	1498			#		
Sulfate	mg/L	08/17/2011	0001	720			#	10	
Temperature	C	08/17/2011	N001	27.51			#		
Total Dissolved Solids	mg/L	08/17/2011	0001	1300		J	#	40	
Turbidity	NTU	08/17/2011	N001	1000			#		
Uranium	mg/L	08/17/2011	0001	0.0048			#	0.0000029	

Surface Water Quality Data by Location (USEE102) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/1/2011
Location: 0965 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	0001	135			#		
Arsenic	mg/L	08/17/2011	0001	0.00083			#	0.000015	
Calcium	mg/L	08/17/2011	0001	200			#	0.012	
Chloride	mg/L	08/17/2011	0001	13			#	4	
Iron	mg/L	08/17/2011	0001	0.023	B	J	#	0.0049	
Magnesium	mg/L	08/17/2011	0001	49			#	0.013	
Manganese	mg/L	08/17/2011	0001	0.19			#	0.00011	
Molybdenum	mg/L	08/17/2011	0001	0.0026			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	0001	0.95			#	0.01	
Oxidation Reduction Potential	mV	08/17/2011	N001	-43.4		R	#		
pH	s.u.	08/17/2011	N001	7.51			#		
Potassium	mg/L	08/17/2011	0001	11			#	0.11	
Selenium	mg/L	08/17/2011	0001	0.0009			#	0.000032	
Sodium	mg/L	08/17/2011	0001	71			#	0.0066	
Specific Conductance	umhos/cm	08/17/2011	N001	1469			#		
Sulfate	mg/L	08/17/2011	0001	650			#	10	
Temperature	C	08/17/2011	N001	28.88			#		
Total Dissolved Solids	mg/L	08/17/2011	0001	1200		J	#	40	
Turbidity	NTU	08/17/2011	N001	1000			#		
Uranium	mg/L	08/17/2011	0001	0.0043			#	0.0000029	

Surface Water Quality Data by Location (USEE102) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/1/2011
Location: 1569 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	N001	0			#		
Arsenic	mg/L	08/17/2011	N001	0.86			#	0.003	
Calcium	mg/L	08/17/2011	N001	1000			#	0.6	
Chloride	mg/L	08/17/2011	N001	84000			#	1000	
Iron	mg/L	08/17/2011	N001	13			#	0.25	
Magnesium	mg/L	08/17/2011	N001	7000			#	0.65	
Manganese	mg/L	08/17/2011	N001	130			#	0.0057	
Molybdenum	mg/L	08/17/2011	N001	0.95			#	0.0064	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	4700			#	50	
Oxidation Reduction Potential	mV	08/17/2011	N001	510			#		
pH	s.u.	08/17/2011	N001	1.61			#		
Potassium	mg/L	08/17/2011	N001	690			#	5.4	
Selenium	mg/L	08/17/2011	N001	0.86			#	0.0065	
Sodium	mg/L	08/17/2011	N001	41000			#	6.6	
Specific Conductance	umhos/cm	08/17/2011	N001	151800			#		
Sulfate	mg/L	08/17/2011	N001	15000			#	2500	
Temperature	C	08/17/2011	N001	31.2			#		
Total Dissolved Solids	mg/L	08/17/2011	N001	190000		J	#	2000	
Turbidity	NTU	08/17/2011	N001	3.24			#		
Uranium	mg/L	08/17/2011	N001	3.2			#	0.00058	

Surface Water Quality Data by Location (USEE102) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/1/2011
Location: 1570 SURFACE LOCATION

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	N001	0			#		
Arsenic	mg/L	08/17/2011	N001	0.89			#	0.003	
Calcium	mg/L	08/17/2011	N001	1100			#	0.6	
Chloride	mg/L	08/17/2011	N001	84000			#	1000	
Iron	mg/L	08/17/2011	N001	14			#	0.25	
Magnesium	mg/L	08/17/2011	N001	7100			#	0.65	
Manganese	mg/L	08/17/2011	N001	130			#	0.0057	
Molybdenum	mg/L	08/17/2011	N001	0.96			#	0.0064	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	4800			#	50	
Oxidation Reduction Potential	mV	08/17/2011	N001	560			#		
pH	s.u.	08/17/2011	N001	1.63			#		
Potassium	mg/L	08/17/2011	N001	700			#	5.4	
Selenium	mg/L	08/17/2011	N001	0.89			#	0.0065	
Sodium	mg/L	08/17/2011	N001	43000			#	6.6	
Specific Conductance	umhos/cm	08/17/2011	N001	152100			#		
Sulfate	mg/L	08/17/2011	N001	15000			#	2500	
Temperature	C	08/17/2011	N001	30.6			#		
Total Dissolved Solids	mg/L	08/17/2011	N001	190000		J	#	2000	
Turbidity	NTU	08/17/2011	N001	4.34			#		
Uranium	mg/L	08/17/2011	N001	3.2			#	0.00058	

Surface Water Quality Data by Location (USEE102) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/1/2011
Location: 1571 SURFACE LOCATION Jimmy Spring West

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (as $CaCO_3$)	mg/L	08/17/2011	N001	238			#		
Arsenic	mg/L	08/17/2011	N001	0.0022			#	0.000015	
Calcium	mg/L	08/17/2011	N001	35			#	0.012	
Chloride	mg/L	08/17/2011	N001	40			#	1	
Iron	mg/L	08/17/2011	N001	0.063	B		#	0.0049	
Magnesium	mg/L	08/17/2011	N001	11			#	0.013	
Manganese	mg/L	08/17/2011	N001	0.0056		U	#	0.00011	
Molybdenum	mg/L	08/17/2011	N001	0.0031			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	1.9			#	0.01	
Oxidation Reduction Potential	mV	08/17/2011	N001	-102.2		R	#		
pH	s.u.	08/17/2011	N001	8.54			#		
Potassium	mg/L	08/17/2011	N001	4			#	0.11	
Selenium	mg/L	08/17/2011	N001	0.0043			#	0.000032	
Sodium	mg/L	08/17/2011	N001	73			#	0.0066	
Specific Conductance	umhos/cm	08/17/2011	N001	673			#		
Sulfate	mg/L	08/17/2011	N001	87			#	2.5	
Temperature	C	08/17/2011	N001	26.64			#		
Total Dissolved Solids	mg/L	08/17/2011	N001	420		J	#	40	
Turbidity	NTU	08/17/2011	N001	8.71			#		
Uranium	mg/L	08/17/2011	N001	0.0035			#	0.0000029	

Surface Water Quality Data by Location (USEE102) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/1/2011
Location: 1573 SURFACE LOCATION Shonto Well West Pipe

Parameter	Units	Sample Date	Sample ID	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Arsenic	mg/L	08/17/2011	N001	0.0047			#	0.000015	
Calcium	mg/L	08/17/2011	N001	16			#	0.012	
Chloride	mg/L	08/17/2011	N001	30			#	0.4	
Iron	mg/L	08/17/2011	N001	0.1			#	0.0049	
Magnesium	mg/L	08/17/2011	N001	4			#	0.013	
Manganese	mg/L	08/17/2011	N001	0.0054		U	#	0.00011	
Molybdenum	mg/L	08/17/2011	N001	0.0013			#	0.000032	
Nitrate + Nitrite as Nitrogen	mg/L	08/17/2011	N001	0.01	U		#	0.01	
Oxidation Reduction Potential	mV	08/17/2011	N001	-13.7		R	#		
pH	s.u.	08/17/2011	N001	8.43			#		
Potassium	mg/L	08/17/2011	N001	0.35	B	J	#	0.11	
Selenium	mg/L	08/17/2011	N001	0.0032			#	0.000032	
Sodium	mg/L	08/17/2011	N001	73			#	0.0066	
Specific Conductance	umhos/cm	08/17/2011	N001	533			#		
Sulfate	mg/L	08/17/2011	N001	30			#	1	
Temperature	C	08/17/2011	N001	27.3			#		
Total Dissolved Solids	mg/L	08/17/2011	N001	290		J	#	20	
Turbidity	NTU	08/17/2011	N001	4.21			#		
Uranium	mg/L	08/17/2011	N001	0.0058			#	0.0000029	

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

QA QUALIFIER:

#	Validated according to quality assurance guidelines.

Equipment Blank Data

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BLANKS REPORT
LAB: PARAGON/ALS LABORATORY GROUP (Fort Collins, CO)
RIN: 11084014
Report Date: 11/2/2011

Parameter	Site Code	Location ID	Sample Date	ID	Units	Result	Qualifiers Lab	Qualifiers Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	TUB01	0999	08/17/2011	N001	mg/L	0.12			0.1		E
Arsenic	TUB01	0999	08/17/2011	N001	mg/L	0.000015	U		0.000015		E
Calcium	TUB01	0999	08/17/2011	N001	mg/L	0.21	B		0.012		E
Chloride	TUB01	0999	08/17/2011	N001	mg/L	0.2	U		0.2		E
Iron	TUB01	0999	08/17/2011	N001	mg/L	0.0049	U	J	0.0049		E
Magnesium	TUB01	0999	08/17/2011	N001	mg/L	1.1	E		0.013		E
Manganese	TUB01	0999	08/17/2011	N001	mg/L	0.021	E		0.00011		E
Molybdenum	TUB01	0999	08/17/2011	N001	mg/L	0.000032	U		0.000032		E
Nitrate + Nitrite as Nitrogen	TUB01	0999	08/17/2011	N001	mg/L	0.01	U		0.01		E
Potassium	TUB01	0999	08/17/2011	N001	mg/L	0.11	U	J	0.11		E
Selenium	TUB01	0999	08/17/2011	N001	mg/L	0.000032	U		0.000032		E
Silica	TUB01	0999	08/17/2011	N001	mg/L	0.0095	U		0.0095		E
Silicon	TUB01	0999	08/17/2011	N001	mg/L	0.0044	U		0.0044		E
Sodium	TUB01	0999	08/17/2011	N001	mg/L	4.3	EN		0.0066		E
Sulfate	TUB01	0999	08/17/2011	N001	mg/L	0.61			0.5		E
Total Dissolved Solids	TUB01	0999	08/17/2011	N001	mg/L	20	U	J	20		E
Uranium	TUB01	0999	08/17/2011	N001	mg/L	0.000012			0.0000029		E

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

SAMPLE TYPES:

E	Equipment Blank.

Static Water Level Data

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STATIC WATER LEVELS (USEE700) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/2/2011

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
0251		5061.25	08/15/2011	17:07:35	68.09	4993.16	
0252		5061.3	08/15/2011	17:35:00	71	4990.3	
0258		5055.56	08/16/2011	13:15:21	99.72	4955.84	
0261		5069.69	08/16/2011	14:00:11	129.33	4940.36	
0262		5061.99	08/16/2011	15:00:05	51.18	5010.81	
0263		5063.1	08/15/2011	17:56:55	58.22	5004.88	
0264		5062.19	08/15/2011	18:17:25	84.52	4977.67	
0265		5053.88	08/16/2011	16:48:11	80.29	4973.59	
0266		5053.32	08/16/2011	17:20:54	94.75	4958.57	
0267		5053.4	08/16/2011	15:56:33	62.45	4990.95	
0268		5067.24	08/17/2011	14:00:23	93.02	4974.22	
0271		5046.72	08/16/2011	15:17:52	54.94	4991.78	
0272		5064.24	08/16/2011	18:15:00	60.48	5003.76	
0273		5064.74	08/17/2011	12:00:06	58.18	5006.56	
0274		5064.42	08/17/2011	12:55:37	63.39	5001.03	
0275		5062.64	08/17/2011	14:30:59	74.3	4988.34	
0276		5067.55	08/17/2011	13:35:59	65.73	5001.82	
0277		4982.35	08/17/2011	09:15:39	36.68	4945.67	
0278		4956.09	08/16/2011	09:06:48	23.44	4932.65	
0279		4951.04	08/16/2011	09:49:14	25.86	4925.18	
0280		4951.52	08/16/2011	10:34:30	27.65	4923.87	
0281		5051	08/16/2011	16:16:44	70.19	4980.81	
0282		5060.04	08/16/2011	17:49:12	83.45	4976.59	
0283		5057.97	08/16/2011	17:52:00			D
0284		5098.72	08/16/2011	09:20:00	29.36	5069.36	
0285		5096.47	08/16/2011	09:17:00			D
0286		5063.99	08/17/2011	10:40:30	59.5	5004.49	

STATIC WATER LEVELS (USEE700) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/2/2011

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
0287		5065.65	08/17/2011	11:40:20	51.42	5014.23	
0288		5072.54	08/17/2011	10:15:15	55.68	5016.86	
0289		5070.82	08/17/2011	09:55:54	55.5	5015.32	
0290		5068.91	08/16/2011	09:00:54	88.62	4980.29	
0683		5070.64	08/16/2011	09:30:44	102.59	4968.05	
0684		5070.05	08/16/2011	08:35:43	68.92	5001.13	
0685		5072.44	08/17/2011	11:20:47	48.42	5024.02	
0686		5107.97	08/17/2011	15:30:39	65.26	5042.71	
0687		5109.82	08/17/2011	10:05:27	55.31	5054.51	
0688		5106.98	08/17/2011	10:40:24	61.09	5045.89	
0689		4981.63	08/16/2011	08:43:20	39.88	4941.75	
0690		4950.87	08/16/2011	10:05:48	25.51	4925.36	
0691		4979.41	08/16/2011	10:57:27	42.62	4936.79	
0692		4953.31	08/16/2011	10:23:19	26.81	4926.5	
0695		4976.83	08/16/2011	11:17:52	50.83	4926	
0901	U	5105.46	08/17/2011	15:08:23	48.1	5057.36	
0902	N	4737.42	08/16/2011	18:42:00	30.49	4706.93	
0903	D	4983.33	08/17/2011	09:46:47	33.69	4949.64	
0904	N	4904.11	08/16/2011	13:23:06	23	4881.11	
0906	O	5062.1	08/17/2011	12:25:35	50.68	5011.42	
0908	D	5058.14	08/15/2011	16:38:25	59.55	4998.59	
0909	D	5057.17	08/16/2011	15:28:00			B
0910	U	5106.7	08/17/2011	14:17:11	51.02	5055.68	
0911	U	5106.96	08/17/2011	15:38:02	47.44	5059.52	
0912	D	5059.97	08/16/2011	18:05:34	61.09	4998.88	
0913	D	5060.16	08/16/2011	17:45:33	67.38	4992.78	
0914	D	5070.1	08/16/2011	10:00:38	113.21	4956.89	

STATIC WATER LEVELS (USEE700) FOR SITE TUB01, Tuba City Disposal Site
REPORT DATE: 11/2/2011

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
0915	D	5070.84	08/16/2011	11:35:18	110.41	4960.43	
0916	D	5070	08/16/2011	11:05:52	119.35	4950.65	
0917	D	5048.02	08/16/2011	12:45:00	69.51	4978.51	
0918	D	5049.63	08/16/2011	18:40:00			D
0919	D	5048.56	08/16/2011	18:41:00	146.11	4902.45	
0920	D	4982.97	08/17/2011	09:01:59	34.19	4948.78	
0921	D	4979.08	08/17/2011	10:20:16	39.65	4939.43	
0929	D	5060.82	08/16/2011	14:48:05	61.82	4999	
0930	D	4954.96	08/16/2011	09:28:05	21.55	4933.41	
0932	D	5057.32	08/16/2011	16:35:41	101.11	4956.21	
0934	D	5059.73	08/16/2011	14:28:27	76.52	4983.21	
0940	D	5064.77	08/17/2011	10:55:57	59.7	5005.07	
0941	D	5065.97	08/17/2011	11:20:27	48.1	5017.87	
0943	U	5098.05	08/17/2011	11:55:52	52.03	5046.02	
0945	U	5140.49	08/17/2011	15:40:53	89.56	5050.93	
0946	C	5100.5	08/16/2011	17:45:55	50	5050.5	
0947	U	5097.01	08/15/2011	18:05:04	68.07	5028.94	
0948	U	5117.8	08/17/2011	09:26:00	135.37	4982.43	
1003		4976.58	08/17/2011	11:17:59	40	4936.58	
1004		4961.55	08/17/2011	11:43:54	25.99	4935.56	
1005		4947.83	08/16/2011	09:30:00	22.51	4925.32	
1006		4947.08	08/17/2011	12:10:19	17.32	4929.76	
1007		4958.56	08/17/2011	12:38:50	22.41	4936.15	
1008		4980.52	08/16/2011	08:25:00	38.24	4942.28	

