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Groundwater Monitoring at Sandia National Laboratories/New Mexico Burn Site Conducted by NMED DOE OB for FFY 2010 Q-4

The New Mexico Environment Department (NMED) DOE Oversight Bureau (Bureau) has compiled and assessed groundwater data from samples collected in September 2010. The Bureau collected groundwater samples from Burn Site groundwater monitoring wells CYNMW6, CYN-MW9, CYN-MW10, CYN-MW11 and CYN-MW12. Split samples were collected using standard Sandia National Laboratories/New Mexico (SNL/NM or Sandia) sampling procedures and equipment. Bureau samples were submitted to an independent contract laboratory to be analyzed for metals, non-metal inorganics, organics, and radionuclides. All samples analyzed for nitrate-nitrite as N were detected at or above the EPA MCL of 10 mg/L.

Data Assessment

Data results are compared to applicable Maximum Contaminant Levels (MCLs) from the U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations (40 CFR 141). Perchlorate results are compared to the Compliance Order on Consent (COOC) Pursuant to the New Mexico Hazardous Waste Act 74-4-10: Sandia National Laboratories Consent Order, New Mexico Environment Department, April 19, 2004.

Results

Analytical results for total unfiltered target compound list (TAL) metals plus uranium are listed in Table-1. All metal concentrations were below established MCLs.

Analytical results for major anions (bromide, chloride, fluoride and sulfate), nitrate-nitrite as Nitrogen, and perchlorate are listed in Table-2. Nitrate concentrations were detected at or above the EPA MCL of 10 mg/L at monitoring wells CYN-MW6 (25 mg/L), CYN-MW9 (32 mg/L), CYN-MW10 (11 mg/L), CYN- MW11 (10 mg/L) and CYN-MW12 (11 mg/L). The perchlorate concentration at CYN-MW6 (6.3 µg/L) exceeded the NMED COOC screening level of 4 µg/L. There is currently no federal MCL that exists for perchlorate. No other major anions were detected above established MCLs.

Analytical results for High Explosives (HE) are listed in Table-3. No HE compounds were detected above the Method Detection Limit (MDL).

Analytical results for gamma emitting isotopes, gross alpha and beta, and isotopic uranium are listed in Table-4. All radionuclide activities were below established MCLs.

Analytical results for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and gasoline/diesel/oil organic compounds are listed in Table-5, Table-6 and Table-7, respectively. No sample concentrations were detected above established MCLs.

Conclusions

Data results from Sandia for this sampling event have been reviewed and evaluated against data results from NMED. Detection limits and methods vary, but overall data results from both organizations are comparable.

All parameters except nitrates were detected below established EPA standards. Nitrate concentrations exceeded the EPA MCL at monitoring wells CYN-MW6, CYN-MW9, CYNMW10, CYN-MW11 and CYN-MW12 during this sampling event. Nitrate concentrations from CYN-MW6 have consistently exceeded the MCL (Graph-1). Nitrate data collected by the Bureau from CYN-MW6 show a slight increase since 2006. Historical data from Sandia (2006-2011) also indicate NPN concentrations have been steady to slightly increasing over time.

Monitoring wells CYN-MW9, CYN-MW10, CYN-MW11 and CYN-MW12 were sampled for nitrates for the first time since their installation during FFY 2010 Q-4. Nitrate results from the quarter compare well to those collected by Sandia (Graph-2).

Perchlorate concentrations at CYN-MW6 have consistently exceeded the SNL COOC screening level of 4 μg/L since 2006 (Graph-3). Perchlorate data results from samples collected in FFY10 Q-4 by the Bureau from CYN-MW6 compare well with historical results collected by NMED and Sandia.

Response

Questions or comments should be addressed to Chris Armijo by phone at (505) 383-2070, by e-mail at chris.armijo1@state.nm.us, or to the address in the letterhead.

Enclosure:
(1) Table-1 Total Metals plus Uranium Results
(2) Table-2 Anions, Nitrate-Nitrite as N, & Perchlorate Results
(3) Table-3 High Explosive Compounds Results
(4) Table-4 Gamma Emitting Isotopes, Gross Alpha and Beta, and Isotopic Uranium Results
(5) Table-5 Volatile Organic Compounds Results
(6) Table-6 Semi-Volatile Organic Compounds Results
(7) Table-7 Diesel/Gasoline/Oil Range Organic Compounds Results
(8) Graph-1 CYN-MW6 Nitrate-Nitrite as N Concentrations
(9) Graph-2 Nitrate-Nitrite as N Results September 2010
(10) Graph-3 CYN-MW6 Perchlorate Concentrations

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File: SGE42. Groundwater Monitoring. BSG. FFY 2010 Q-4

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Table-1 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Total Metals + Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CYN-MW6 20-Sep-10	Aluminum	0.04	NE	0.2	0.04	E8,U	SW-846:6010B
	Antimony	0.00023	0.006	0.003	0.00023	E8,U	SW-846:6020
	Arsenic	0.0037	0.01	0.001	0.00034		SW-846:6020
	Barium	0.072	2	0.001	0.00026		SW-846:6020
	Beryllium	0.0004	0.004	0.001	0.0004	E8,U	SW-846:6010B
	Cadmium	0.00009	0.005	0.001	0.00009	E8,U	SW-846:6020
	Calcium	140	NE	2	0.012		SW-846:6010B
	Chromium	0.0003	0.1	0.001	0.00023	J	SW-846:6020
	Cobalt	0.00028	NE	0.001	0.00005	J	SW-846:6020
	Copper	0.002	1.3	0.001	0.00007		SW-846:6020
	Iron	0.036	NE	0.05	0.036	E8,U	SW-846:6010B
	Lead	0.00006	0.015	0.001	0.00006	E8,U	SW-846:6020
	Magnesium	39	NE	2	0.04		SW-846:6010B
	Manganese	0.0011	NE	0.005	0.00007	J	SW-846:6020
	Mercury	0.000089	0.002	0.0005	0.000089	E8,U	SW-846:7040
	Nickel	0.0047	NE	0.001	0.00017		SW-846:6020
	Potassium	2.2	NE	2	0.12		SW-846:6010B
	Selenium	0.017	0.05	0.002	0.0012	M1	SW-846:6020
	Silver	0.00012	NE	0.001	0.00009	M2, J	SW-846:6020
	Sodium	42	NE	2	0.65		SW-846:6010B
	Thallium	0.00012	0.002	0.001	0.00012	E8,U	SW-846:6020
	Uranium	0.0089	0.03	0.001	0.00005		SW-846:6020
	Vanadium	0.0025	NE	0.001	0.00019		SW-846:6020
	Zinc	0.025	NE	0.01	0.0033		SW-846:6020
CYN-MW9 28-Sep-10	Aluminum	0.04	NE	0.2	0.04	E8,U	SW-846:6010B
	Antimony	0.00023	0.006	0.003	0.00023	E8,U	SW-846:6020
	Arsenic	0.002	0.01	0.001	0.00034		SW-846:6020
	Barium	0.071	2	0.001	0.00026		SW-846:6020
	Beryllium	0.0004	0.004	0.001	0.0004	E8,U	SW-846:6010B
	Cadmium	0.00009	0.005	0.001	0.00009	E8,U	SW-846:6020
	Calcium	150	NE	2	0.012		SW-846:6010B
	Chromium	0.0004	0.1	0.001	0.00023	J	SW-846:6020
	Cobalt	0.00042	NE	0.001	0.00005	J	SW-846:6020
	Copper	0.0012	1.3	0.001	0.00007		SW-846:6020
	Iron	0.036	NE	0.05	0.036	E8,U	SW-846:6010B
	Lead	0.000061	0.015	0.001	0.00006	J	SW-846:6020
	Magnesium	44	NE	2	0.04		SW-846:6010B
	Manganese	0.072	NE	0.005	0.00007		SW-846:6020
	Mercury	0.000089	0.002	0.0005	0.000089	E8,U	SW-846:7040
	Nickel	0.0066	NE	0.001	0.00017		SW-846:6020
	Potassium	2.9	NE	2	0.12		SW-846:6010B
	Selenium	0.0066	0.05	0.002	0.0012		SW-846:6020
	Silver	0.00009	NE	0.001	0.00009	E8,U	SW-846:6020
	Sodium	40	NE	2	0.65		SW-846:6010B
	Thallium	0.00012	0.002	0.001	0.00012	E8,U	SW-846:6020
	Uranium	0.0082	0.03	0.001	0.00005		SW-846:6020
	Vanadium	0.0016	NE	0.001	0.00019		SW-846:6020
	Zinc	0.034	NE	0.01	0.0033		SW-846:6020

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Result falls between the MDL and RL.

M1= Matrix spike recovery was high; the associated blank spike recovery was acceptable.