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

WATER LEVEL FLAGS: D Dry F FLOWING

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Time-Concentration Graphs

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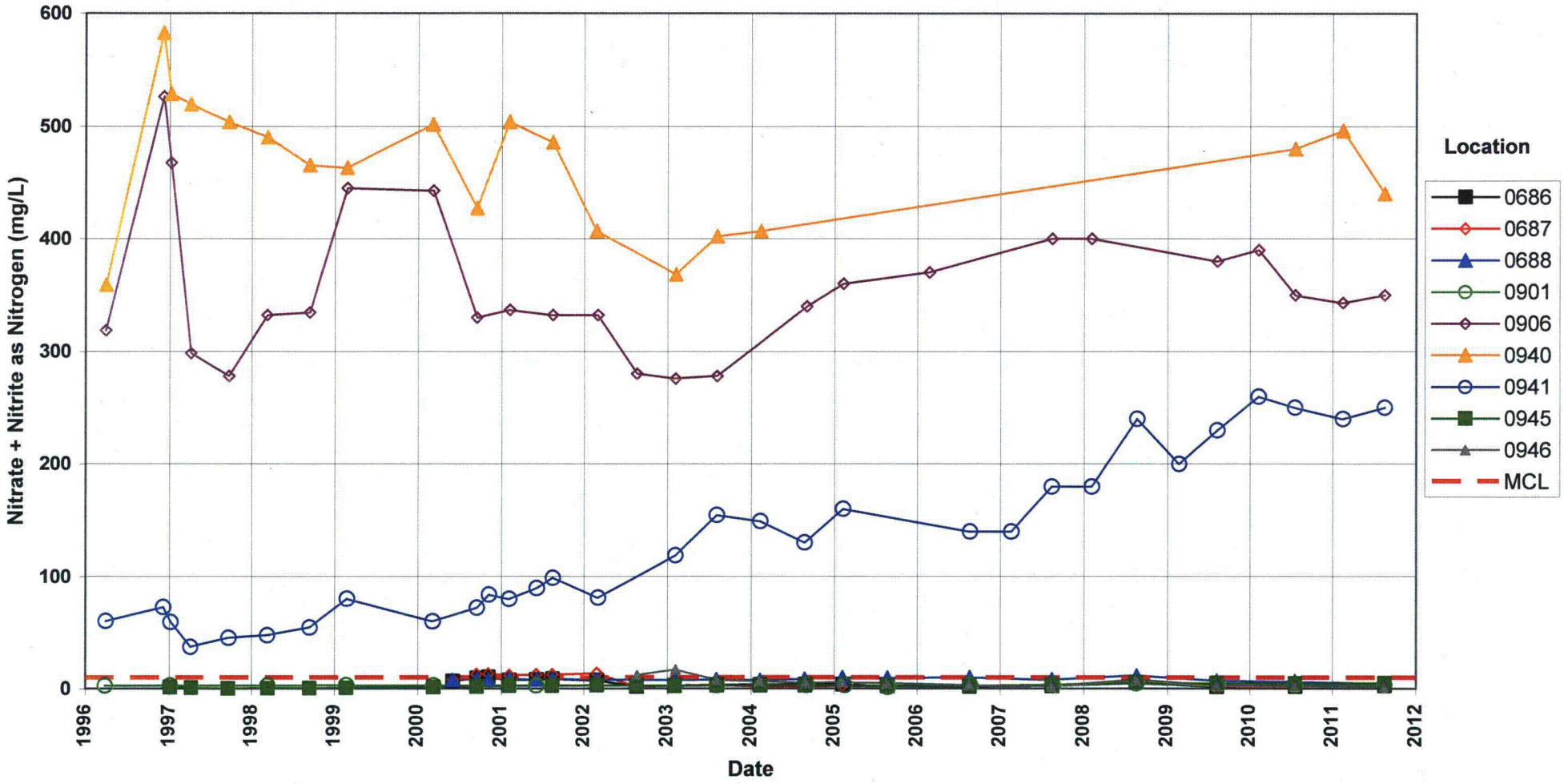
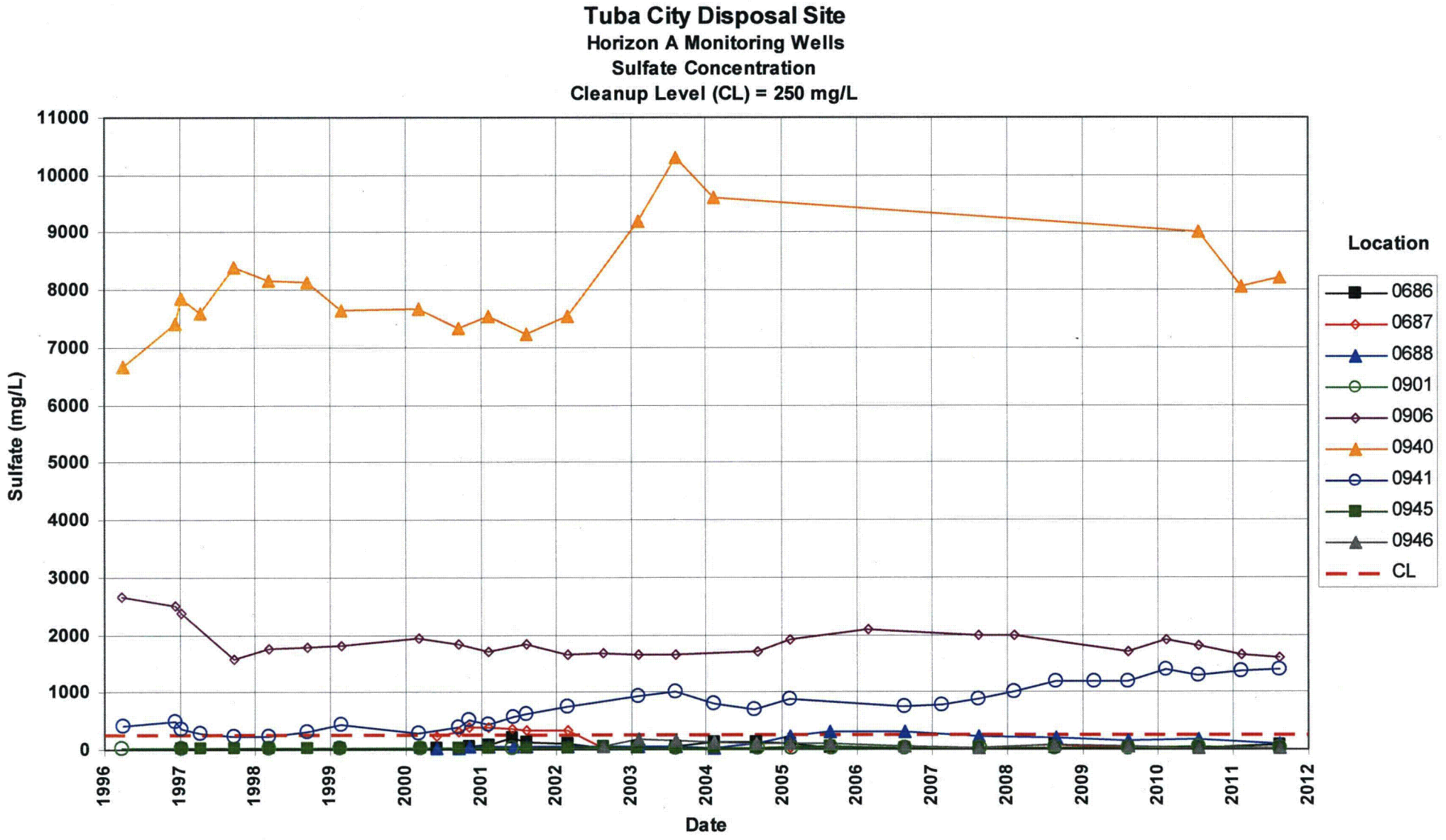
Tuba City Disposal Site

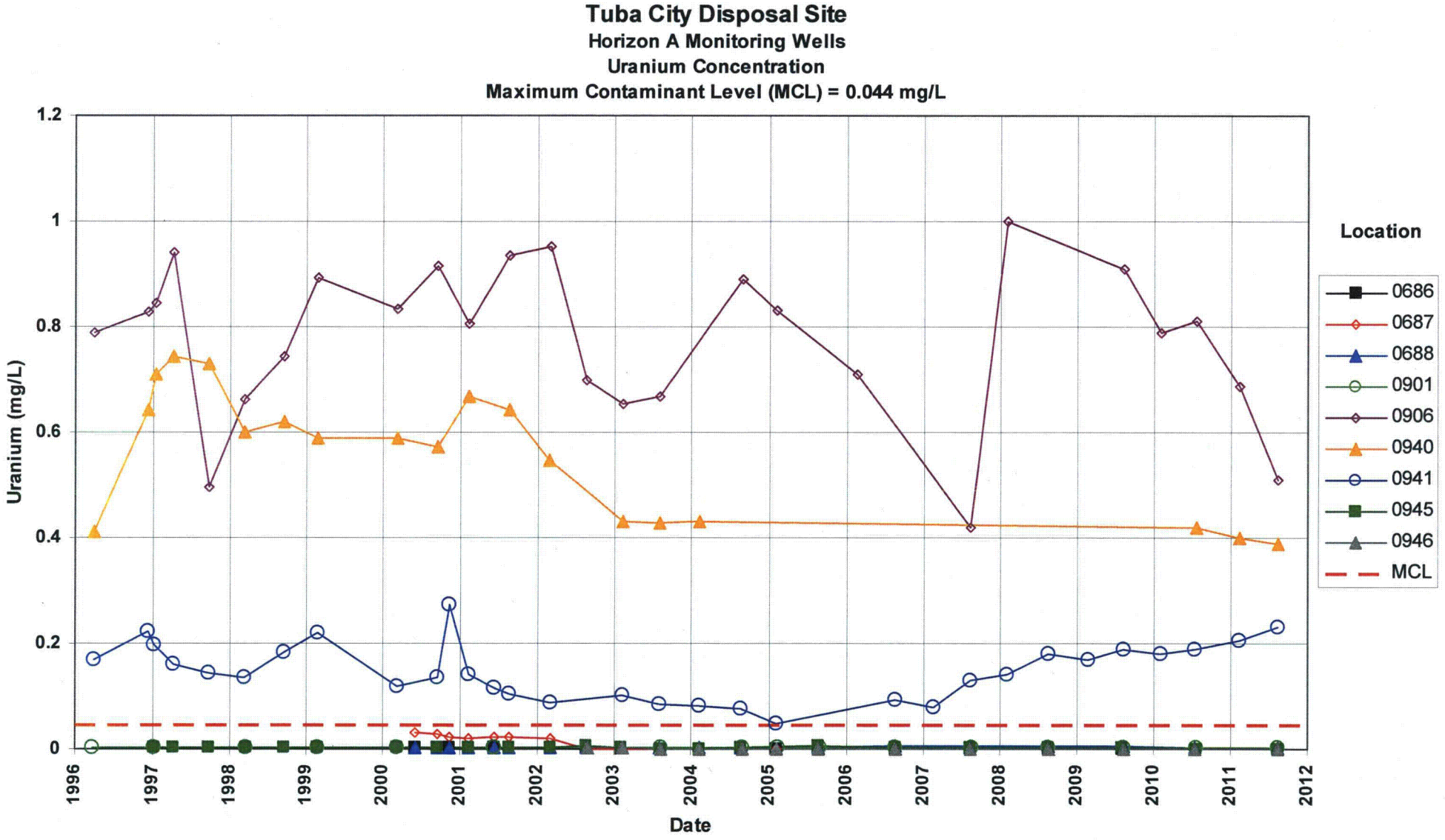
Horizon A Monitoring Wells

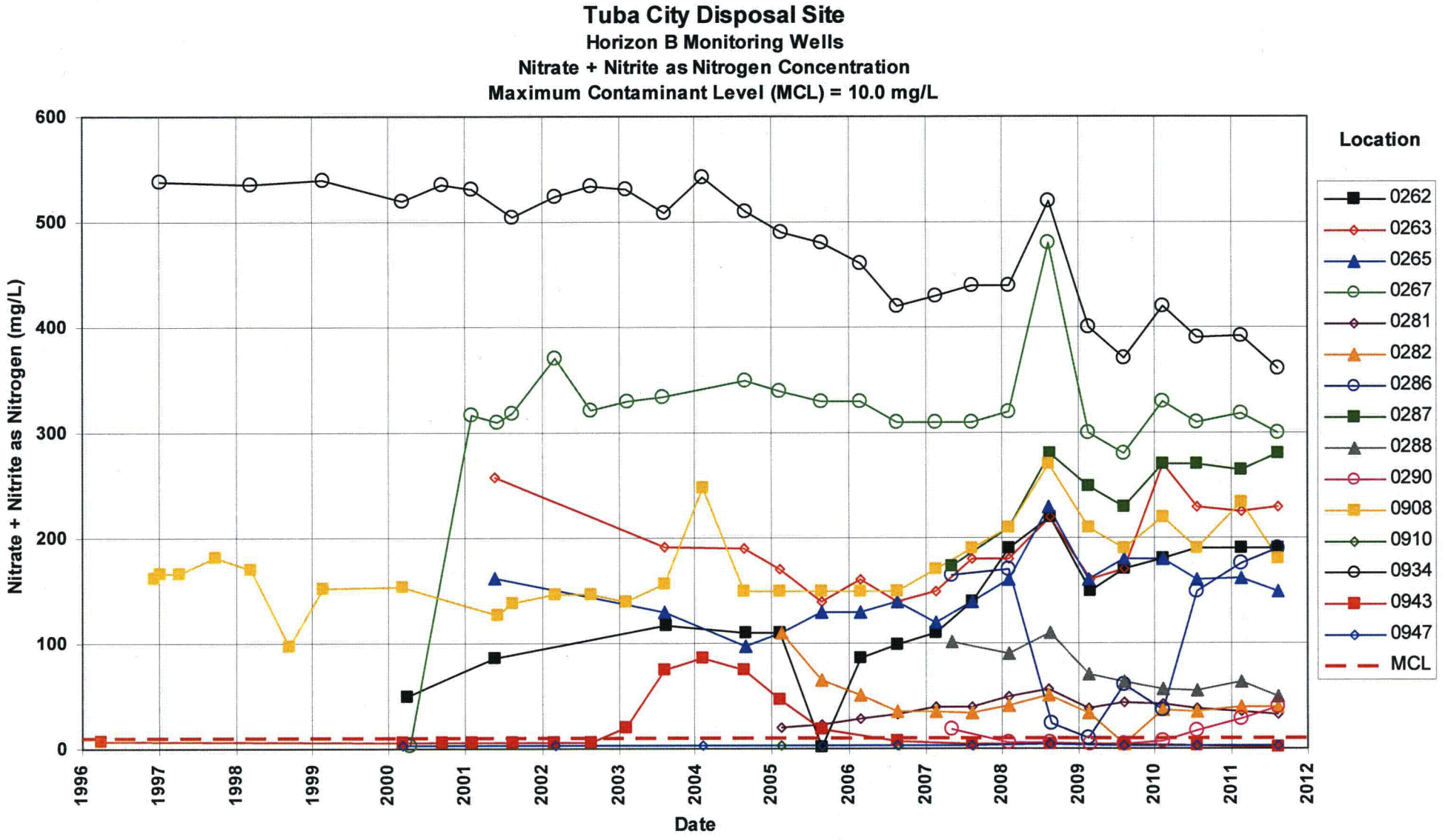
Nitrate + Nitrite as Nitrogen Concentration

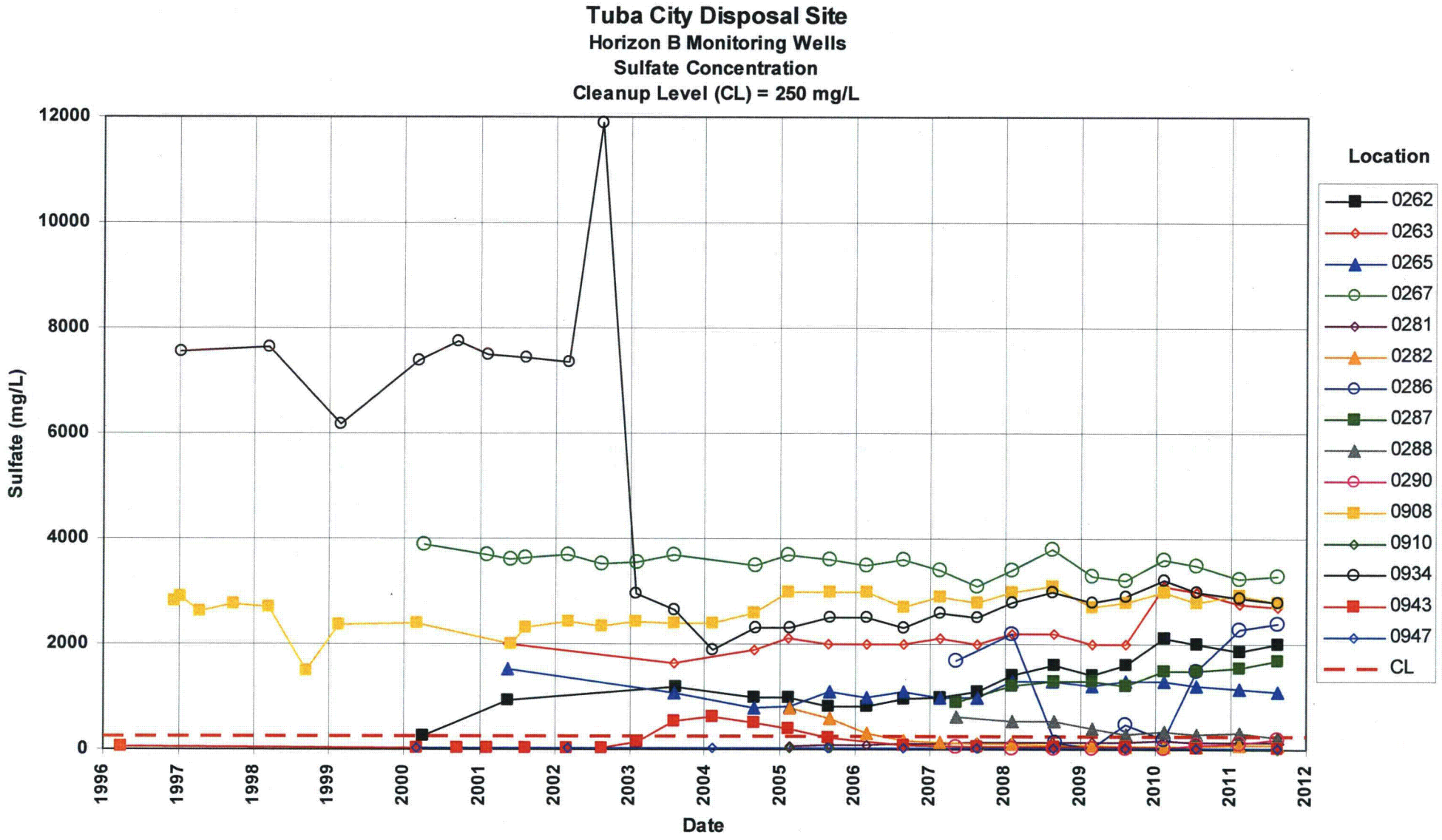
Maximum Contaminant Level (MCL) = 10.0 mg/L

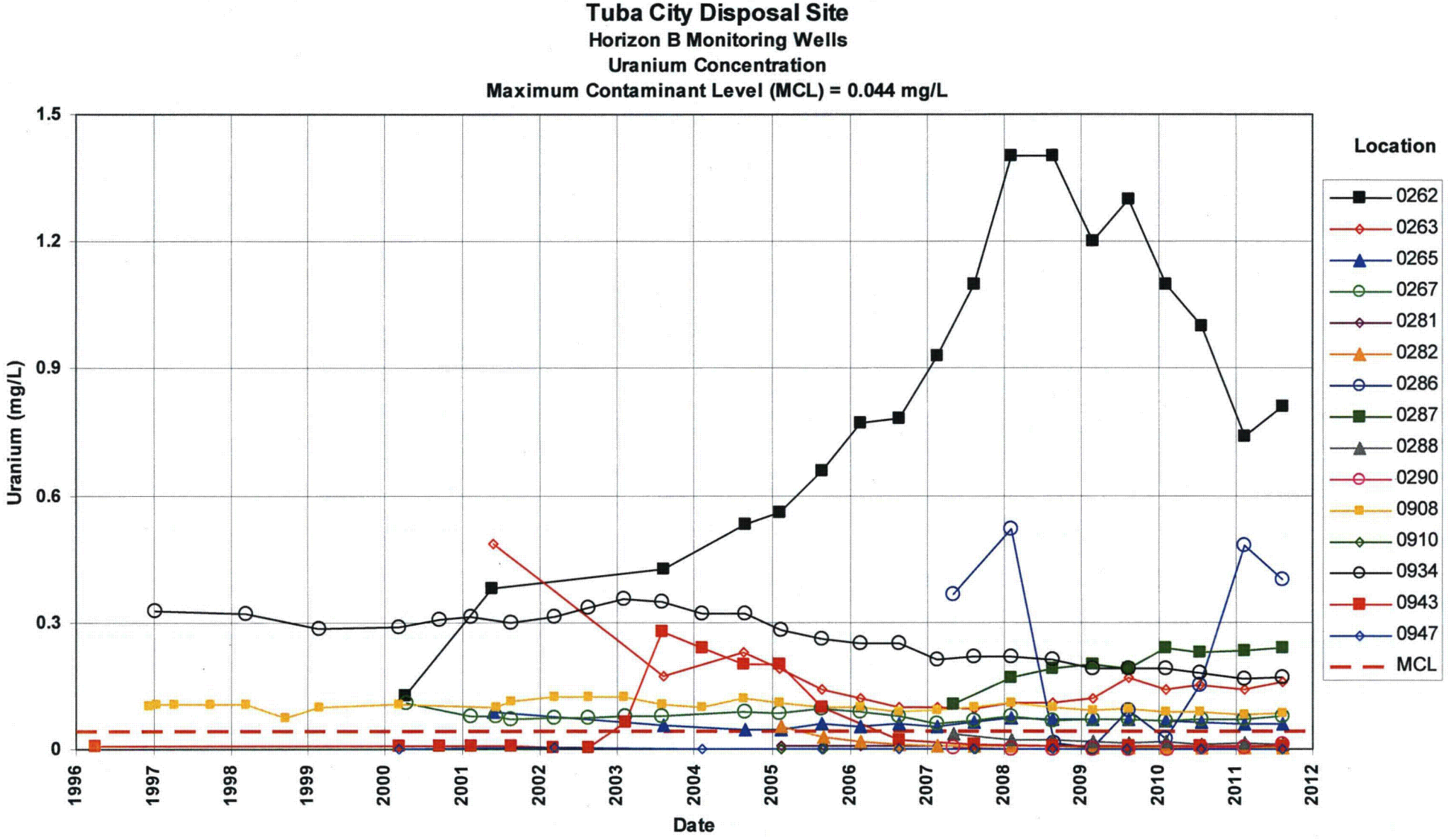


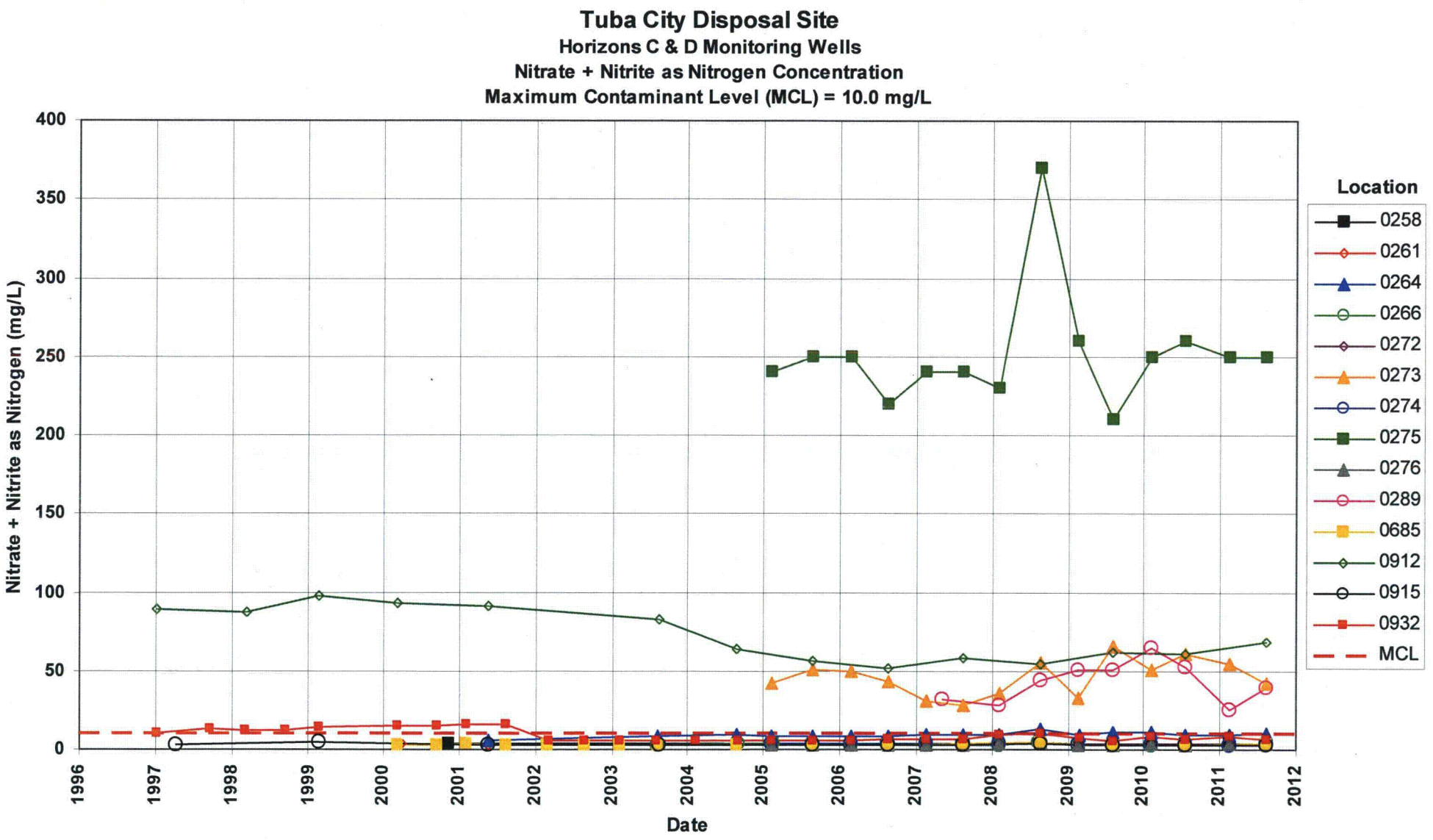

Tuba City Disposal Site
Horizon A Monitoring Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0686
0687
0688
0901
0906
0940
0941
0945
0946
CL

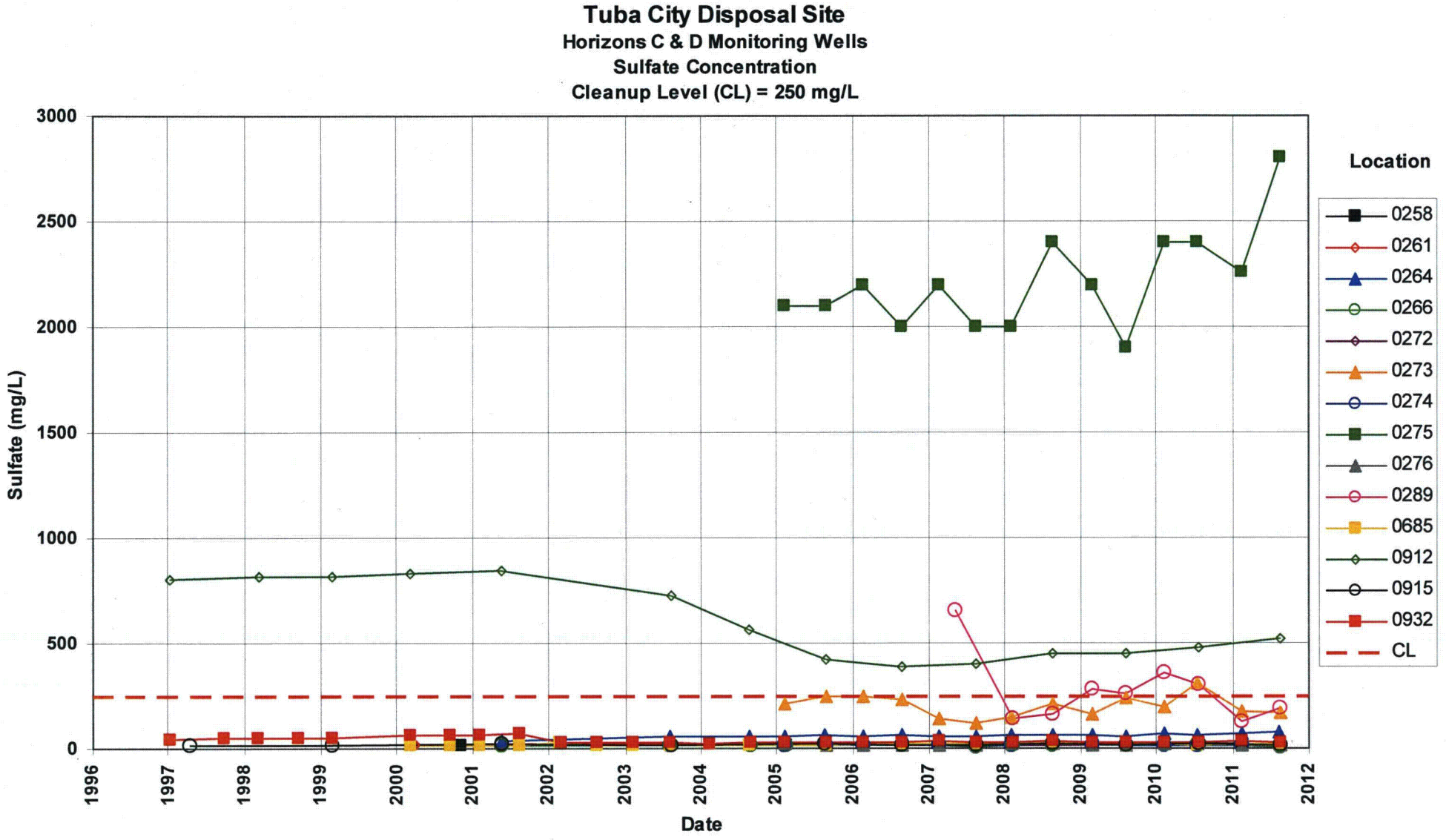

Tuba City Disposal Site
Horizon A Monitoring Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
1.2
1
0.8
0.6
0.4
0.2
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0686
0687
0688
0901
0906
0940
0941
0945
0946
MCL