M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

NE = Not Established

U = Analyte not detected at or above the reporting limit or MDL

Table-1 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Total Metals + Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CYN-MW10 27-Sep-10	Aluminum	0.04	NE	0.2	0.04	E8,U	SW-846:6010B
	Antimony	0.00023	0.006	0.003	0.00023	E8,U	SW-846:6020
	Arsenic	0.0021	0.01	0.001	0.00034		SW-846:6020
	Barium	0.072	2	0.001	0.00026		SW-846:6020
	Beryllium	0.0004	0.004	0.001	0.0004	E8,U	SW-846:6010B
	Cadmium	0.00009	0.005	0.001	0.00009	E8,U	SW-846:6020
	Calcium	130	NE	2	0.012		SW-846:6010B
	Chromium	0.00023	0.1	0.001	0.00023	E8,U	SW-846:6020
	Cobalt	0.00019	NE	0.001	0.00005	J	SW-846:6020
	Copper	0.00095	1.3	0.001	0.00007	J	SW-846:6020
	Iron	0.036	NE	0.05	0.036	E8,U	SW-846:6010B
	Lead	0.00006	0.015	0.001	0.00006	E8,U	SW-846:6020
	Magnesium	34	NE	2	0.04		SW-846:6010B
	Manganese	0.0024	NE	0.005	0.00007	J	SW-846:6020
	Mercury	0.000089	0.002	0.0005	0.000089	E8,U	SW-846:7040
	Nickel	0.0041	NE	0.001	0.00017		SW-846:6020
	Potassium	2.6	NE	2	0.12		SW-846:6010B
	Selenium	0.011	0.05	0.002	0.0012		SW-846:6020
	Silver	0.00012	NE	0.001	0.00009	J	SW-846:6020
	Sodium	37	NE	2	0.65		SW-846:6010B
	Thallium	0.00012	0.002	0.001	0.00012	E8,U	SW-846:6020
	Uranium	0.0068	0.03	0.001	0.00005		SW-846:6020
	Vanadium	0.003	NE	0.001	0.00019		SW-846:6020
	Zinc	0.0033	NE	0.01	0.0033	E8,U	SW-846:6020
CYN-MW11 29-Sep-10	Aluminum	0.042	NE	0.2	0.04	J	SW-846:6010B
	Antimony	0.00061	0.006	0.003	0.00023	J	SW-846:6020
	Arsenic	0.002	0.01	0.001	0.00034		SW-846:6020
	Barium	0.086	2	0.001	0.00026		SW-846:6020
	Beryllium	0.0004	0.004	0.001	0.0004	E8,U	SW-846:6010B
	Cadmium	0.00009	0.005	0.001	0.00009	E8,U	SW-846:6020
	Calcium	130	NE	2	0.012		SW-846:6010B
	Chromium	0.00063	0.1	0.001	0.00023	J	SW-846:6020
	Cobalt	0.0013	NE	0.001	0.00005		SW-846:6020
	Copper	0.0013	1.3	0.001	0.00007		SW-846:6020
	Iron	0.053	NE	0.05	0.036		SW-846:6010B
	Lead	0.00014	0.015	0.001	0.00006	J	SW-846:6020
	Magnesium	40	NE	2	0.04		SW-846:6010B
	Manganese	0.77	NE	0.005	0.00007		SW-846:6020
	Mercury	0.000089	0.002	0.0005	0.000089	E8,U	SW-846:7040
	Nickel	0.0056	NE	0.001	0.00017		SW-846:6020
	Potassium	3.6	NE	2	0.12		SW-846:6010B
	Selenium	0.0037	0.05	0.002	0.0012		SW-846:6020
	Silver	0.00009	NE	0.001	0.00009	E8, M2,U	SW-846:6020
	Sodium	48	NE	2	0.65		SW-846:6010B
	Thallium	0.00012	0.002	0.001	0.00012	E8,U	SW-846:6020
	Uranium	0.008	0.03	0.001	0.00005		SW-846:6020
	Vanadium	0.0013	NE	0.001	0.00019		SW-846:6020
	Zinc	0.67	NE	0.01	0.0033		SW-846:6020

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Result falls between the MDL and RL.

M1= Matrix spike recovery was high; the associated blank spike recovery was acceptable.

M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

NE = Not Established

U = Analyte not detected at or above the reporting limit or MDL

Table-1 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Total Metals + Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CYN-MW12 23-Sep-10	Aluminum	0.04	NE	0.2	0.04	E8,U	SW-846:6010B
	Antimony	0.00023	0.006	0.003	0.00023	E8,U	SW-846:6020
	Arsenic	0.0018	0.01	0.001	0.00034		SW-846:6020
	Barium	0.047	2	0.001	0.00026		SW-846:6020
	Beryllium	0.0004	0.004	0.001	0.0004	E8,U	SW-846:6010B
	Cadmium	0.00027	0.005	0.001	0.00009	J	SW-846:6020
	Calcium	150	NE	2	0.012		SW-846:6010B
	Chromium	0.00023	0.1	0.001	0.00023	E8,U	SW-846:6020
	Cobalt	0.0012	NE	0.001	0.00005		SW-846:6020
	Copper	0.0017	1.3	0.001	0.00007		SW-846:6020
	Iron	0.038	NE	0.05	0.036	J	SW-846:6010B
	Lead	0.00006	0.015	0.001	0.00006	E8,U	SW-846:6020
	Magnesium	41	NE	2	0.04		SW-846:6010B
	Manganese	0.5	NE	0.005	0.00007		SW-846:6020
	Mercury	0.000089	0.002	0.0005	0.000089	E8,U	SW-846:7040
	Nickel	0.0057	NE	0.001	0.00017		SW-846:6020
	Potassium	6.9	NE	2	0.12		SW-846:6010B
	Selenium	0.0093	0.05	0.002	0.0012		SW-846:6020
	Silver	0.00012	NE	0.001	0.00009	J	SW-846:6020
	Sodium	47	NE	2	0.65		SW-846:6010B
	Thallium	0.00012	0.002	0.001	0.00012	E8,U	SW-846:6020
	Uranium	0.0086	0.03	0.001	0.00005		SW-846:6020
	Vanadium	0.0011	NE	0.001	0.00019		SW-846:6020
	Zinc	0.21	NE	0.01	0.0033		SW-846:6020

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Result falls between the MDL and RL.

M1= Matrix spike recovery was high; the associated blank spike recovery was acceptable.

M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

NE = Not Established

U = Analyte not detected at or above the reporting limit or MDL

Table-2 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Anions, Nitrate-Nitrite as N, & Perchlorate

Monitoring Well/ Sample Date	Analyte	Result	EPA MCL	Quantitation Limit	MDL	Units	Laboratory Qualifier	Analytical Method
CYN-MW6 20-Sep-10	Bromide	0.93	NE	0.5	0.077	mg/L		EPA:300
	Chloride	70	NE	2	0.056	mg/L	M2	EPA:300
	Fluoride	0.58	4	0.4	0.026	mg/L		EPA:300
	Nitrate-Nitrite as N	**25**	10	2	0.27	mg/L		EPA:300.0
	Perchlorate	6.3	NE	2	0.47	µg/L		EPA:314.0
	Sulfate	140	NE	10	0.45	mg/L		EPA:300
CYN-MW9 28-Sep-10	Bromide	1.2	NE	0.5	0.077	mg/L		EPA:300
	Chloride	89	NE	2	0.056	mg/L		EPA:300
	Fluoride	0.83	4	0.4	0.026	mg/L		EPA:300
	Nitrate-Nitrite as N	**32**	10	2	0.27	mg/L		EPA:300.0
	Perchlorate	2.3	NE	2	0.47	µg/L		EPA:314.0
	Sulfate	190	NE	2	0.091	mg/L		EPA:300
CYN-MW10 27-Sep-10	Bromide	0.81	NE	0.5	0.077	mg/L		EPA:300
	Chloride	60	NE	2	0.056	mg/L		EPA:300
	Fluoride	0.57	4	0.4	0.026	mg/L		EPA:300
	Nitrate-Nitrite as N	**11**	10	2	0.27	mg/L		EPA:300.0
	Perchlorate	1.4	NE	2	0.47	µg/L	J	EPA:314.0
	Sulfate	180	NE	10	0.45	mg/L		EPA:300
CYN-MW11 29-Sep-10	Bromide	1.1	NE	0.5	0.077	mg/L		EPA:300
	Chloride	83	NE	2	0.056	mg/L		EPA:300
	Fluoride	0.79	4	0.4	0.026	mg/L		EPA:300
	Nitrate-Nitrite as N	**10**	10	2	0.27	mg/L		EPA:300.0
	Perchlorate	1.2	NE	2	0.47	µg/L	J	EPA:314.0
	Sulfate	190	NE	2	0.091	mg/L		EPA:300
CYN-MW12 23-Sep-10	Bromide	1	NE	0.5	0.077	mg/L		EPA:300
	Chloride	91	NE	2	0.056	mg/L		EPA:300
	Fluoride	1.3	4	0.4	0.026	mg/L		EPA:300
	Nitrate-Nitrite as N	**11**	10	2	0.27	mg/L		EPA:300.0
	Perchlorate	2	NE	2	0.47	µg/L		EPA:314.0
	Sulfate	220	NE	10	0.45	mg/L		EPA:300

J = Result falls between the MDL and RL.