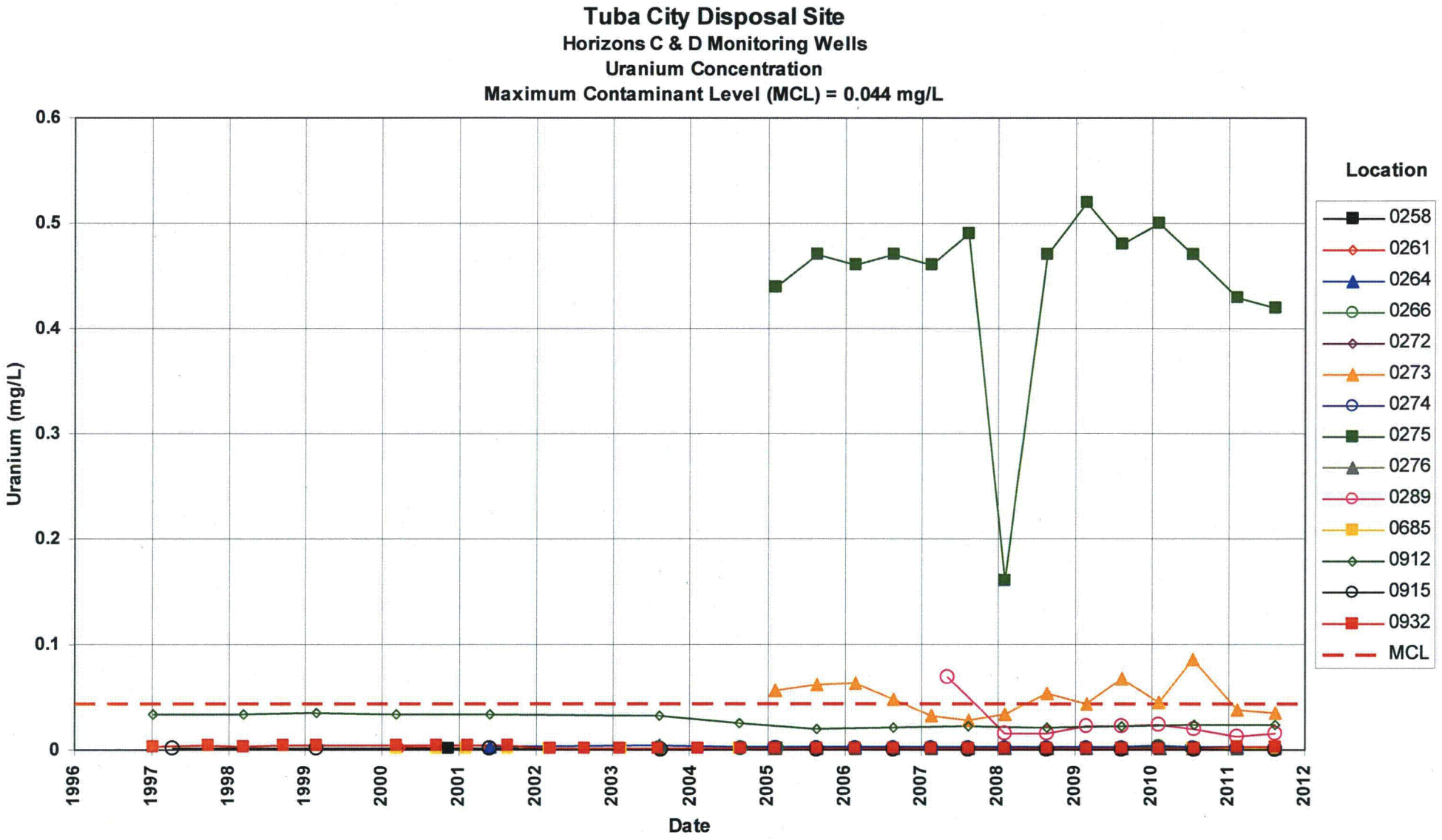

Tuba City Disposal Site
Horizon B Monitoring Wells
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level (MCL) = 10.0 mg/L
Nitrate + Nitrite as Nitrogen (mg/L)
600
500
400
300
200
100
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0262
0263
0265
0267
0281
0282
0286
0287
0288
0290
0908
0910
0934
0943
0947
MCL

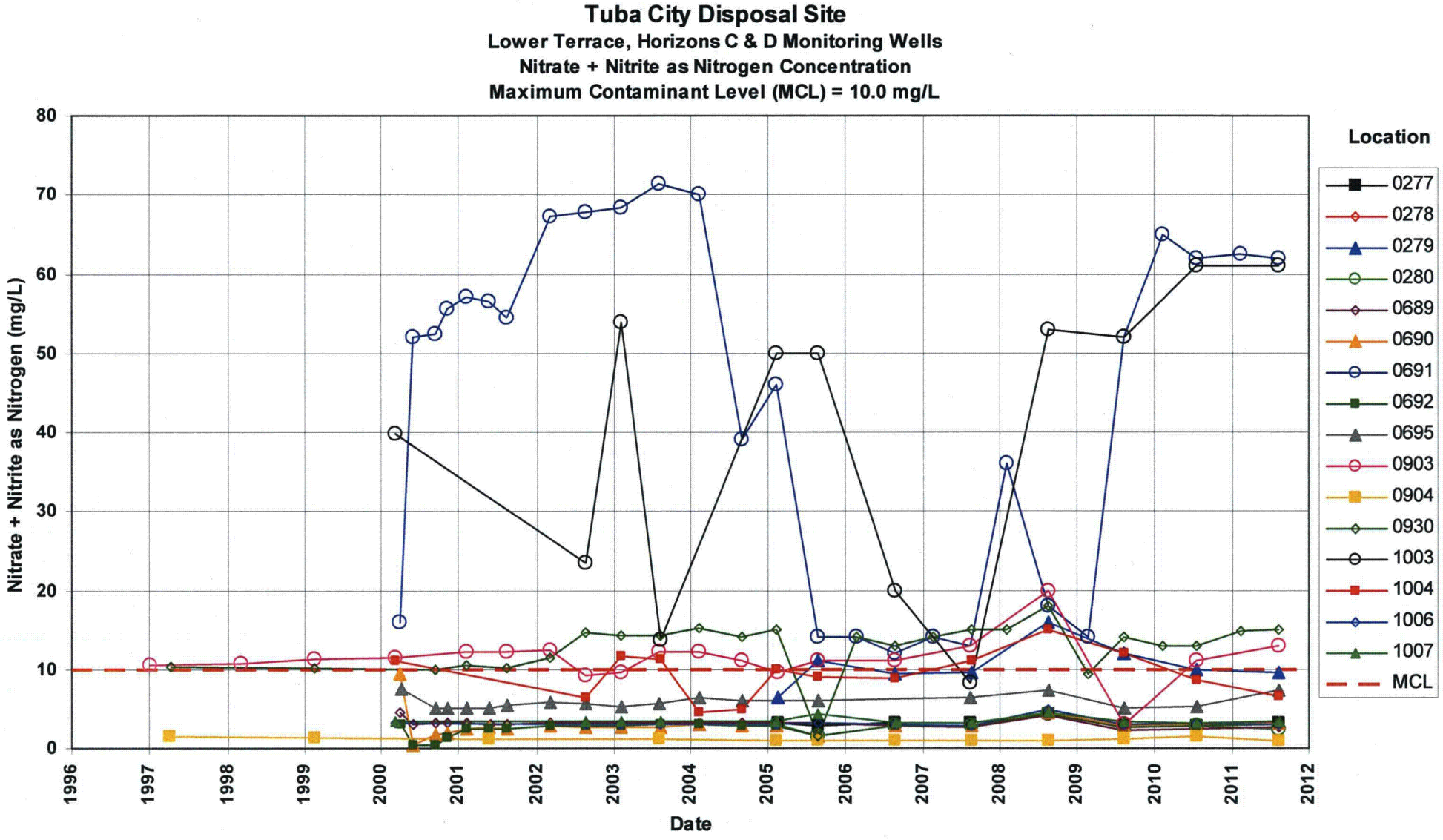

Tuba City Disposal Site
Horizon B Monitoring Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
12000
10000
8000
6000
4000
2000
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0262
0263
0265
0267
0281
0282
0286
0287
0288
0290
0908
0910
0934
0943
0947
CL

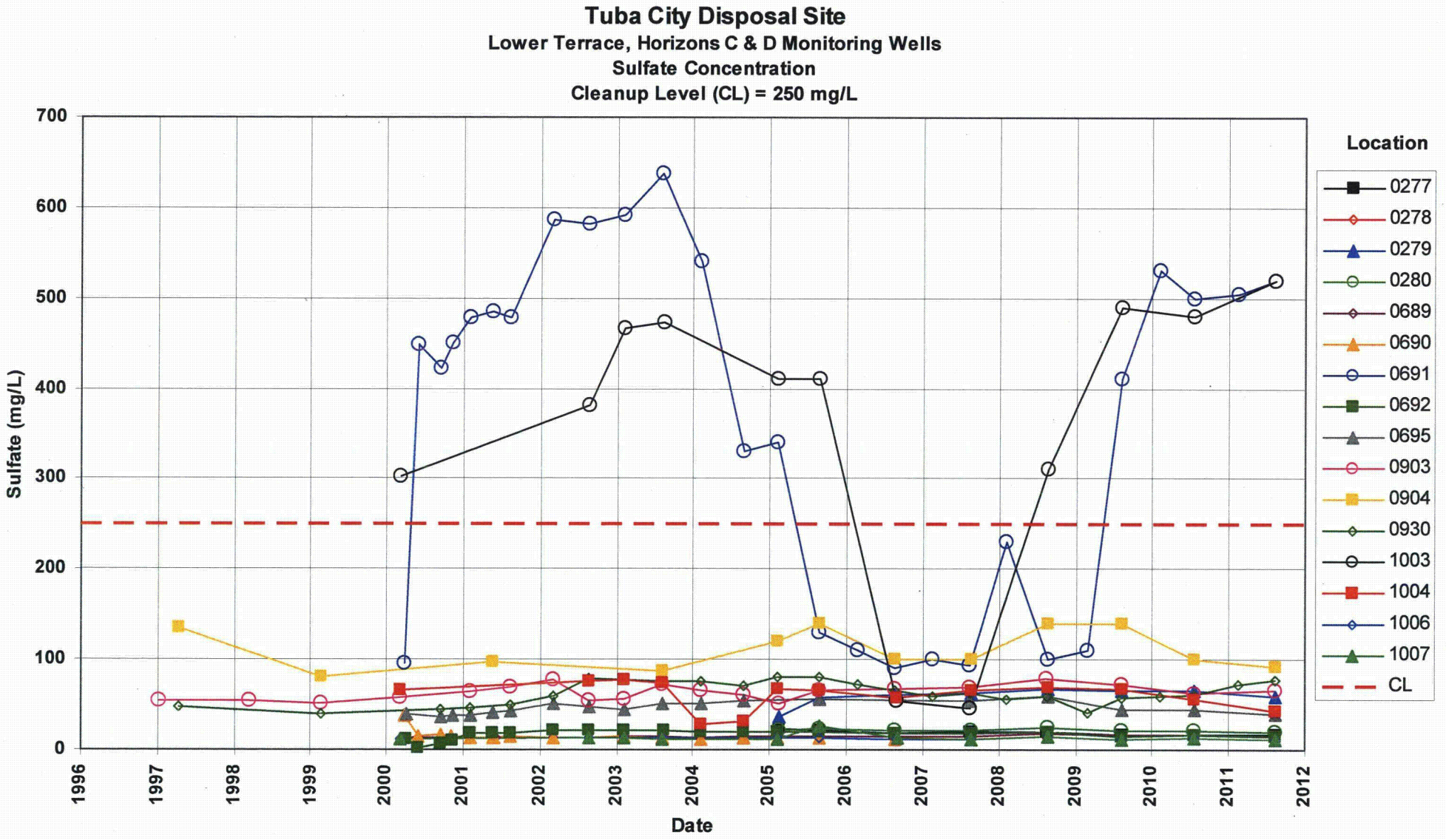

Tuba City Disposal Site
Horizon B Monitoring Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
1.5
1.2
0.9
0.6
0.3
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0262
0263
0265
0267
0281
0282
0286
0287
0288
0290
0908
0910
0934
0943
0947
MCL

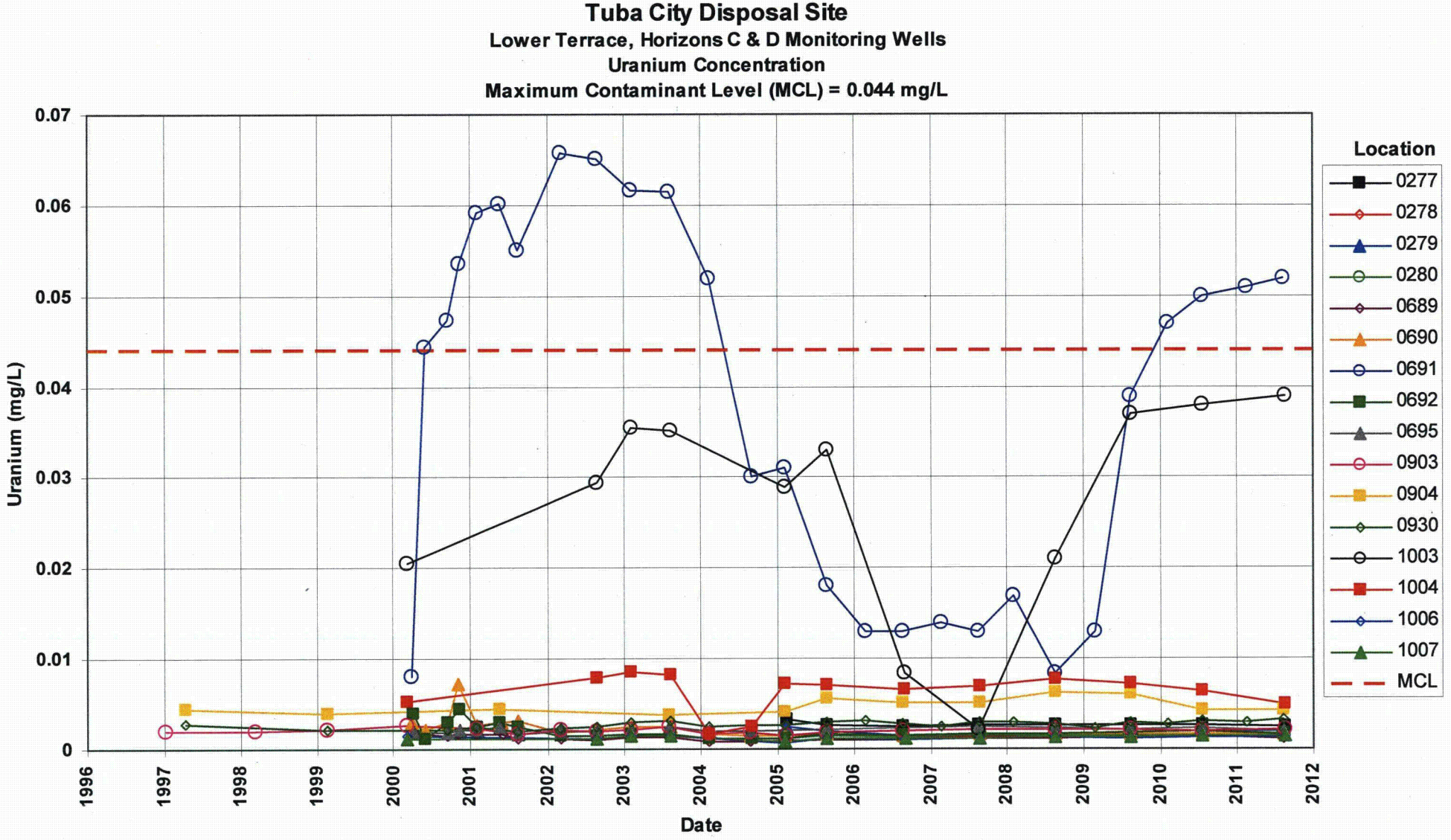

Tuba City Disposal Site
Horizons C & D Monitoring Wells
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level (MCL) = 10.0 mg/L
Nitrate + Nitrite as Nitrogen (mg/L)
400
350
300
250
200
150
100
50
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0258
0261
0264
0266
0272
0273
0274
0275
0276
0289
0685
0912
0915
0932
MCL