M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

NE = Not Established

Table-3 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: High Explosive Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW9 28-Sep-10	1,3,5-trinitrobenzene	0.02	0.12	0.02	U	SW-846:8321A(M)
	1,3-dichlorobenzene	0.017	0.12	0.017	U	SW-846:8321A(M)
	2,4,6-Trinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2,4-Dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A(M)
	2,6-Dinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2-Amino-4,6-dinitrotoluene	0.025	0.12	0.025	U	SW-846:8321A(M)
	2-nitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	3-Nitrotoluene	0.03	0.12	0.03	U	SW-846:8321A(M)
	4-Amino-2,6-dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A(M)
	4-Methylnitrobenzene	0.031	0.12	0.031	U	SW-846:8321A(M)
	HMX	0.091	0.48	0.091	U	SW-846:8321A(M)
	Nitrobenzene	0.04	0.12	0.04	U	SW-846:8321A(M)
	RDX	0.025	0.12	0.025	U	SW-846:8321A(M)
	Tetryl	0.025	0.12	0.025	U	SW-846:8321A(M)
CYN-MW10 27-Sep-10	1,3,5-trinitrobenzene	0.02	0.12	0.02	U	SW-846:8321A(M)
	1,3-dichlorobenzene	0.017	0.12	0.017	U	SW-846:8321A(M)
	2,4,6-Trinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2,4-Dinitrotoluene	0.022	0.12	0.022	U	SW-846:8321A(M)
	2,6-Dinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2-Amino-4,6-dinitrotoluene	0.025	0.12	0.025	U	SW-846:8321A(M)
	2-nitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	3-Nitrotoluene	0.03	0.12	0.03	U	SW-846:8321A(M)
	4-Amino-2,6-dinitrotoluene	0.022	0.12	0.022	U	SW-846:8321A(M)
	4-Methylnitrobenzene	0.031	0.12	0.031	U	SW-846:8321A(M)
	HMX	0.09	0.47	0.09	U	SW-846:8321A(M)
	Nitrobenzene	0.039	0.12	0.039	U	SW-846:8321A(M)
	RDX	0.025	0.12	0.025	U	SW-846:8321A(M)
	Tetryl	0.025	0.12	0.025	U	SW-846:8321A(M)
CYN-MW11 29-Sep-10	1,3,5-trinitrobenzene	0.02	0.12	0.02	U	SW-846:8321A(M)
	1,3-dichlorobenzene	0.017	0.12	0.017	U	SW-846:8321A(M)
	2,4,6-Trinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2,4-Dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A(M)
	2,6-Dinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2-Amino-4,6-dinitrotoluene	0.025	0.12	0.025	U	SW-846:8321A(M)
	2-nitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	3-Nitrotoluene	0.03	0.12	0.03	U	SW-846:8321A(M)
	4-Amino-2,6-dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A(M)
	4-Methylnitrobenzene	0.031	0.12	0.031	U	SW-846:8321A(M)
	HMX	0.09	0.48	0.09	U	SW-846:8321A(M)
	Nitrobenzene	0.039	0.12	0.039	U	SW-846:8321A(M)
	RDX	0.025	0.12	0.025	U	SW-846:8321A(M)
	Tetryl	0.025	0.12	0.025	U	SW-846:8321A(M)

U = Analyte not detected at or above the reporting limit or MDL

Table-3 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: High Explosive Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW12 23-Sep-10	1,3,5-trinitrobenzene	0.02	0.12	0.02	U	SW-846:8321A(M)
	1,3-dichlorobenzene	0.017	0.12	0.017	U	SW-846:8321A(M)
	2,4,6-Trinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2,4-Dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A(M)
	2,6-Dinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	2-Amino-4,6-dinitrotoluene	0.025	0.12	0.025	U	SW-846:8321A(M)
	2-nitrotoluene	0.026	0.12	0.026	U	SW-846:8321A(M)
	3-Nitrotoluene	0.03	0.12	0.03	U	SW-846:8321A(M)
	4-Amino-2,6-dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A(M)
	4-Methylnitrobenzene	0.031	0.12	0.031	U	SW-846:8321A(M)
	HMX	0.091	0.48	0.091	U	SW-846:8321A(M)
	Nitrobenzene	0.04	0.12	0.04	U	SW-846:8321A(M)
	RDX	0.025	0.12	0.025	U	SW-846:8321A(M)
	Tetryl	0.025	0.12	0.025	U	SW-846:8321A(M)

U = Analyte not detected at or above the reporting limit or MDL

Table-4 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Gamma Emitting Isotopes, Gross Alpha/Beta, & Isotopic Uranium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	±		MDA (pCi/L)	Laboratory Qualifier	Analytical Method
CYN-MW6 20-Sep-10	Actinium-228	4.6	±	19	32	U	713R11
	Aluminum-26	-1.2	±	2.8	5.1	U	713R11
	Americium-241	8.8	±	14	24	U	713R11
	Antimony-124	-3.3	±	5.2	9	U	713R11
	Antimony-125	3.1	±	5.8	10	U	713R11
	Beryllium-7	-24	±	38	66	U	713R11
	Bismuth-212	39	±	35	56	U	713R11
	Bismuth-214	-9.2	±	15	25	U,J	713R11
	Cadmium-109	17	±	56	93	U	713R11
	Cerium-139	0.88	±	2	3.2	U	713R11
	Cerium-144	-16	±	12	21	U	713R11
	Cesium-134	-2.9	±	2.7	4.7	U	713R11
	Cesium-137	-1.1	±	2.4	4.2	U	713R11
	Chromium-51	50	±	77	130	U	713R11
	Cobalt-56	4.6	±	7.1	12	U	713R11
	Cobalt-57	-0.37	±	1.6	2.7	U	713R11
	Cobalt-58	-1.2	±	4.3	7.5	U	713R11
	Cobalt-60	0.035	±	2.5	4.3	U	713R11
	Europium-152	-9.9	±	12	22	U	713R11
	Europium-154	-8.5	±	14	25	U	713R11
	Europium-155	5.4	±	6.6	11	U	713R11
	Gross Alpha	11	±	2.2	1.6	M3	724R10
	Gross Beta	6.6	±	1.7	2.1	M3	724R10
	Iodine-131	-110	±	530	900	U	713R11
	Iron-59	-4.3	±	12	21	U	713R11
	Lead-212	1.6	±	8.5	14	U	713R11
	Lead-214	-3.1	±	9.3	16	U,J	713R11
	Manganese-54	2	±	2.8	4.6	U	713R11
	Niobium-94	0.65	±	2.3	3.9	U	713R11
	Niobium-95	-4.5	±	4.9	8.6	U	713R11
	Potassium-40	-73	±	71	120	U	713R11
	Protactinium-234m	570	±	430	680	U	713R11
	Ruthenium-106	-16	±	25	43	U	713R11
	Scandium-46	1.5	±	3.7	6.3	U	713R11
	Silver-110m	-0.24	±	2.6	4.4	U	713R11
	Sodium-22	-1.8	±	2.7	4.8	U	713R11
	Strontium-85	7.4	±	5.9	9.2	U	713R11
	Thallium-208	5.5	±	2.8	4.4	TI	713R11
	Thorium-227	-8.4	±	16	28	U	713R11
	Thorium-234	-20	±	68	120	U	713R11
	Tritium	-140	±	210	360	U	704R9
	Uranium-234	10	±	1.8	0.12		714R12
	Uranium-235	19	±	11	17	TI	713R11
	Uranium-235	0.13	±	0.089	0.076	LT	714R12
	Uranium-238	2.9	±	0.6	0.033		714R12
	Zinc-65	-2.7	±	6.4	11	U	713R11

J = Estimated Value

LT = Result is < than Requested MDC but > than sample specific MDC.