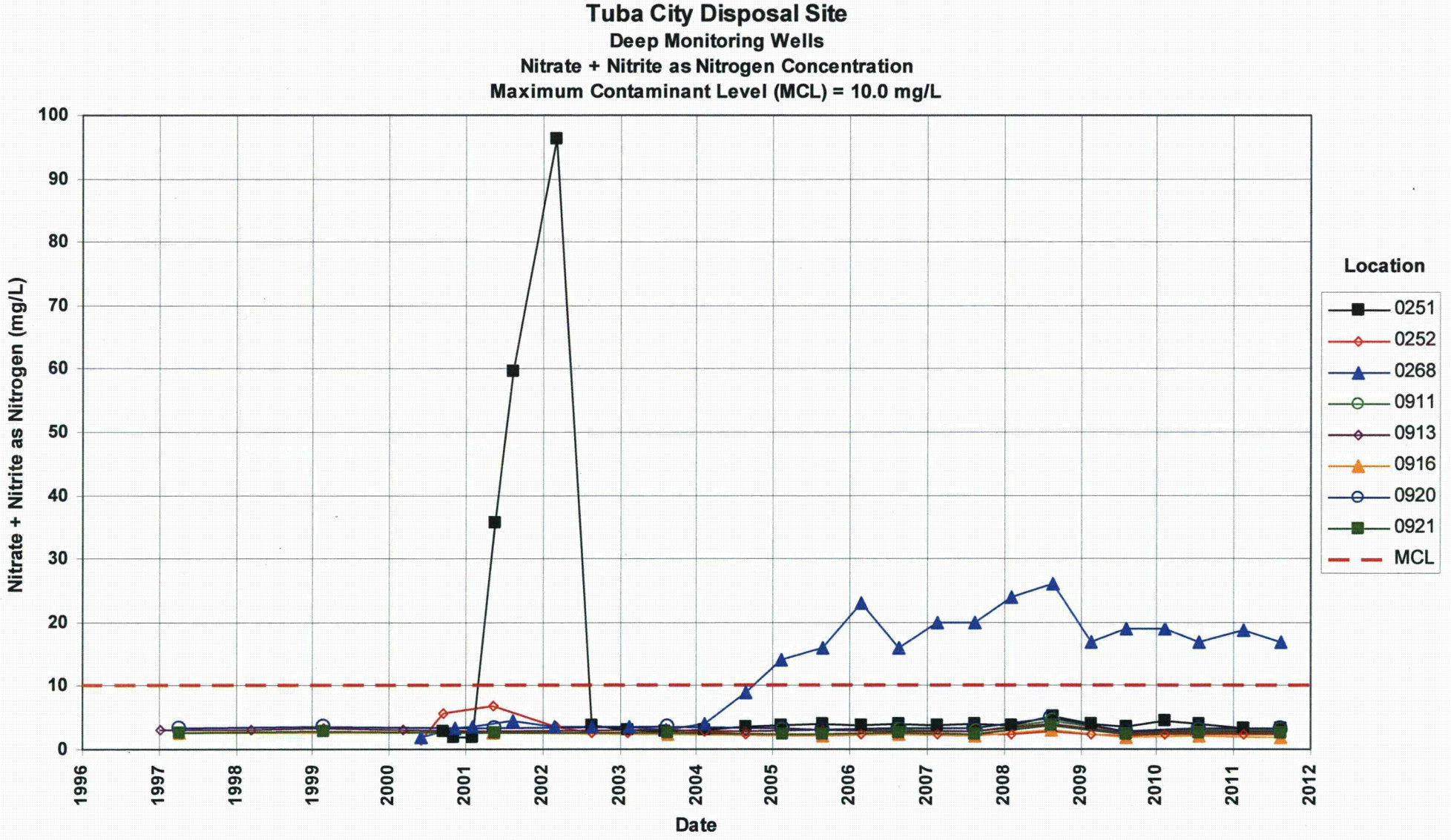

Tuba City Disposal Site
Horizons C & D Monitoring Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
3000
2500
2000
1500
1000
500
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0258
0261
0264
0266
0272
0273
0274
0275
0276
0289
0685
0912
0915
0932
CL

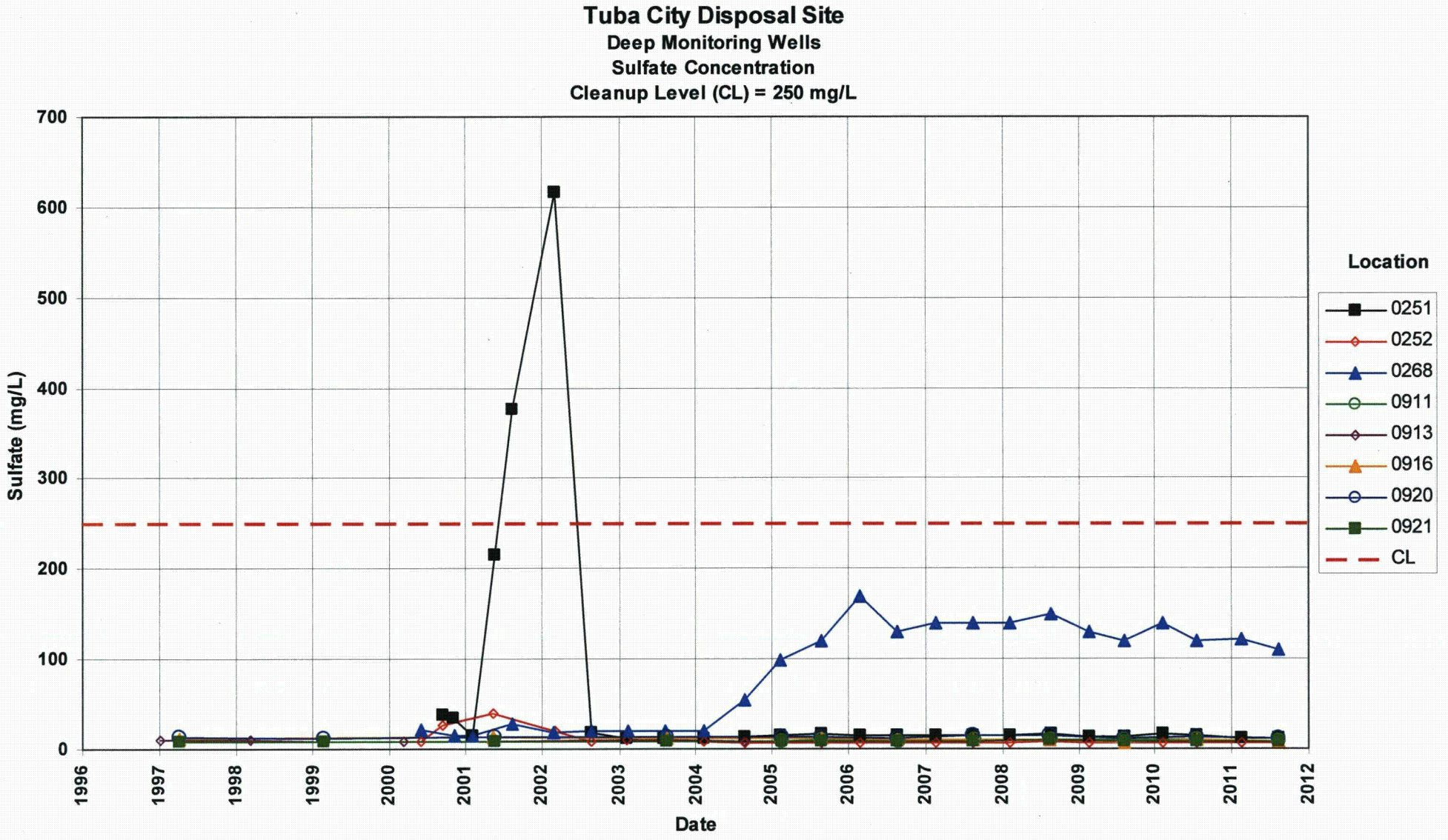

Tuba City Disposal Site
Horizons C & D Monitoring Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
0.6
0.5
0.4
0.3
0.2
0.1
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0258
0261
0264
0266
0272
0273
0274
0275
0276
0289
0685
0912
0915
0932
MCL

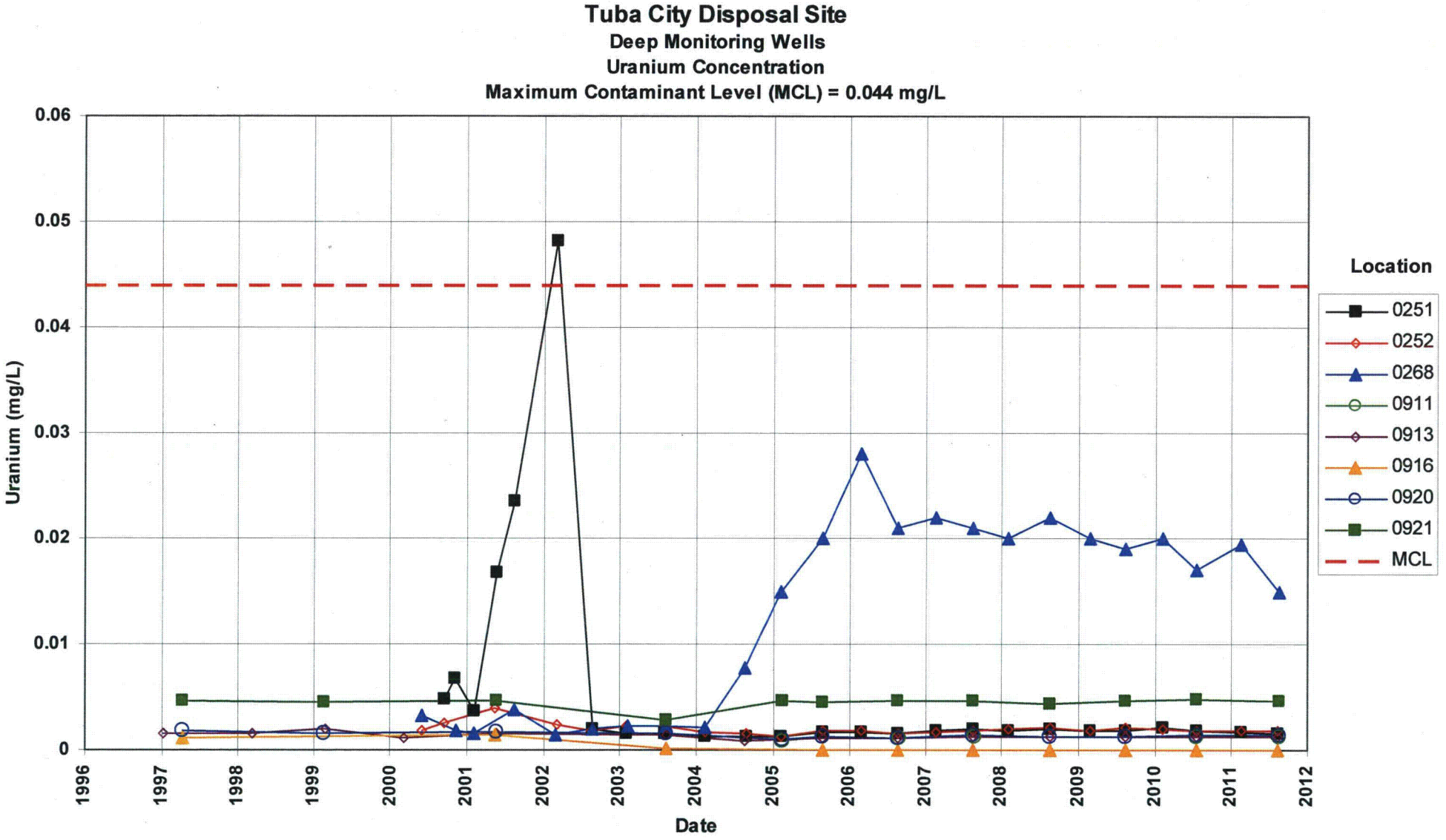

Tuba City Disposal Site
Lower Terrace, Horizons C & D Monitoring Wells
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level (MCL) = 10.0 mg/L
Nitrate + Nitrite as Nitrogen (mg/L)
Date
Location
0277
0278
0279
0280
0689
0690
0691
0692
0695
0903
0904
0930
1003
1004
1006
1007
MCL

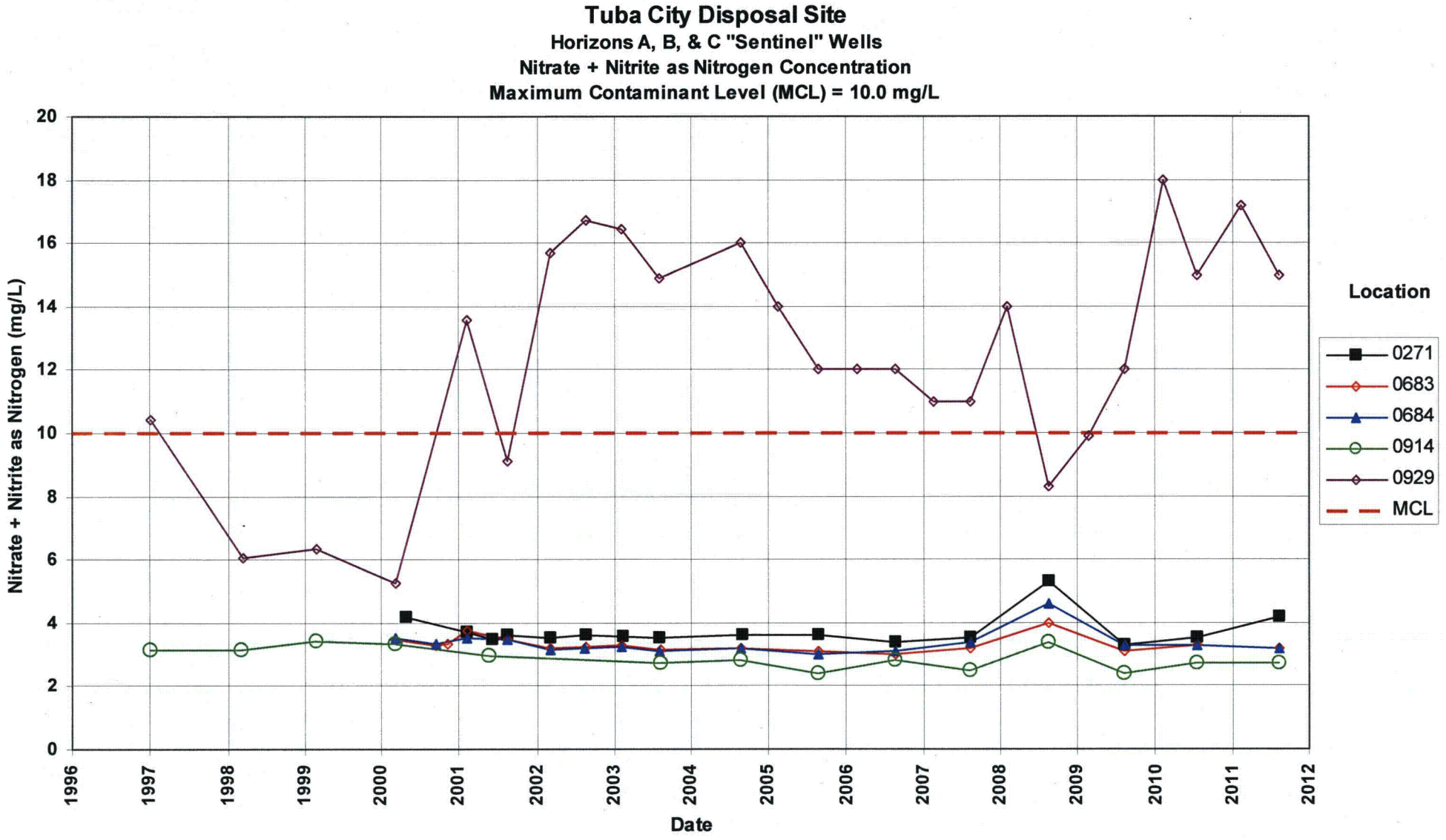

Tuba City Disposal Site
Lower Terrace, Horizons C & D Monitoring Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
700
600
500
400
300
200
100
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0277
0278
0279
0280
0689
0690
0691
0692
0695
0903
0904
0930
1003
1004
1006
1007
CL

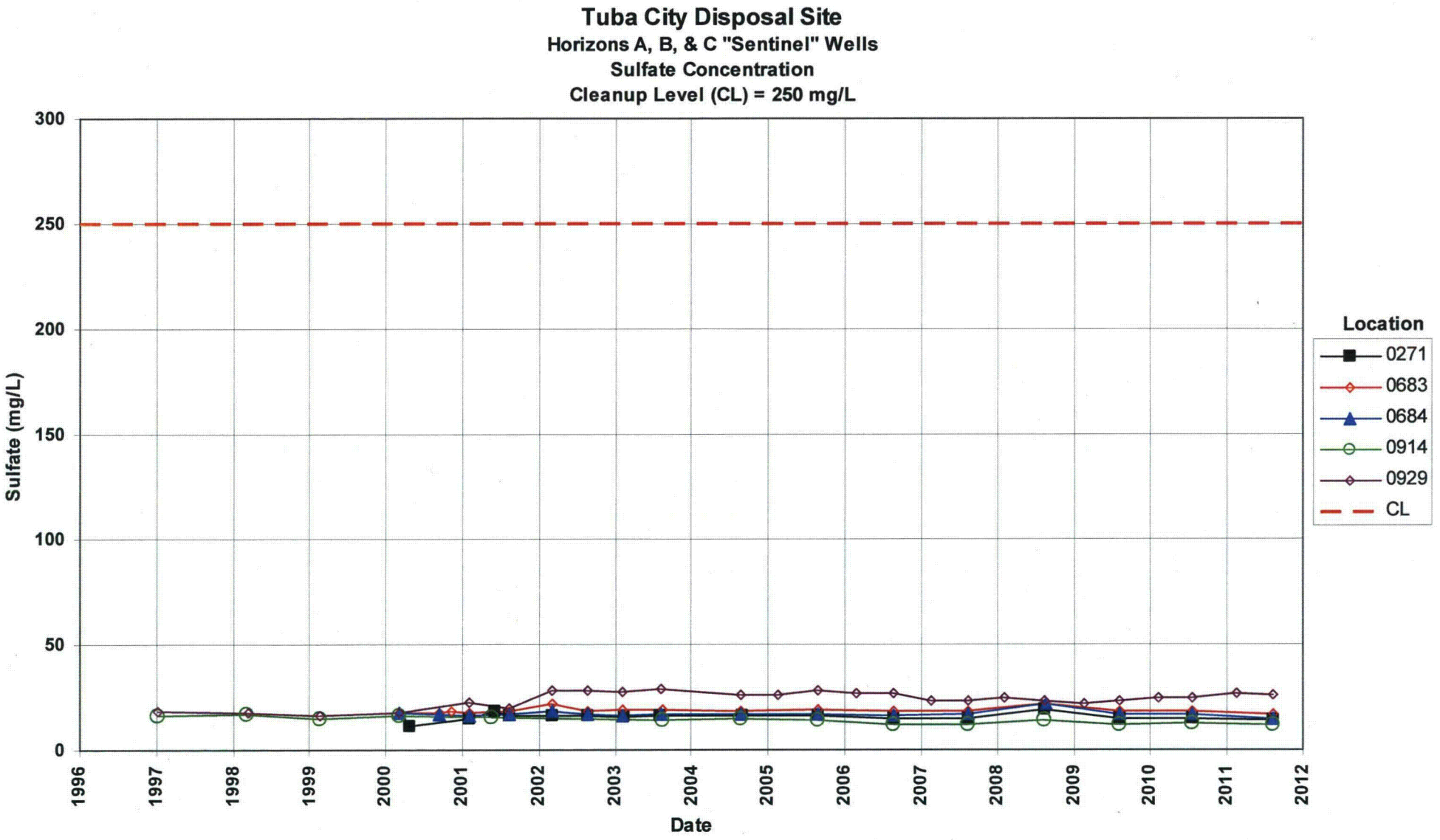

Tuba City Disposal Site
Lower Terrace, Horizons C & D Monitoring Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0277
0278
0279
0280
0689
0690
0691
0692
0695
0903
0904
0930
1003
1004
1006
1007
MCL

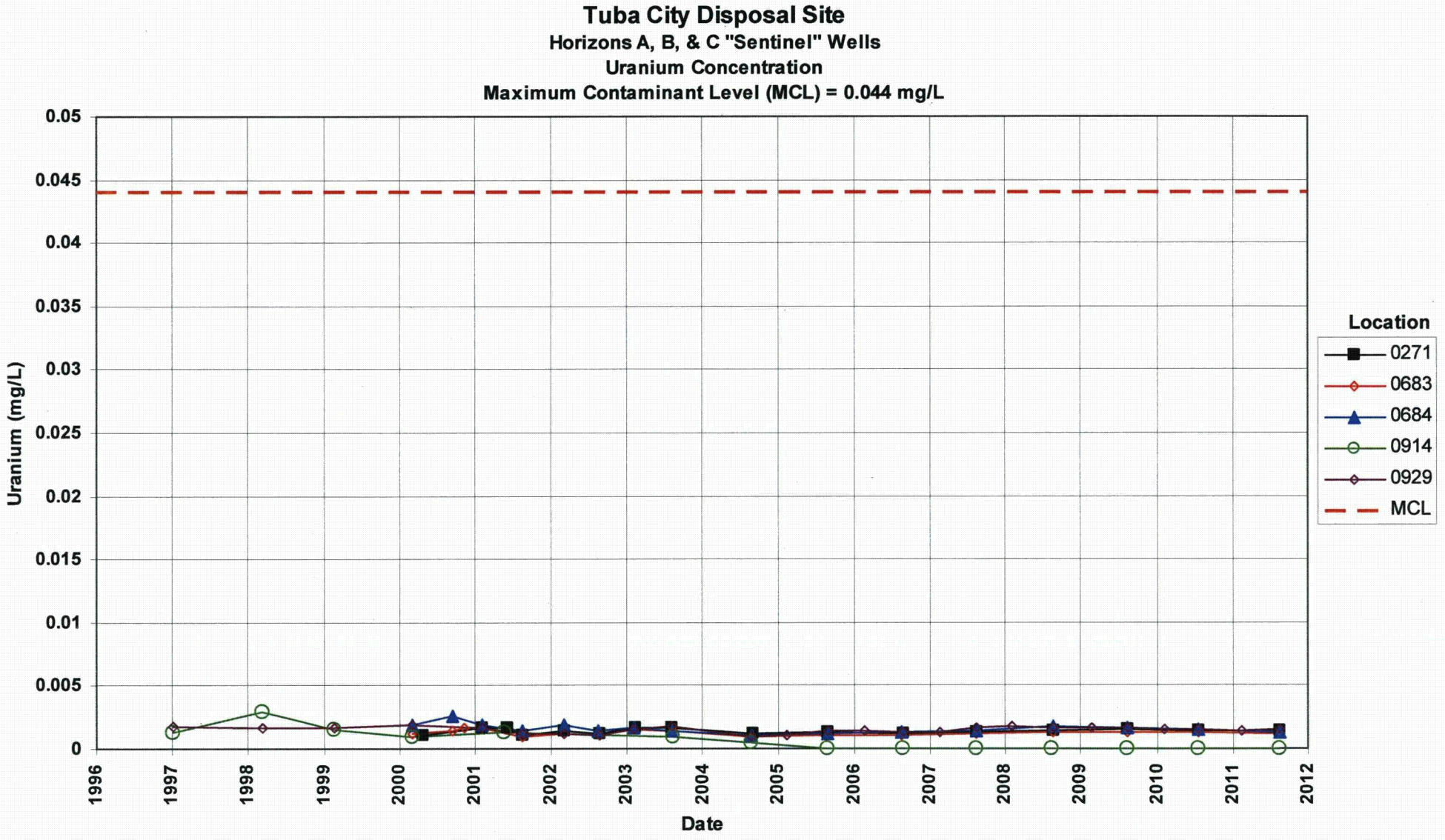

Tuba City Disposal Site
Deep Monitoring Wells
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level (MCL) = 10.0 mg/L
Nitrate + Nitrite as Nitrogen (mg/L)
100
90
80
70
60
50
40
30
20
10
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0251
0252
0268
0911
0913
0916
0920
0921
MCL

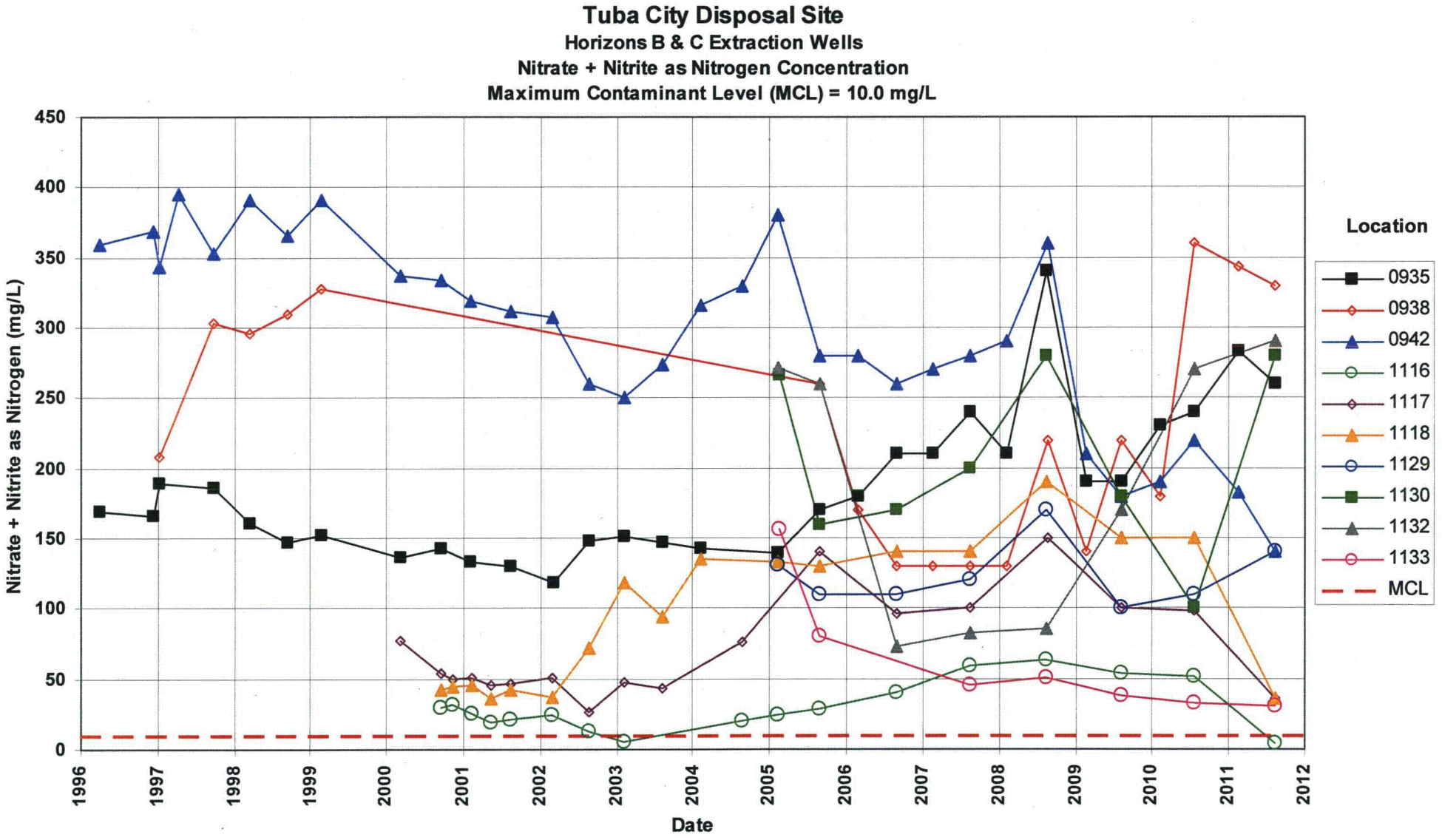

Tuba City Disposal Site
Deep Monitoring Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
700
600
500
400
300
200
100
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0251
0252
0268
0911
0913
0916
0920
0921
CL

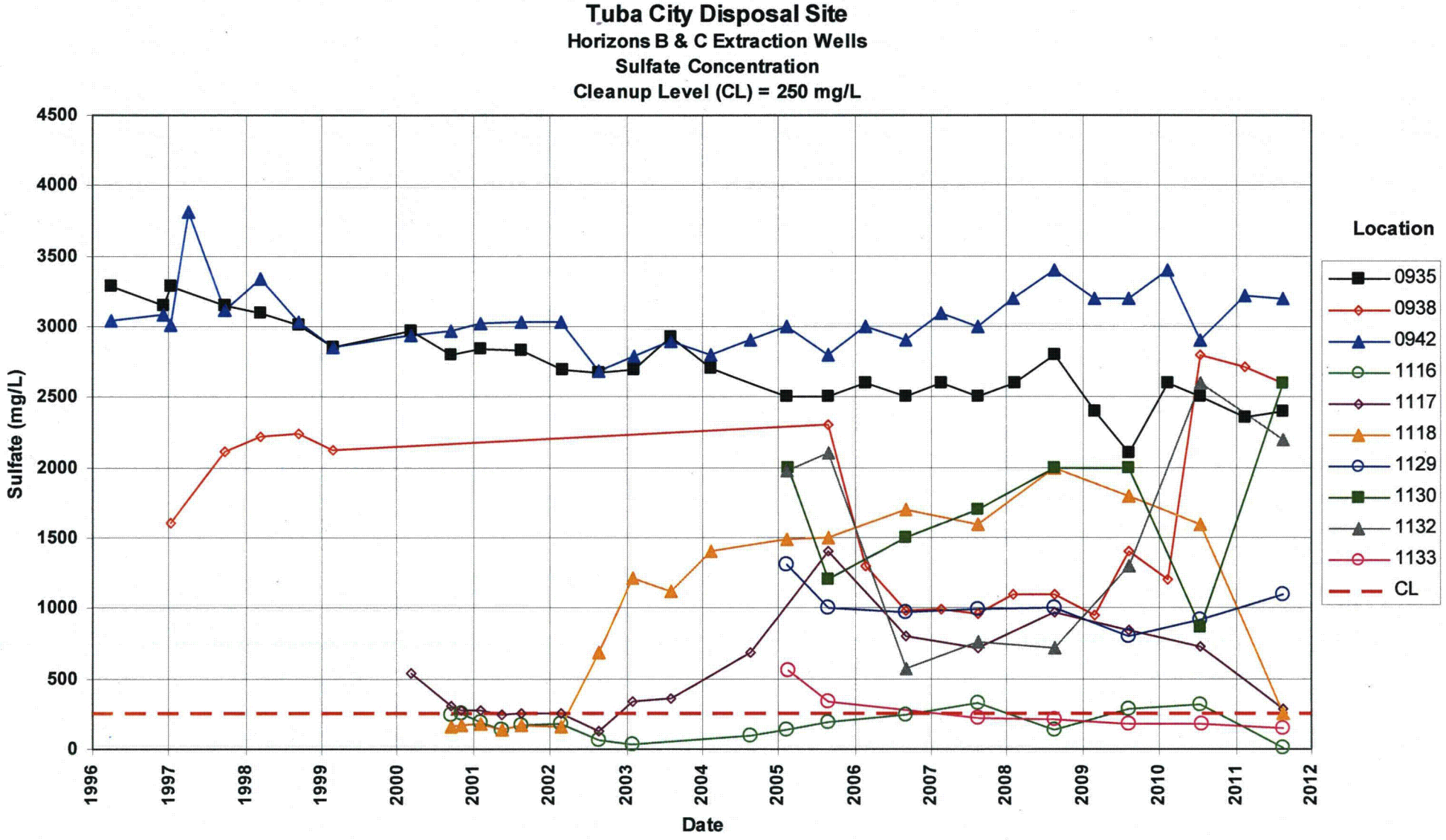

Tuba City Disposal Site
Deep Monitoring Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
0.06
0.05
0.04
0.03
0.02
0.01
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0251
0252
0268
0911
0913
0916
0920
0921
MCL