M3 = Reported activity is greater than the reported MDA

TI = Nuclide identification is tentative

U = Analyzed for but not detected

Table-4 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Gamma Emitting Isotopes, Gross Alpha/Beta, & Isotopic Uranium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	±		MDA (pCi/L)	Laboratory Qualifier	Analytical Method
CYN-MW9 28-Sep-10	Actinium-228	19	±	9.8	15	TI	713R11
	Aluminum-26	1.1	±	2.8	4.7	U	713R11
	Americium-241	14	±	13	20	U	713R11
	Antimony-124	1	±	4.8	8	U	713R11
	Antimony-125	7.3	±	5.7	10	U	713R11
	Beryllium-7	-56	±	53	91	U	713R11
	Bismuth-212	55	±	35	54	TI	713R11
	Bismuth-214	-0.73	±	12	20	U,J	713R11
	Cadmium-109	-9.5	±	44	75	U	713R11
	Cerium-139	-1.1	±	1.8	3.1	U	713R11
	Cerium-144	5.3	±	16	27	U	713R11
	Cesium-134	-1.6	±	2.7	4.6	U	713R11
	Cesium-137	0.32	±	2.5	4.2	U	713R11
	Chromium-51	-7.1	±	61	100	U	713R11
	Cobalt-56	1.6	±	6	10	U	713R11
	Cobalt-57	0.088	±	1.6	2.6	U	713R11
	Cobalt-58	-3.5	±	3.9	6.9	U	713R11
	Cobalt-60	-0.8	±	2.4	4.3	U	713R11
	Europium-152	-4.6	±	12	22	U	713R11
	Europium-154	-3.5	±	12	21	U	713R11
	Europium-155	1.8	±	8.6	14	U	713R11
	Gross Alpha	6.3	±	1.5	1.4		724R10
	Gross Beta	3.9	±	1.3	1.8	M3	724R10
	Iodine-131	20	±	240	410	U	713R11
	Iron-59	6.5	±	11	18	U	713R11
	Lead-212	-0.85	±	7.8	13	U	713R11
	Lead-214	6.8	±	4.6	7.2	U,J	713R11
	Manganese-54	-1.9	±	2.7	4.7	U	713R11
	Niobium-94	-1.5	±	2.5	4.3	U	713R11
	Niobium-95	3.5	±	3.9	6.3	U	713R11
	Potassium-40	-4.6	±	66	110	U	713R11
	Protactinium-234m	240	±	260	420	U	713R11
	Ruthenium-106	-2.9	±	25	43	U	713R11
	Scandium-46	-2.7	±	3.5	6.2	U	713R11
	Silver-110m	0.056	±	2.6	4.4	U	713R11
	Sodium-22	1.2	±	2.7	4.5	U	713R11
	Strontium-85	5.6	±	5.9	9.4	U	713R11
	Thallium-208	-0.45	±	6.2	10	U	713R11
	Thorium-227	4.2	±	10	17	U	713R11
	Thorium-234	35	±	72	120	U	713R11
	Tritium	12	±	220	360	U	704R9
	Uranium-234	6.2	±	1.1	0.11		714R12
	Uranium-235	12	±	11	17	U	713R11
	Uranium-235	0.12	±	0.088	0.076	LT	714R12
	Uranium-238	2.1	±	0.47	0.065		714R12
	Zinc-65	1.6	±	5.8	9.9	U	713R11

J = Estimated Value

LT = Result is < than Requested MDC but > than sample specific MDC.

M3 = Reported activity is greater than the reported MDA

TI = Nuclide identification is tentative

U = Analyzed for but not detected

Table-4 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Gamma Emitting Isotopes, Gross Alpha/Beta, & Isotopic Uranium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	±		MDA (pCi/L)	Laboratory Qualifier	Analytical Method
CYN-MW10 27-Sep-10	Actinium-228	-0.4	±	12	20	U	713R11
	Aluminum-26	1	±	1.8	3	U	713R11
	Americium-241	12	±	7.7	12	TI	713R11
	Antimony-124	19	±	3.4	3.8	TI	713R11
	Antimony-125	3.9	±	3.2	5.6	U	713R11
	Beryllium-7	0.93	±	21	36	U	713R11
	Bismuth-212	12	±	47	78	U	713R11
	Bismuth-214	-32	±	9.6	15	U,J	713R11
	Cadmium-109	-13	±	78	130	U	713R11
	Cerium-139	-0.52	±	1.4	2.4	U	713R11
	Cerium-144	-2.1	±	9	15	U	713R11
	Cesium-134	0.034	±	2.2	3.7	U	713R11
	Cesium-137	-1.4	±	1.4	2.3	U	713R11
	Chromium-51	-2.7	±	39	65	U	713R11
	Cobalt-56	0.55	±	8.1	13	U	713R11
	Cobalt-57	0.52	±	1.1	1.8	U	713R11
	Cobalt-58	-0.69	±	3.2	5.4	U	713R11
	Cobalt-60	-0.17	±	1.6	2.8	U	713R11
	Europium-152	-2.5	±	15	25	U	713R11
	Europium-154	-16	±	12	20	U	713R11
	Europium-155	4	±	4.4	7.1	U	713R11
	Gross Alpha	8.6	±	1.9	1.5		724R10
	Gross Beta	4	±	1.6	2.4	M3	724R10
	Iodine-131	29	±	160	270	U	713R11
	Iron-59	8.3	±	6.1	9.8	U	713R11
	Lead-212	1.5	±	5	8.3	U	713R11
	Lead-214	-5.6	±	7.6	13	U,J	713R11
	Manganese-54	-2	±	2.2	3.7	U	713R11
	Niobium-94	1.1	±	2	3.2	U	713R11
	Niobium-95	-4.3	±	3.5	6	U	713R11
	Potassium-40	-58	±	45	75	U	713R11
	Protactinium-234m	490	±	240	380		713R11
	Ruthenium-106	-6	±	20	33	U	713R11
	Scandium-46	-1.2	±	2.1	3.6	U	713R11
	Silver-110m	-1.2	±	1.4	2.4	U	713R11
	Sodium-22	0.38	±	1.7	2.8	U	713R11
	Strontium-85	6.1	±	3.2	5	TI	713R11
	Thallium-208	0.72	±	2.8	4.8	U	713R11
	Thorium-227	-15	±	13	22	U	713R11
	Thorium-234	-1.9	±	51	84	U	713R11
	Tritium	-150	±	210	370	U	704R9
	Uranium-234	8	±	1.4	0.078		714R12
	Uranium-235	15	±	6.8	13	TI	713R11
	Uranium-235	0.15	±	0.095	0.04	LT	714R12
	Uranium-238	2.4	±	0.51	0.078		714R12
	Zinc-65	-3.2	±	5.4	9.1	U	713R11

J = Estimated Value

LT = Result is < than Requested MDC but > than sample specific MDC.

M3 = Reported activity is greater than the reported MDA

TI = Nuclide identification is tentative

U = Analyzed for but not detected

Table-4 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Gamma Emitting Isotopes, Gross Alpha/Beta, & Isotopic Uranium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	±		MDA (pCi/L)	Laboratory Qualifier	Analytical Method
CYN-MW11 29-Sep-10	Actinium-228	-7	±	10	17	U	713R11
	Aluminum-26	-0.32	±	1.5	2.5	U	713R11
	Americium-241	0	±	17	28	U	713R11
	Antimony-124	13	±	2.8	3.6	TI	713R11
	Antimony-125	1.5	±	3	5	U	713R11
	Beryllium-7	11	±	18	30	U	713R11
	Bismuth-212	26	±	18	28	U	713R11
	Bismuth-214	-3.3	±	7.4	12	U,J	713R11
	Cadmium-109	-27	±	37	62	U	713R11
	Cerium-139	-0.89	±	1.4	2.4	U	713R11
	Cerium-144	2.1	±	8.8	15	U	713R11
	Cesium-134	0.36	±	2.2	3.7	U	713R11
	Cesium-137	0.49	±	1.3	2.1	U	713R11
	Chromium-51	-1.5	±	39	66	U	713R11
	Cobalt-56	2.6	±	3.4	5.6	U	713R11
	Cobalt-57	0.71	±	1.1	1.8	U	713R11
	Cobalt-58	0.34	±	1.9	3.2	U	713R11
	Cobalt-60	-0.72	±	1.4	2.4	U	713R11
	Europium-152	-2	±	6.5	11	U	713R11
	Europium-154	8.7	±	7	11	U	713R11
	Europium-155	-0.57	±	4.4	7.3	U	713R11
	Gross Alpha	8.2	±	1.8	1.4		724R10
	Gross Beta	5.7	±	1.6	2	M3	724R10
	Iodine-131	-21	±	130	220	U	713R11
	Iron-59	0.7	±	5.5	9.2	U	713R11
	Lead-212	1.3	±	5.7	9.4	U	713R11
	Lead-214	-1.9	±	6.5	11	U,J	713R11
	Manganese-54	-1.6	±	1.9	3.3	U	713R11
	Niobium-94	-0.35	±	1.2	2.1	U	713R11
	Niobium-95	-0.9	±	3.5	5.8	U	713R11
	Potassium-40	-73	±	44	73	U	713R11
	Protactinium-234m	300	±	220	340	U	713R11
	Ruthenium-106	-4	±	13	23	U	713R11
	Scandium-46	-1.8	±	1.8	3.1	U	713R11
	Silver-110m	0.24	±	1.3	2.2	U	713R11
	Sodium-22	-1.3	±	1.5	2.5	U	713R11
	Strontium-85	4.8	±	2.7	4.2	TI	713R11
	Thallium-208	-0.72	±	3.1	5.2	U	713R11
	Thorium-227	-4.9	±	13	21	U	713R11
	Thorium-234	13	±	50	85	U	713R11
	Tritium	98	±	220	360	U	704R9
	Uranium-234	6.4	±	1.1	0.12		714R12
	Uranium-235	4.8	±	11	18	U	713R11
	Uranium-235	0.014	±	0.053	0.13	U	714R12
	Uranium-238	2.4	±	0.52	0.096		714R12
	Zinc-65	0.24	±	3.3	5.5	U	713R11

J = Estimated Value

LT = Result is < than Requested MDC but > than sample specific MDC.