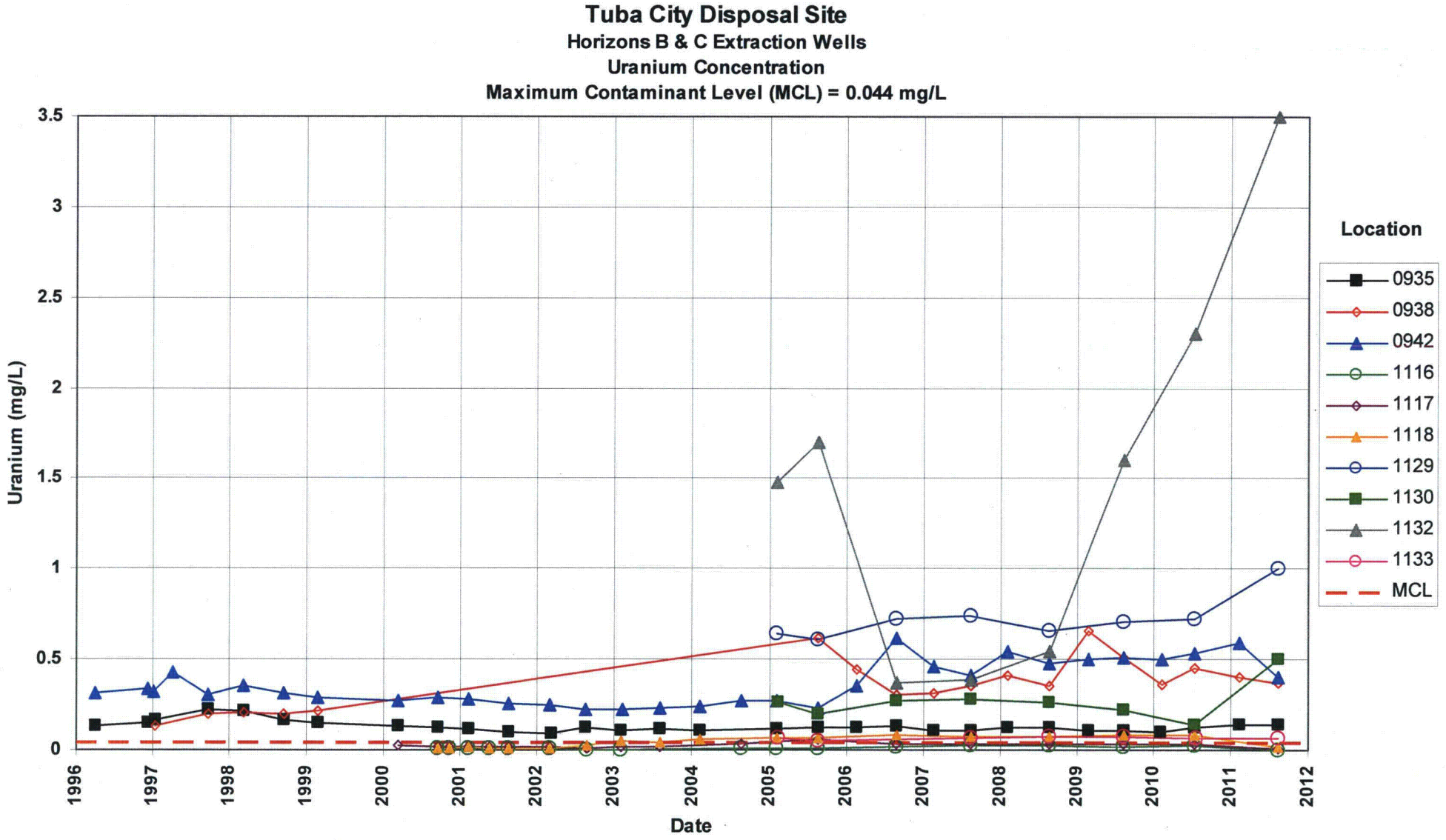

Tuba City Disposal Site
Horizons A, B, & C "Sentinel" Wells
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level (MCL) = 10.0 mg/L
Nitrate + Nitrite as Nitrogen (mg/L)
0
2
4
6
8
10
12
14
16
18
20
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0271
0683
0684
0914
0929
MCL

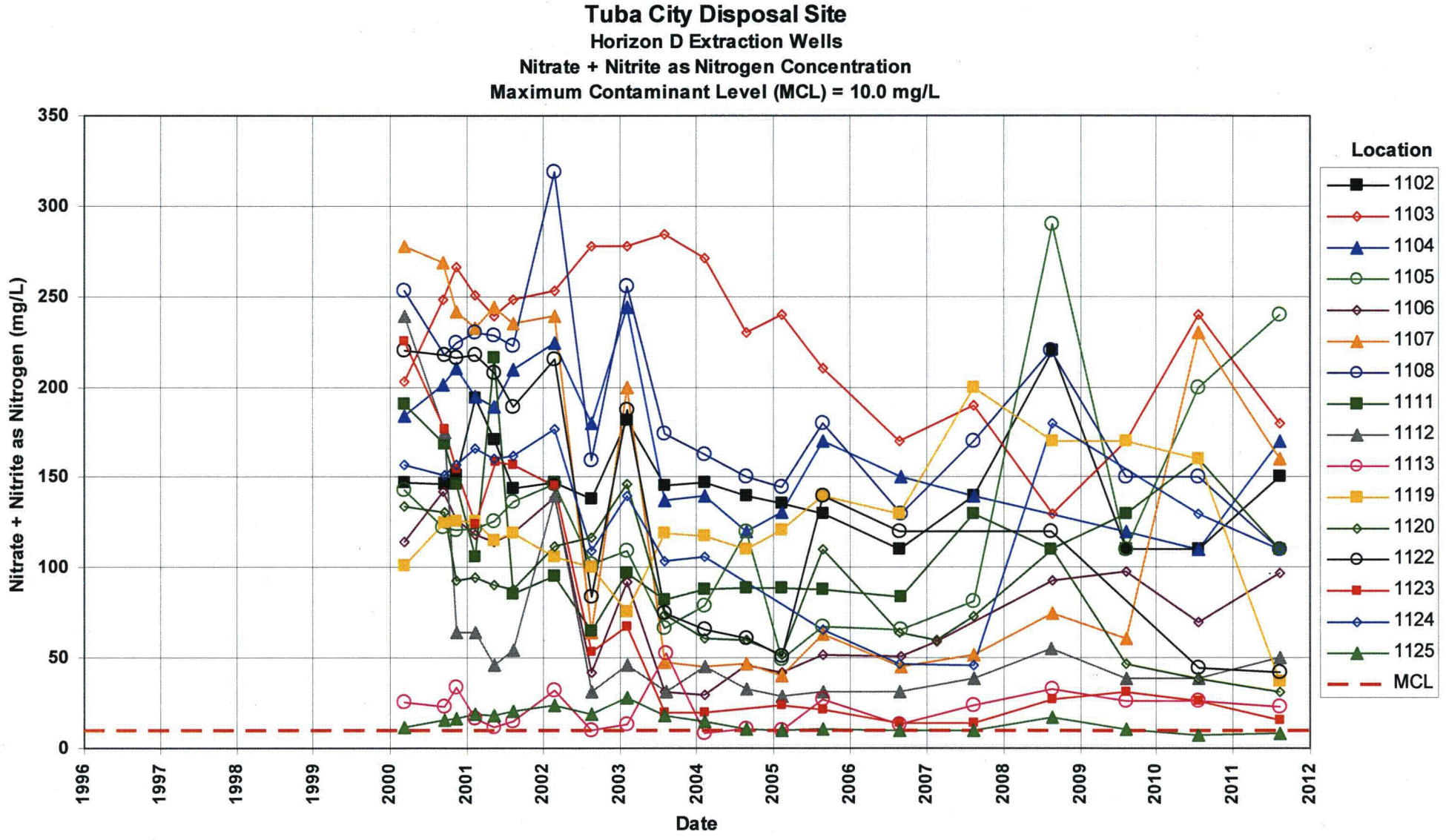

Tuba City Disposal Site
Horizons A, B, & C "Sentinel" Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
300
250
200
150
100
50
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0271
0683
0684
0914
0929
CL

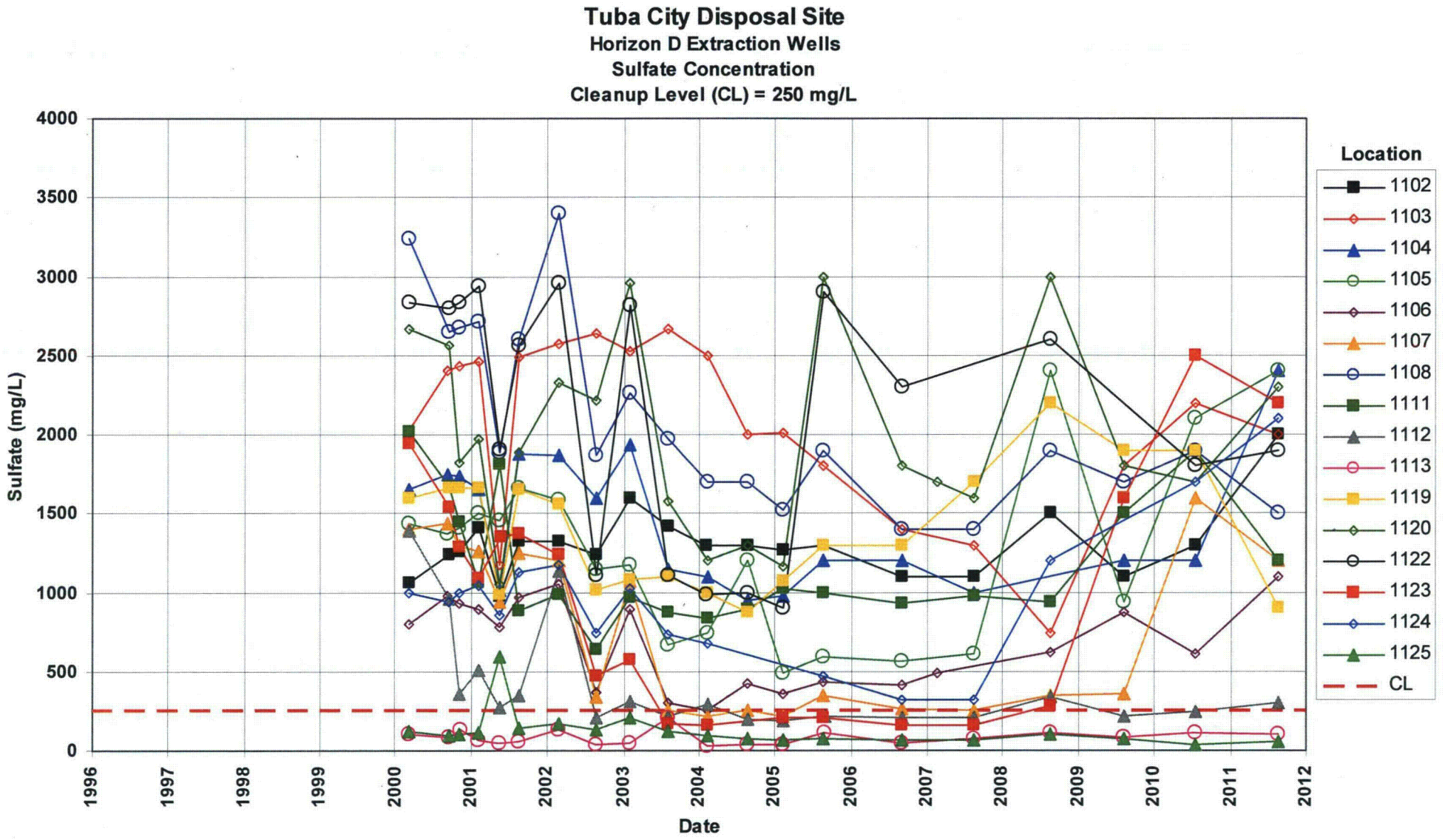

Tuba City Disposal Site
Horizons A, B, & C "Sentinel" Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0271
0683
0684
0914
0929
MCL

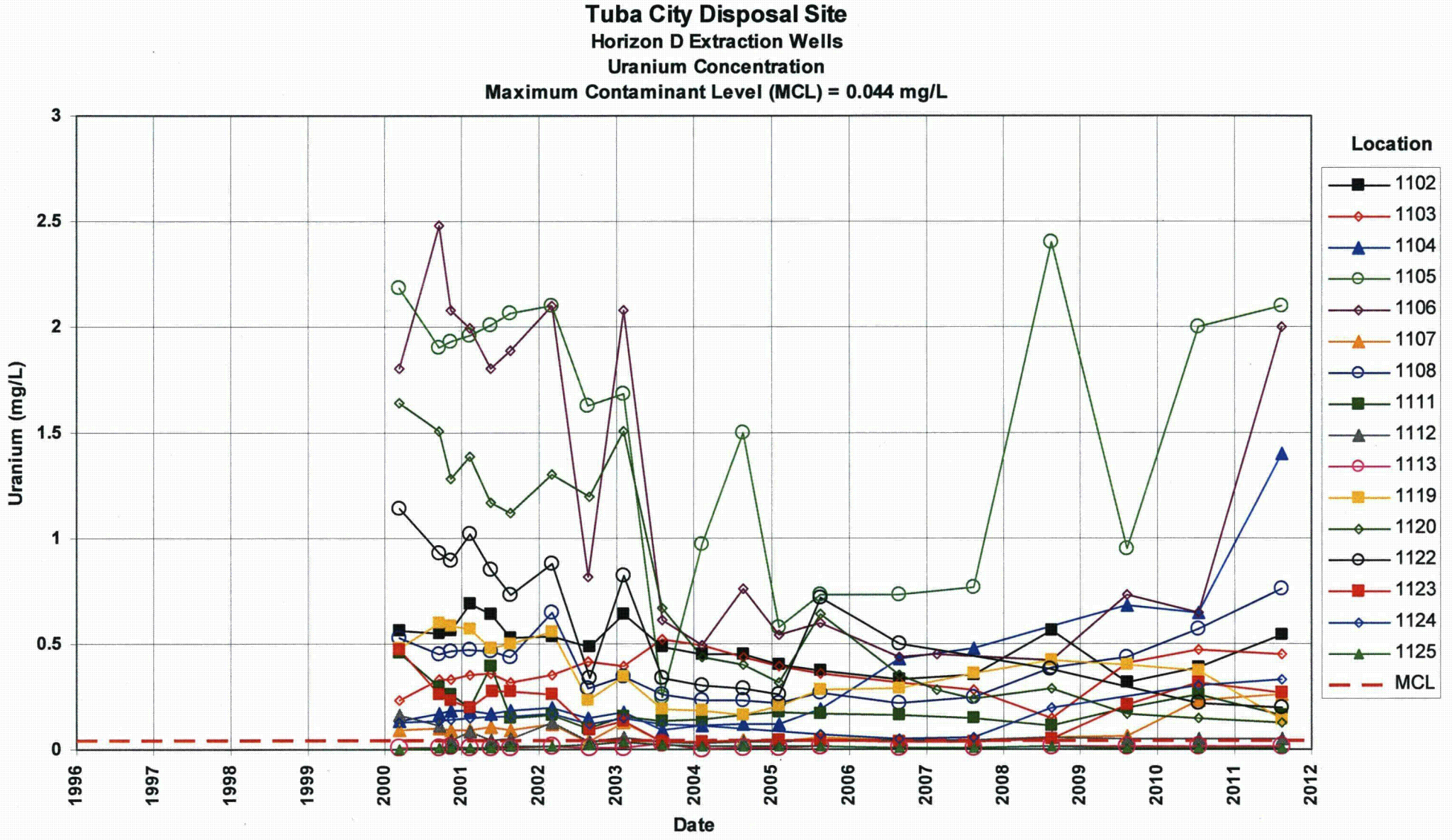

Tuba City Disposal Site
Horizons B & C Extraction Wells
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level (MCL) = 10.0 mg/L
Nitrate + Nitrite as Nitrogen (mg/L)
450
400
350
300
250
200
150
100
50
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0935
0938
0942
1116
1117
1118
1129
1130
1132
1133
MCL


Tuba City Disposal Site
Horizons B & C Extraction Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0935
0938
0942
1116
1117
1118
1129
1130
1132
1133
CL


Tuba City Disposal Site
Horizons B & C Extraction Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
0935
0938
0942
1116
1117
1118
1129
1130
1132
1133
MCL


Tuba City Disposal Site
Horizon D Extraction Wells
Nitrate + Nitrite as Nitrogen Concentration
Maximum Contaminant Level (MCL) = 10.0 mg/L
Nitrate + Nitrite as Nitrogen (mg/L)
350
300
250
200
150
100
50
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
1102
1103
1104
1105
1106
1107
1108
1111
1112
1113
1119
1120
1122
1123
1124
1125
MCL


Tuba City Disposal Site
Horizon D Extraction Wells
Sulfate Concentration
Cleanup Level (CL) = 250 mg/L
Sulfate (mg/L)
4000
3500
3000
2500
2000
1500
1000
500
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
1102
1103
1104
1105
1106
1107
1108
1111
1112
1113
1119
1120
1122
1123
1124
1125
CL


Tuba City Disposal Site
Horizon D Extraction Wells
Uranium Concentration
Maximum Contaminant Level (MCL) = 0.044 mg/L
Uranium (mg/L)
3
2.5
2
1.5
1
0.5
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Date
Location
1102
1103
1104
1105
1106
1107
1108
1111
1112
1113
1119
1120
1122
1123
1124
1125
MCL

Attachment 3
Sampling and Analysis Work Order

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Task Order LM00-501
Control Number 11-0712

June 6, 2011

U.S. Department of Energy
Office of Legacy Management
ATTN: Richard Bush
Site Manager
2597 Legacy Way
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AM01-07LM00060, S.M. Stoller Corporation (Stoller)
August 2011 Environmental Sampling at Tuba City, Arizona, Disposal Site

REFERENCE: Task Order LM00-501-02-122-402, Tuba City, AZ, Disposal Site

Dear Mr. Bush:

The purpose of this letter is to inform you of the upcoming sampling event at Tuba City, AZ. Enclosed are the map and tables specifying sample locations and analytes for monitoring at the Tuba City, AZ, Disposal Site. Water quality data will be collected from monitoring wells and surface locations at this site as part of the routine environmental sampling currently scheduled to begin the week of August 1, 2011.

The following lists show the monitoring wells (with zone of completion) and surface locations scheduled to be sampled during this event.

Monitoring Wells*

251 Na	276 Na	685 Al	910 Na	938 Na	1104 Na	1119 Na
252 Na	277 Na	686 Na	911 Na	940 Na	1105 Na	1120 Na
258 Na	278 Na	687 Na	912 Na	941 Na	1106 Na	1121 Na
261 Na	279 Na	688 Na	913 Na	942 Na	1107 Na	1122 Na
262 Na	280 Na	689 Na	914 Na	943 Na	1108 Na	1123 Na
263 Na	281 Na	690 Na	915 Na	945 Na	1109 Na	1124 Na
264 Na	282 Na	691 Na	916 Na	946 Na	1110 Na	1125 Na
265 Na	283 Na	692 Na	920 Na	947 Na	1111 Na	1126 Na
266 Na	286 Na	695 Na	921 Na	1003 Al	1112 Na	1127 Na
267 Na	287 Na	901 Na	929 Na	1004 Al	1113 Na	1128 Na
268 Na	288 Na	903 Na	930 Na	1006 Al	1114 Na	1129 Na
271 Na	289 Na	904 Na	932 Na	1007 Al	1115 Na	1130 Na
272 Na	290 Na	906 Na	934 Na	1101 Na	1116 Na	1131 Na
273 Na	683 Al	908 Na	935 Na	1102 Na	1117 Na	1132 Na
274 Na	684 Al	909 Na	936 Na	1103 Na	1118 Na	1133 Na
275 Na						

*NOTE: Al = alluvium; Na = Navajo sandstone

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Surface locations
759 965 1205 1569 1570 1571 1573
778

All samples will be collected as directed in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites*. In addition, water levels will be collected from all wells on site.

Please contact me at (970) 248-6568 if you have any questions.

Sincerely,

Carl Jacobson
Site Manager

CJ/lcg/lb

Enclosures (3)

cc: (electronic)
Steve Donivan, Stoller
Lauren Goodknight, Stoller
Carl Jacobson, Stoller
Clint Mori, Stoller
Troy Thompson, Stoller
EDD Delivery
rc-grand junction
File: TUB 410.02 (A)

Constituent Sampling Breakdown

Site	Tuba City				
Analyte	Groundwater	Surface Water	Required Detection Limit (mg/L)	Analytical Method	Line Item Code
Approx. No. Samples/yr	143	9			
Field Measurements					
Alkalinity	X	X			
Dissolved Oxygen					
Redox Potential	X	X			
pH	X	X			
Specific Conductance	X	X			
Turbidity	X				
Temperature	X	X			
Laboratory Measurements					
Aluminum					
Ammonia as N (NH3-N)	X		0.1	EPA 350.1	WCH-A-005
Arsenic	X	X	0.0001	SW-846 6020	LMM-02
Calcium	X	X	5	SW-846 6010	LMM-01
Chloride	X	X	0.5	SW-846 9056	WCH-A-039
Chromium					
Iron	X	X	0.05	SW-846 6020	LMM-02
Lead					
Magnesium	X	X	5	SW-846 6010	LMM-01
Manganese	X	X	0.005	SW-846 6010	LMM-01
Molybdenum	X	X	0.003	SW-846 6020	LMM-02
Nickel					
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	X		0.2	SW-846 6010	LMM-01
Sodium	X	X	1	SW-846 6010	LMM-01
Strontium					
Sulfate	X	X	0.5	SW-846 9056	MIS-A-044
Sulfide					
Total Dissolved Solids	X	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	16	14			

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

Sampling Frequencies for Locations at Tuba City, Arizona

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Monitoring Wells						
251		X				
252		X				
258		X				
261			X			August
262		X				
263		X				
264		X				
265		X				
266		X				
267		X				
268		X				
271			X			August
272		X				
273		X				
274		X				
275		X				
276		X				
277			X			August
278			X			August
279			X			August
280			X			August
281		X				
282		X				
283		X				
284					X	Water level only
285					X	Water level only
286		X				
287		X				
288		X				
289		X				
290		X				
683			X			August
684			X			August
685			X			August
686			X			DATA LOGGER; August
687			X			DATA LOGGER; August
688			X			DATA LOGGER; August
689			X			August
690			X			August
691		X				
692			X			August
695			X			August
901			X			August
902					X	Water level only
903			X			August
904			X			August

Sampling Frequencies for Locations at Tuba City, Arizona

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Monitoring Wells						
906		X				DATA LOGGER
908		X				DATA LOGGER
909		X				DATA LOGGER
910			X			August
911			X			August
912			X			August
913			X			August
914			X			August
915			X			August
916			X			August
917					X	Water level only
918					X	Water level only
919					X	Water level only
920			X			August
921			X			August
929		X				
930		X				
932		X				
934		X				DATA LOGGER
935		X				Converted to extraction well 7/05
936		X				DATA LOGGER
938		X				Converted to extraction well 7/05
940		X				DATA LOGGER
941		X				DATA LOGGER
942		X				DATA LOGGER
943			X			DATA LOGGER; August
945			X			August
946			X			DATA LOGGER; August
947			X			August
948					X	Water level only
1003			X			August
1004			X			August
1005					X	Water level only
1006			X			August
1007			X			August
1008					X	Water level only
1101			X			August
1102			X			August
1103			X			August
1104			X			August
1105			X			August
1106			X			August
1107			X			August
1108			X			August
1109			X			August
1110			X			August

Sampling Frequencies for Locations at Tuba City, Arizona

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Monitoring Wells						
1111			X			August
1112			X			August
1113			X			August
1114			X			August
1115			X			August
1116			X			August
1117			X			August
1118			X			August
1119			X			August
1120			X			August
1121			X			August
1122			X			August
1123			X			August
1124			X			August
1125			X			August
1126			X			August
1127			X			August
1128			X			August
1129			X			August
1130			X			August
1131			X			August
1132			X			August
1133			X			August
Surface Locations						
759			X			August; Moenkopi wash-downgradient
778			X			August; Moenkopi wash-at Jimmy Spring
965			X			August; Moenkopi wash-far upgradient
1205		X				Treatment system distillate
1569		X				Evap pond - North
1570		X				Evap pond - South
1571			X			Jimmy Spr West - August
1573			X			West pipe Shonto Well - August

Semi-annual sampling conducted in February and August; Annual sampling conducted in August.

Attachment 4
Trip Report

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Memorandum

DATE: September 8, 2011

TO: Carl Jacobson

FROM: Gretchen Baer

SUBJECT: Trip Report

Site: Tuba City, Arizona

Dates of Sampling Event: August 15-17, 2011

Team Members: Jeff Price, Joe Trevino, Dave Atkinson, Kent Moe, Jeff Walters, Dan Sellers, and Gretchen Baer

Number of Locations Sampled: Samples were collected from 100 of the 114 locations identified on the sampling notification letter as follows.

	Locations That Were Sampled	Planned Locations
Monitoring wells	67	69
Extraction wells	26	37
Surface locations	7	7
Treatment System locations	0	1

Locations Not Sampled/Reason: A total of 14 locations were not sampled for the following reasons:

- Monitoring wells 0283 and 0909 did not have enough water to sample.
- The pumps at 11 extraction wells (0936, 1101, 1109, 1110, 1114, 1115, 1121, 1126, 1127, 1128, and 1131) were not functioning.
- 1205 is the treatment system distillate. The treatment system was not operating.

Location Specific Information:

Location IDs	Comments
0251, 0258, 0262, 0263, 0264, 0266, 0272, 0273, 0274, 0277, 0278, 0280, 0281, 0286, 0287, 0288, 0289, 0290, 0683, 0684, 0690, 0692, 0906, 0908, 0911, 0912, 0913, 0914, 0915, 0916, 0929, 0934, 0940, 0941, 0945, 0947	Category II based on water level drop.

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Location IDs	Comments
0258, 0261, 0290, 0683, 0684, 0759, 0778, 0914, 0915, 0916, 0947, 0965, 1571, 1573	Measurements were recorded with YSI "G." This instrument may have had a low bias for ORP only, based on comparison with historical results and on tap water checks. The tap water checks demonstrated a possible low bias, but not an equipment failure.
0282	Well was purged to below top of pump; pump depth measured at 84.69'.
0283	Could not sample. Hit top of pump at 80.23'.
0686	Deep sand around this well. Parked by ponds to the south and walked to well.
0759, 1573	Surface water. Not enough water collected to record alkalinity.
0901	Turbidity requirements met but a slow and long purge is necessary.
0903	Pump produces half volumes each cycle.
0909	Could not sample. Top of pump = 73.35'. WL = 74.70'. Total Depth measured = 76.9'. Note that this WL was taken immediately after the pump was removed. It is not a measurement of the static water level.
0914, 0915, 0916	pH is ~10 or higher.

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

False ID	True ID	Ticket Number	Sample Type	Associated Matrix
2186	1132	JJS 393	Duplicate	Groundwater
2532	1133	JJS 372	Duplicate	Groundwater
2987	0935	JJS 363	Duplicate	Groundwater
2988	1113	JJS 364	Duplicate	Groundwater
2989	1112	JJS 365	Duplicate	Groundwater
2990	1116	JJS 366	Duplicate	Groundwater
2991	Associated with 0759, 0778, 0965, 1571	JJS 367	Equipment Blank	Surface Water

Report Identification Number (RIN) Assigned: 11084014. Field data sheets can be found in Condor\sms\11084014 in the FieldData folder.

Sample Shipment: Samples were shipped overnight via FedEx to ALS Laboratory Group, Fort Collins, CO, from Tuba City, Arizona, on August 17 and 18, 2011. The second shipment was received by the laboratory a day late on August 20, 2011, due to a FedEx delay.

Water Level Measurements: Water levels were measured in all sampled wells, and in 9 additional wells. Water level data reports for these 9 additional wells (TUB01_8192001.pdf and TUB01_8262011.pdf) can be found in Condor\sms\11084014. Well 0948 is a former monitoring well with a pump added to supply the treatment plant lab with domestic non-potable water. Historically, the water level at this well has fluctuated widely because it is pumped.

Well Inspection Summary: All wells were in good condition.

Field Variance:

- At the Category I well 0282, the water level was below the top of the pump during the purge and could not be measured; therefore, water level stability could not be documented.

- Surface water locations 0759 and 1573: insufficient volume was collected to measure alkalinity.

All other samples were collected according to the *Sampling and Analysis Plan for the U. S. Department of Energy Office of Legacy Management Sites.*

Equipment: All equipment functioned properly. Multi-gas meters were used to verify the air quality in the extraction vaults. Monitoring wells were sampled with a peristaltic pump and dedicated tubing or a dedicated bladder pump. Extraction wells have dedicated submersible pumps and were sampled at taps. Surface waters were sampled using a peristaltic pump and dedicated tubing, a peristaltic pump and tubing reel, or by container immersion. New, dedicated tubing was placed at pond locations 1569 and 1570. This tubing was left at the site. An equipment blank was collected after decontamination of non-dedicated equipment (the tubing reel).

Dataloggers: Dataloggers were downloaded and checked for accuracy at the following locations: 0263, 0264, 0265, 0274, 0286, 0287, 0908, 0929, 0934, 0941, 0943, and 0946. Data and information from each data logger can be viewed electronically using SEEPro.

Regulatory: Nothing to note.

Institutional Controls:

Fences, Gates, and Locks: Acceptable
Signs: Acceptable
Trespassing/Site Disturbances: None observed

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

Disposal Cell/Drainage Structure Integrity: No issues observed
Vegetation/Noxious Weed Concerns: None observed
Maintenance Requirements:

- The well completion data for 0283 and 0909 should be examined before the next event. If it is determined that the water in these wells is formation water and not just sump water, the water may have to be sampled by (1) lowering the installed pumps, (2) bailing, or (3) installing new pumps with more flexible bladders.
- An unusual number of extraction well pumps were non-functional for this event. Site personnel are working to get the parts necessary to repair the controls for the pumps.

Safety Issues: None
Access Issues: None

Corrective Action Required/Taken: None

(GB/lcg)

cc: (electronic)
Richard Bush, DOE
Timothy Bartlett, Stoller
Steve Donivan, Stoller
Susan Kamp, Stoller
EDD Delivery

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Data Validation Package for the Tuba City, Arizona, Disposal Site, August 2011

The U.S. Department of Energy (DOE) has prepared a Data Validation Package containing the water sampling data generated from the August 2011 sampling event at the Tuba City, Arizona, Site. This package includes worksheets and reports that document the sampling activities and validation procedures conducted. **At your request, you are receiving a hard copy of the report.**

The report is also available for your review on the Internet at the DOE Office of Legacy Management (LM) website – www.lm.doe.gov. From the LM website home page, select the United States map icon titled Legacy Management Sites. Then select the Tuba City Site from the drop-down list. The report will be available on the Tuba City Site page of the LM website under Site Documents and Links.

U.S. DEPARTMENT OF ENERGY | Legacy Management