M3 = Reported activity is greater than the reported MDA

TI = Nuclide identification is tentative

U = Analyzed for but not detected

Table-4 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Gamma Emitting Isotopes, Gross Alpha/Beta, & Isotopic Uranium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	±		MDA (pCi/L)	Laboratory Qualifier	Analytical Method
CYN-MW12 23-Sep-10	Actinium-228	22	±	12	18	TI	713R11
	Aluminum-26	-0.52	±	3.9	6.7	U	713R11
	Americium-241	-22	±	24	40	U	713R11
	Antimony-124	12	±	5.5	8.3	TI	713R11
	Antimony-125	1.4	±	6.8	12	U	713R11
	Beryllium-7	-0.77	±	49	82	U	713R11
	Bismuth-212	-16	±	44	76	U	713R11
	Bismuth-214	2.3	±	13	22	U,J	713R11
	Cadmium-109	0.89	±	70	120	U	713R11
	Cerium-139	-0.26	±	2.6	4.4	U	713R11
	Cerium-144	11	±	16	27	U	713R11
	Cesium-134	-4.5	±	4.4	7.6	U	713R11
	Cesium-137	2.8	±	3.1	5	U	713R11
	Chromium-51	-32	±	97	160	U	713R11
	Cobalt-56	1	±	7.9	13	U	713R11
	Cobalt-57	-0.46	±	2.2	3.6	U	713R11
	Cobalt-58	-2	±	4.6	7.9	U	713R11
	Cobalt-60	0.55	±	3.2	5.4	U	713R11
	Europium-152	-9.6	±	15	27	U	713R11
	Europium-154	3	±	16	27	U	713R11
	Europium-155	-8.6	±	8.7	15	U	713R11
	Gross Alpha	13	±	2.6	1.4		724R10
	Gross Beta	8.1	±	1.9	2.1	M3	724R10
	Iodine-131	560	±	520	840	U	713R11
	Iron-59	13	±	14	23	U	713R11
	Lead-212	1.5	±	10	17	U	713R11
	Lead-214	-2.3	±	12	20	U,J	713R11
	Manganese-54	1.9	±	3.2	5.3	U	713R11
	Niobium-94	1.3	±	3.2	5.3	U	713R11
	Niobium-95	-4.9	±	5.2	9.1	U	713R11
	Potassium-40	-0.38	±	76	130	U	713R11
	Protactinium-234m	-410	±	800	1400	U	713R11
	Ruthenium-106	-15	±	30	51	U	713R11
	Scandium-46	-0.8	±	4.7	8.1	U	713R11
	Silver-110m	-1.2	±	3.3	5.7	U	713R11
	Sodium-22	1	±	3.3	5.6	U	713R11
	Strontium-85	7	±	6.8	11	U	713R11
	Thallium-208	3.9	±	3.2	5.1	U	713R11
	Thorium-227	0.17	±	20	34	U	713R11
	Thorium-234	64	±	89	150	U	713R11
	Tritium	2.5	±	210	360	U	704R9
	Uranium-234	11	±	2	0.11		714R12
	Uranium-235	7.3	±	26	44	U	713R11
	Uranium-235	0.16	±	0.1	0.098	LT	714R12
	Uranium-238	2.3	±	0.5	0.035		714R12
	Zinc-65	-2.9	±	7.6	13	U	713R11

J = Estimated Value

LT = Result is < than Requested MDC but > than sample specific MDC.

M3 = Reported activity is greater than the reported MDA

TI = Nuclide identification is tentative

U = Analyzed for but not detected

Table-5 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW6 20-Sep-10	Acetone	3.8	20	3.8	E8, L,U	SW-846:8260B
	Benzene	0.15	1	0.15	E8,U	SW-846:8260B
	Bromodichloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Bromoform	0.19	1	0.19	E8,U	SW-846:8260B
	Bromomethane	0.22	2	0.22	E8,U	SW-846:8260B
	Butanone[2-]	1.8	5	1.8	E8,U	SW-846:8260B
	Carbon Disulfide	0.18	1	0.18	E8,U	SW-846:8260B
	Carbon tetrachloride	0.19	1	0.19	E8,U	SW-846:8260B
	Chlorobenzene	0.12	1	0.12	E8,U	SW-846:8260B
	Chloroethane	0.26	1	0.26	E8,U	SW-846:8260B
	Chloroform	0.16	1	0.16	E8,U	SW-846:8260B
	Chloromethane	0.2	5	0.2	E8,U	SW-846:8260B
	Dibromochloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloroethane[1,1-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloroethane[1,2-]	0.2	1	0.2	E8,U	SW-846:8260B
	Dichloroethene[cis/trans-1,2-]	0.22	1	0.22	E8,U	SW-846:8260B
	Dichloroethene[cis-1,2-]	0.18	1	0.18	E8,U	SW-846:8260B
	Dichloroethylene[1,1-]	0.23	1	0.23	E8,U	SW-846:8260B
	Dichloropropane[1,2-]	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloropropylene[cis-1,3-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloropropylene[trans-1,3-]	0.097	1	0.097	E8,U	SW-846:8260B
	Ethylbenzene	0.16	1	0.16	E8,U	SW-846:8260B
	Hexanone[2-]	0.31	5	0.31	E8,U	SW-846:8260B
	Methyl-2-pentanone[4-]	0.43	5	0.43	E8,U	SW-846:8260B
	Methylene chloride	0.5	2	0.5	E8,U	SW-846:8260B
	Styrene	0.15	1	0.15	E8,U	SW-846:8260B
	Tetrachloroethane[1,1,2,2-]	0.12	1	0.12	E8,U	SW-846:8260B
	Tetrachloroethylene	0.23	1	0.23	E8,U	SW-846:8260B
	Toluene	0.35	1	0.35	E8,U	SW-846:8260B
	Trichloroethane[1,1,1-]	0.22	1	0.22	E8,U	SW-846:8260B
	Trichloroethane[1,1,2-]	0.19	1	0.19	E8,U	SW-846:8260B
	Trichloroethylene	0.19	1	0.19	E8,U	SW-846:8260B
	Vinyl acetate	0.21	1	0.21	E8,U	SW-846:8260B
	Vinyl chloride	0.24	1	0.24	E8,U	SW-846:8260B
	Xylene (Total)	0.54	2	0.54	E8,U	SW-846:8260B
	Xylene(m+p)	0.35	2	0.35	E8,U	SW-846:8260B
	Xylene[1,2-]	0.19	1	0.19	E8,U	SW-846:8260B

C = Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit

L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected,

U = Analyte not detected at or above the reporting limit or MDL

Table-5 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW9 28-Sep-10	Acetone	3.8	20	3.8	E8,U	SW-846:8260B
	Benzene	0.15	1	0.15	E8,U	SW-846:8260B
	Bromodichloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Bromoform	0.19	1	0.19	E8,U	SW-846:8260B
	Bromomethane	0.55	2	0.22	J	SW-846:8260B
	Butanone[2-]	1.8	5	1.8	E8,U	SW-846:8260B
	Carbon Disulfide	0.18	1	0.18	E8,U	SW-846:8260B
	Carbon tetrachloride	0.19	1	0.19	E8,U	SW-846:8260B
	Chlorobenzene	0.12	1	0.12	E8,U	SW-846:8260B
	Chloroethane	0.26	1	0.26	E8,U	SW-846:8260B
	Chloroform	0.16	1	0.16	E8,U	SW-846:8260B
	Chloromethane	0.2	5	0.2	E8,U	SW-846:8260B
	Dibromochloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloroethane[1,1-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloroethane[1,2-]	0.2	1	0.2	E8,U	SW-846:8260B
	Dichloroethene[cis/trans-1,2-]	0.22	1	0.22	E8,U	SW-846:8260B
	Dichloroethene[cis-1,2-]	0.18	1	0.18	E8,U	SW-846:8260B
	Dichloroethylene[1,1-]	0.23	1	0.23	E8,U	SW-846:8260B
	Dichloropropane[1,2-]	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloropropylene[cis-1,3-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloropropylene[trans-1,3-]	0.097	1	0.097	E8,U	SW-846:8260B
	Ethylbenzene	0.16	1	0.16	E8,U	SW-846:8260B
	Hexanone[2-]	0.31	5	0.31	E8,U	SW-846:8260B
	Methyl-2-pentanone[4-]	0.43	5	0.43	E8,U	SW-846:8260B
	Methylene chloride	0.5	2	0.5	E8,U	SW-846:8260B
	Styrene	0.15	1	0.15	E8,U	SW-846:8260B
	Tetrachloroethane[1,1,2,2-]	0.12	1	0.12	E8,U	SW-846:8260B
	Tetrachloroethylene	0.23	1	0.23	E8,U	SW-846:8260B
	Toluene	0.35	1	0.35	E8,U	SW-846:8260B
	Trichloroethane[1,1,1-]	0.22	1	0.22	E8,U	SW-846:8260B
	Trichloroethane[1,1,2-]	0.19	1	0.19	E8,U	SW-846:8260B
	Trichloroethylene	0.19	1	0.19	E8,U	SW-846:8260B
	Vinyl acetate	0.21	1	0.21	E8,U	SW-846:8260B
	Vinyl chloride	0.24	1	0.24	E8,U	SW-846:8260B
	Xylene (Total)	0.54	2	0.54	E8,U	SW-846:8260B
	Xylene(m+p)	0.35	2	0.35	E8,U	SW-846:8260B
	Xylene[1,2-]	0.19	1	0.19	E8,U	SW-846:8260B

C = Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit

L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected,

U = Analyte not detected at or above the reporting limit or MDL

Table-5 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW10 27-Sep-10	Acetone	3.8	20	3.8	E8,U	SW-846:8260B
	Benzene	0.15	1	0.15	E8,U	SW-846:8260B
	Bromodichloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Bromoform	0.19	1	0.19	E8,U	SW-846:8260B
	Bromomethane	0.45	2	0.22	J	SW-846:8260B
	Butanone[2-]	1.8	5	1.8	E8,U	SW-846:8260B
	Carbon Disulfide	0.18	1	0.18	E8,U	SW-846:8260B
	Carbon tetrachloride	0.19	1	0.19	E8,U	SW-846:8260B
	Chlorobenzene	0.12	1	0.12	E8,U	SW-846:8260B
	Chloroethane	0.26	1	0.26	E8,U	SW-846:8260B
	Chloroform	0.16	1	0.16	E8,U	SW-846:8260B
	Chloromethane	0.2	5	0.2	E8,U	SW-846:8260B
	Dibromochloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloroethane[1,1-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloroethane[1,2-]	0.2	1	0.2	E8,U	SW-846:8260B
	Dichloroethene[cis/trans-1,2-]	0.22	1	0.22	E8,U	SW-846:8260B
	Dichloroethene[cis-1,2-]	0.18	1	0.18	E8,U	SW-846:8260B
	Dichloroethylene[1,1-]	0.23	1	0.23	E8,U	SW-846:8260B
	Dichloropropane[1,2-]	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloropropylene[cis-1,3-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloropropylene[trans-1,3-]	0.097	1	0.097	E8,U	SW-846:8260B
	Ethylbenzene	0.16	1	0.16	E8,U	SW-846:8260B
	Hexanone[2-]	0.31	5	0.31	E8,U	SW-846:8260B
	Methyl-2-pentanone[4-]	0.43	5	0.43	E8,U	SW-846:8260B
	Methylene chloride	0.5	2	0.5	E8,U	SW-846:8260B
	Styrene	0.15	1	0.15	E8,U	SW-846:8260B
	Tetrachloroethane[1,1,2,2-]	0.12	1	0.12	E8,U	SW-846:8260B
	Tetrachloroethylene	0.23	1	0.23	E8,U	SW-846:8260B
	Toluene	0.35	1	0.35	E8,U	SW-846:8260B
	Trichloroethane[1,1,1-]	0.22	1	0.22	E8,U	SW-846:8260B
	Trichloroethane[1,1,2-]	0.19	1	0.19	E8,U	SW-846:8260B
	Trichloroethylene	0.19	1	0.19	E8,U	SW-846:8260B
	Vinyl acetate	0.21	1	0.21	E8,U	SW-846:8260B
	Vinyl chloride	0.24	1	0.24	E8,U	SW-846:8260B
	Xylene (Total)	0.54	2	0.54	E8,U	SW-846:8260B
	Xylene(m+p)	0.35	2	0.35	E8,U	SW-846:8260B
	Xylene[1,2-]	0.19	1	0.19	E8,U	SW-846:8260B

C = Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit

L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected,

U = Analyte not detected at or above the reporting limit or MDL

Table-5 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW11 29-Sep-10	Acetone	3.8	20	3.8	E8,U	SW-846:8260B
	Benzene	0.15	1	0.15	E8,U	SW-846:8260B
	Bromodichloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Bromoform	0.19	1	0.19	E8,U	SW-846:8260B
	Bromomethane	0.22	2	0.22	E8,U	SW-846:8260B
	Butanone[2-]	1.8	5	1.8	E8,U	SW-846:8260B
	Carbon Disulfide	0.18	1	0.18	E8,U	SW-846:8260B
	Carbon tetrachloride	0.19	1	0.19	E8,U	SW-846:8260B
	Chlorobenzene	0.12	1	0.12	E8,U	SW-846:8260B
	Chloroethane	0.26	1	0.26	E8,U	SW-846:8260B
	Chloroform	0.16	1	0.16	E8,U	SW-846:8260B
	Chloromethane	0.2	5	0.2	E8,U	SW-846:8260B
	Dibromochloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloroethane[1,1-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloroethane[1,2-]	0.2	1	0.2	E8,U	SW-846:8260B
	Dichloroethene[cis/trans-1,2-]	0.22	1	0.22	E8,U	SW-846:8260B
	Dichloroethene[cis-1,2-]	0.18	1	0.18	E8,U	SW-846:8260B
	Dichloroethylene[1,1-]	0.23	1	0.23	E8,U	SW-846:8260B
	Dichloropropane[1,2-]	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloropropylene[cis-1,3-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloropropylene[trans-1,3-]	0.097	1	0.097	E8,U	SW-846:8260B
	Ethylbenzene	0.16	1	0.16	E8,U	SW-846:8260B
	Hexanone[2-]	0.31	5	0.31	E8,U	SW-846:8260B
	Methyl-2-pentanone[4-]	0.43	5	0.43	E8,U	SW-846:8260B
	Methylene chloride	0.5	2	0.5	E8,U	SW-846:8260B
	Styrene	0.15	1	0.15	E8,U	SW-846:8260B
	Tetrachloroethane[1,1,2,2-]	0.12	1	0.12	E8,U	SW-846:8260B
	Tetrachloroethylene	0.23	1	0.23	E8,U	SW-846:8260B
	Toluene	0.35	1	0.35	E8,U	SW-846:8260B
	Trichloroethane[1,1,1-]	0.22	1	0.22	E8,U	SW-846:8260B
	Trichloroethane[1,1,2-]	0.19	1	0.19	E8,U	SW-846:8260B
	Trichloroethylene	0.19	1	0.19	E8,U	SW-846:8260B
	Vinyl acetate	0.21	1	0.21	E8,U	SW-846:8260B
	Vinyl chloride	0.24	1	0.24	E8,U	SW-846:8260B
	Xylene (Total)	0.54	2	0.54	E8,U	SW-846:8260B
	Xylene(m+p)	0.35	2	0.35	E8,U	SW-846:8260B
	Xylene[1,2-]	0.19	1	0.19	E8,U	SW-846:8260B

C = Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit

L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected,

U = Analyte not detected at or above the reporting limit or MDL

Table-5 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW12 23-Sep-10	Acetone	3.8	20	3.8	E8,U	SW-846:8260B
	Benzene	0.15	1	0.15	E8,U	SW-846:8260B
	Bromodichloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Bromoform	0.19	1	0.19	E8,U	SW-846:8260B
	Bromomethane	0.22	2	0.22	E8,U	SW-846:8260B
	Butanone[2-]	1.8	5	1.8	E8,U	SW-846:8260B
	Carbon Disulfide	0.18	1	0.18	E8,U	SW-846:8260B
	Carbon tetrachloride	0.19	1	0.19	E8,U	SW-846:8260B
	Chlorobenzene	0.12	1	0.12	E8,U	SW-846:8260B
	Chloroethane	0.26	1	0.26	E8,U	SW-846:8260B
	Chloroform	0.16	1	0.16	E8,U	SW-846:8260B
	Chloromethane	0.2	5	0.2	E8,U	SW-846:8260B
	Dibromochloromethane	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloroethane[1,1-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloroethane[1,2-]	0.2	1	0.2	E8,U	SW-846:8260B
	Dichloroethene[cis/trans-1,2-]	0.22	1	0.22	E8,U	SW-846:8260B
	Dichloroethene[cis-1,2-]	0.18	1	0.18	E8,U	SW-846:8260B
	Dichloroethylene[1,1-]	0.23	1	0.23	E8,U	SW-846:8260B
	Dichloropropane[1,2-]	0.15	1	0.15	E8,U	SW-846:8260B
	Dichloropropylene[cis-1,3-]	0.17	1	0.17	E8,U	SW-846:8260B
	Dichloropropylene[trans-1,3-]	0.097	1	0.097	E8,U	SW-846:8260B
	Ethylbenzene	0.16	1	0.16	E8,U	SW-846:8260B
	Hexanone[2-]	0.31	5	0.31	E8,U	SW-846:8260B
	Methyl-2-pentanone[4-]	0.43	5	0.43	E8,U	SW-846:8260B
	Methylene chloride	0.5	2	0.5	E8,U	SW-846:8260B
	Styrene	0.15	1	0.15	E8,U	SW-846:8260B
	Tetrachloroethane[1,1,2,2-]	0.12	1	0.12	E8,U	SW-846:8260B
	Tetrachloroethylene	0.23	1	0.23	E8,U	SW-846:8260B
	Toluene	0.35	1	0.35	E8,U	SW-846:8260B
	Trichloroethane[1,1,1-]	0.22	1	0.22	E8,U	SW-846:8260B
	Trichloroethane[1,1,2-]	0.19	1	0.19	E8,U	SW-846:8260B
	Trichloroethylene	0.19	1	0.19	E8,U	SW-846:8260B
	Vinyl acetate	0.21	1	0.21	E8,U	SW-846:8260B
	Vinyl chloride	0.24	1	0.24	E8,U	SW-846:8260B
	Xylene (Total)	0.54	2	0.54	E8,U	SW-846:8260B
	Xylene(m+p)	0.35	2	0.35	E8,U	SW-846:8260B
	Xylene[1,2-]	0.19	1	0.19	E8,U	SW-846:8260B

C = Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit

L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected,

U = Analyte not detected at or above the reporting limit or MDL

Table-6 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW9 28-Sep-10	1,2,4-Trichlorobenzene	3.9	11	3.9	E8,U	SW-846:8270
	1,2-Dichlorobenzene	3.1	11	3.1	E8,U	SW-846:8270
	1,3-dichlorobenzene	3.7	11	3.7	E8,U	SW-846:8270
	1,4-Dichlorobenzene	3.5	11	3.5	E8,U	SW-846:8270
	2,2'-oxybis[1-chloropropane]	3.2	11	3.2	E8,U	SW-846:8270
	2,4,5-Trichlorophenol	2.9	22	2.9	E8,U	SW-846:8270
	2,4,6-trichlorophenol	3.1	22	3.1	E8,U	SW-846:8270
	2,4-Dichlorophenol	3.7	11	3.7	E8,U	SW-846:8270
	2,4-Dimethylphenol	5.8	11	5.8	E8,U	SW-846:8270
	2,4-dinitrophenol	21	56	21	E8, L2,U	SW-846:8270
	2,4-Dinitrotoluene	8.7	11	8.7	E8,U	SW-846:8270
	2,6-Dinitrotoluene	6.5	11	6.5	E8,U	SW-846:8270
	2-Chloronaphthalene	2.5	11	2.5	E8,U	SW-846:8270
	2-Chlorophenol	4.3	11	4.3	E8,U	SW-846:8270
	2-Methylnaphthalene	3	11	3	E8,U	SW-846:8270
	2-Methylphenol	3.4	11	3.4	E8,U	SW-846:8270
	2-Nitroaniline	8	11	8	E8,U	SW-846:8270
	2-Nitrophenol	6.3	17	6.3	E8,U	SW-846:8270
	3,3'-Dichlorobenzidine	3.4	11	3.4	E8,U	SW-846:8270
	3-Nitroaniline	7.1	11	7.1	E8,U	SW-846:8270
	4,6-Dinitro-2-Methylphenol	20	56	20	E8,U	SW-846:8270
	4-Bromophenyl phenyl ether	3	11	3	E8,U	SW-846:8270
	4-Chloro-3-methylphenol	3.1	11	3.1	E8,U	SW-846:8270
	4-chloroaniline	2.5	11	2.5	E8,U	SW-846:8270
	4-Chlorophenyl phenyl ether	2.6	11	2.6	E8,U	SW-846:8270
	4-Methylphenol	6.4	11	6.4	E8,U	SW-846:8270
	4-Nitroaniline	3.6	11	3.6	E8,U	SW-846:8270
	4-Nitrophenol	10	28	10	E8,U	SW-846:8270
	Acenaphthene	2.2	11	2.2	E8,U	SW-846:8270
	Acenaphthene	2.3	11	2.3	E8,U	SW-846:8270
	Anthracene	2.5	11	2.5	E8,U	SW-846:8270
	Azobenzene	2.4	11	2.4	E8,U	SW-846:8270
	Benzo(a)anthracene	2.5	11	2.5	E8,U	SW-846:8270
	Benzo(a)pyrene	2.5	11	2.5	E8,U	SW-846:8270
	Benzo(b)fluoranthene	2.3	11	2.3	E8,U	SW-846:8270
	Benzo(g,h,i)perylene	3.9	11	3.9	E8,U	SW-846:8270
	Benzo(k)fluoranthene	2.9	11	2.9	E8,U	SW-846:8270
	Benzyl Alcohol	4.6	11	4.6	E8,U	SW-846:8270
	Bis(2-chloroethoxy)methane	3.1	11	3.1	E8,U	SW-846:8270
	Bis(2-chloroethyl)ether	2.7	11	2.7	E8,U	SW-846:8270
	Bis(2-ethylhexyl)phthalate	3.3	11	3.3	E8,U	SW-846:8270
	Butylbenzylphthalate	2.5	11	2.5	E8,U	SW-846:8270
	Chrysene	2.6	11	2.6	E8,U	SW-846:8270
	Dibenz(a,h)anthracene	4.5	11	4.5	E8,U	SW-846:8270
	Dibenzofuran	2.3	11	2.3	E8,U	SW-846:8270
	Diethylphthalate	2.8	11	2.8	E8,U	SW-846:8270
	Dimethyl Phthalate	5.5	22	5.5	E8,U	SW-846:8270
	Di-n-butylphthalate	2.7	11	2.7	E8,U	SW-846:8270
	Di-n-octylphthalate	2.7	11	2.7	E8,U	SW-846:8270

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

L2 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

U = Analyte not detected at or above the reporting limit or MDL

Table-6 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW9 28-Sep-10	Fluoranthene	2.9	11	2.9	E8,U	SW-846:8270
	Fluorene	2.5	11	2.5	E8,U	SW-846:8270
	Hexachlorobenzene	2.7	11	2.7	E8,U	SW-846:8270
	Hexachlorobutadiene	6.3	11	6.3	E8,U	SW-846:8270
	Hexachlorocyclopentadiene	7.7	11	7.7	E8,U	SW-846:8270
	Hexachloroethane	4.2	11	4.2	E8,U	SW-846:8270
	Indeno(1,2,3-cd)pyrene	3.8	11	3.8	E8,U	SW-846:8270
	Isophorone	2.9	11	2.9	E8,U	SW-846:8270
	Naphthalene	3	11	3	E8,U	SW-846:8270
	Nitrobenzene	2.7	11	2.7	E8,U	SW-846:8270
	N-Nitrosodiphenylamine	2.7	11	2.7	E8,U	SW-846:8270
	N-nitrosodipropylamine	3.5	11	3.5	E8,U	SW-846:8270
	Pentachlorophenol	15	56	15	E8,U	SW-846:8270
	Phenanthrene	2.5	11	2.5	E8,U	SW-846:8270
	Phenol	4.2	11	4.2	E8,U	SW-846:8270
	Pyrene	2.4	11	2.4	E8,U	SW-846:8270
CYN-MW10 27-Sep-10	1,2,4-Trichlorobenzene	3.9	11	3.9	E8,U	SW-846:8270
	1,2-Dichlorobenzene	3.2	11	3.2	E8,U	SW-846:8270
	1,3-dichlorobenzene	3.7	11	3.7	E8,U	SW-846:8270
	1,4-Dichlorobenzene	3.6	11	3.6	E8,U	SW-846:8270
	2,2'-oxybis[1-chloropropane]	3.3	11	3.3	E8,U	SW-846:8270
	2,4,5-Trichlorophenol	2.9	22	2.9	E8,U	SW-846:8270
	2,4,6-trichlorophenol	3.1	22	3.1	E8,U	SW-846:8270
	2,4-Dichlorophenol	3.7	11	3.7	E8,U	SW-846:8270
	2,4-Dimethylphenol	5.8	11	5.8	E8,U	SW-846:8270
	2,4-dinitrophenol	21	56	21	E8,U	SW-846:8270
	2,4-Dinitrotoluene	8.8	11	8.8	E8,U	SW-846:8270
	2,6-Dinitrotoluene	6.6	11	6.6	E8,U	SW-846:8270
	2-Chloronaphthalene	2.5	11	2.5	E8,U	SW-846:8270
	2-Chlorophenol	4.3	11	4.3	E8,U	SW-846:8270
	2-Methylnaphthalene	3.1	11	3.1	E8,U	SW-846:8270
	2-Methylphenol	3.4	11	3.4	E8,U	SW-846:8270
	2-Nitroaniline	8.1	11	8.1	E8,U	SW-846:8270
	2-Nitrophenol	6.4	17	6.4	E8,U	SW-846:8270
	3,3'-Dichlorobenzidine	3.5	11	3.5	E8,U	SW-846:8270
	3-Nitroaniline	7.2	11	7.2	E8,U	SW-846:8270
	4,6-Dinitro-2-Methylphenol	21	56	21	E8,U	SW-846:8270
	4-Bromophenyl phenyl ether	3	11	3	E8,U	SW-846:8270
	4-Chloro-3-methylphenol	3.1	11	3.1	E8,U	SW-846:8270
	4-chloroaniline	2.5	11	2.5	E8,U	SW-846:8270
	4-Chlorophenyl phenyl ether	2.7	11	2.7	E8,U	SW-846:8270
	4-Methylphenol	6.4	11	6.4	E8,U	SW-846:8270
	4-Nitroaniline	3.6	11	3.6	E8,U	SW-846:8270
	4-Nitrophenol	10	28	10	E8,U	SW-846:8270
	Acenaphthene	2.3	11	2.3	E8,U	SW-846:8270
	Acenaphthene	2.4	11	2.4	E8,U	SW-846:8270
	Anthracene	2.5	11	2.5	E8,U	SW-846:8270
	Azobenzene	2.5	11	2.5	E8,U	SW-846:8270
	Benzo(a)anthracene	2.5	11	2.5	E8,U	SW-846:8270
	Benzo(a)pyrene	2.5	11	2.5	E8,U	SW-846:8270
	Benzo(b)fluoranthene	2.4	11	2.4	E8,U	SW-846:8270

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

L2 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

U = Analyte not detected at or above the reporting limit or MDL

Table-6 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW10 27-Sep-10	Benzo(g,h,i)perylene	4	11	4	E8,U	SW-846:8270
	Benzo(k)fluoranthene	2.9	11	2.9	E8,U	SW-846:8270
	Benzyl Alcohol	4.7	11	4.7	E8,U	SW-846:8270
	Bis(2-chloroethoxy)methane	3.1	11	3.1	E8,U	SW-846:8270
	Bis(2-chloroethyl)ether	2.8	11	2.8	E8,U	SW-846:8270
	Bis(2-ethylhexyl)phthalate	3.3	11	3.3	E8,U	SW-846:8270
	Butylbenzylphthalate	2.5	11	2.5	E8,U	SW-846:8270
	Chrysene	2.6	11	2.6	E8,U	SW-846:8270
	Dibenz(a,h)anthracene	4.6	11	4.6	E8,U	SW-846:8270
	Dibenzofuran	2.4	11	2.4	E8,U	SW-846:8270
	Diethylphthalate	2.9	11	2.9	E8,U	SW-846:8270
	Dimethyl Phthalate	5.5	22	5.5	E8,U	SW-846:8270
	Di-n-butylphthalate	2.8	11	2.8	E8,U	SW-846:8270
	Di-n-octylphthalate	2.7	11	2.7	E8,U	SW-846:8270
	Fluoranthene	2.9	11	2.9	E8,U	SW-846:8270
	Fluorene	2.5	11	2.5	E8,U	SW-846:8270
	Hexachlorobenzene	2.7	11	2.7	E8,U	SW-846:8270
	Hexachlorobutadiene	6.3	11	6.3	E8,U	SW-846:8270
	Hexachlorocyclopentadiene	7.7	11	7.7	E8,U	SW-846:8270
	Hexachloroethane	4.3	11	4.3	E8,U	SW-846:8270
	Indeno(1,2,3-cd)pyrene	3.9	11	3.9	E8,U	SW-846:8270
	Isophorone	2.9	11	2.9	E8,U	SW-846:8270
	Naphthalene	3.1	11	3.1	E8,U	SW-846:8270
	Nitrobenzene	2.7	11	2.7	E8,U	SW-846:8270
	N-Nitrosodiphenylamine	2.7	11	2.7	E8,U	SW-846:8270
	N-nitrosodipropylamine	3.5	11	3.5	E8,U	SW-846:8270
	Pentachlorophenol	16	56	16	E8,U	SW-846:8270
	Phenanthrene	2.5	11	2.5	E8,U	SW-846:8270
	Phenol	4.2	11	4.2	E8,U	SW-846:8270
	Pyrene	2.4	11	2.4	E8,U	SW-846:8270
CYN-MW11 29-Sep-10	1,2,4-Trichlorobenzene	3.5	10	3.5	E8,U	SW-846:8270
	1,2-Dichlorobenzene	2.8	10	2.8	E8,U	SW-846:8270
	1,3-dichlorobenzene	3.3	10	3.3	E8,U	SW-846:8270
	1,4-Dichlorobenzene	3.2	10	3.2	E8,U	SW-846:8270
	2,2'-oxybis[1-chloropropane]	2.9	10	2.9	E8,U	SW-846:8270
	2,4,5-Trichlorophenol	2.6	20	2.6	E8,U	SW-846:8270
	2,4,6-trichlorophenol	2.8	20	2.8	E8,U	SW-846:8270
	2,4-Dichlorophenol	3.3	10	3.3	E8,U	SW-846:8270
	2,4-Dimethylphenol	5.2	10	5.2	E8,U	SW-846:8270
	2,4-dinitrophenol	19	50	19	E8, L2,U	SW-846:8270
	2,4-Dinitrotoluene	7.9	10	7.9	E8,U	SW-846:8270
	2,6-Dinitrotoluene	5.8	10	5.8	E8,U	SW-846:8270
	2-Chloronaphthalene	2.2	10	2.2	E8,U	SW-846:8270
	2-Chlorophenol	3.8	10	3.8	E8,U	SW-846:8270
	2-Methylnaphthalene	2.7	10	2.7	E8,U	SW-846:8270
	2-Methylphenol	3	10	3	E8,U	SW-846:8270
	2-Nitroaniline	7.2	10	7.2	E8,U	SW-846:8270
	2-Nitrophenol	5.7	15	5.7	E8,U	SW-846:8270
	3,3'-Dichlorobenzidine	3.1	10	3.1	E8,U	SW-846:8270
	3-Nitroaniline	6.4	10	6.4	E8,U	SW-846:8270
	4,6-Dinitro-2-Methylphenol	18	50	18	E8,U	SW-846:8270

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

L2 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

U = Analyte not detected at or above the reporting limit or MDL

Table-6 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW11 29-Sep-10	4-Bromophenyl phenyl ether	2.7	10	2.7	E8,U	SW-846:8270
	4-Chloro-3-methylphenol	2.8	10	2.8	E8,U	SW-846:8270
	4-chloroaniline	2.2	10	2.2	E8,U	SW-846:8270
	4-Chlorophenyl phenyl ether	2.4	10	2.4	E8,U	SW-846:8270
	4-Methylphenol	5.7	10	5.7	E8,U	SW-846:8270
	4-Nitroaniline	3.2	10	3.2	E8,U	SW-846:8270
	4-Nitrophenol	9.2	25	9.2	E8,U	SW-846:8270
	Acenaphthene	2	10	2	E8,U	SW-846:8270
	Acenaphthene	2.1	10	2.1	E8,U	SW-846:8270
	Anthracene	2.2	10	2.2	E8,U	SW-846:8270
	Azobenzene	2.2	10	2.2	E8,U	SW-846:8270
	Benzo(a)anthracene	2.2	10	2.2	E8,U	SW-846:8270
	Benzo(a)pyrene	2.2	10	2.2	E8,U	SW-846:8270
	Benzo(b)fluoranthene	2.1	10	2.1	E8,U	SW-846:8270
	Benzo(g,h,i)perylene	3.5	10	3.5	E8,U	SW-846:8270
	Benzo(k)fluoranthene	2.6	10	2.6	E8,U	SW-846:8270
	Benzyl Alcohol	4.1	10	4.1	E8,U	SW-846:8270
	Bis(2-chloroethoxy)methane	2.8	10	2.8	E8,U	SW-846:8270
	Bis(2-chloroethyl)ether	2.5	10	2.5	E8,U	SW-846:8270
	Bis(2-ethylhexyl)phthalate	2.9	10	2.9	E8,U	SW-846:8270
	Butylbenzylphthalate	2.2	10	2.2	E8,U	SW-846:8270
	Chrysene	2.3	10	2.3	E8,U	SW-846:8270
	Dibenz(a,h)anthracene	4.1	10	4.1	E8,U	SW-846:8270
	Dibenzofuran	2.1	10	2.1	E8,U	SW-846:8270
	Diethylphthalate	2.5	10	2.5	E8,U	SW-846:8270
	Dimethyl Phthalate	4.9	20	4.9	E8,U	SW-846:8270
	Di-n-butylphthalate	2.4	10	2.4	E8,U	SW-846:8270
	Di-n-octylphthalate	2.4	10	2.4	E8,U	SW-846:8270
	Fluoranthene	2.6	10	2.6	E8,U	SW-846:8270
	Fluorene	2.2	10	2.2	E8,U	SW-846:8270
	Hexachlorobenzene	2.4	10	2.4	E8,U	SW-846:8270
	Hexachlorobutadiene	5.6	10	5.6	E8,U	SW-846:8270
	Hexachlorocyclopentadiene	6.9	10	6.9	E8,U	SW-846:8270
	Hexachloroethane	3.8	10	3.8	E8,U	SW-846:8270
	Indeno(1,2,3-cd)pyrene	3.5	10	3.5	E8,U	SW-846:8270
	Isophorone	2.6	10	2.6	E8,U	SW-846:8270
	Naphthalene	2.7	10	2.7	E8,U	SW-846:8270
	Nitrobenzene	2.4	10	2.4	E8,U	SW-846:8270
	N-Nitrosodiphenylamine	2.4	10	2.4	E8,U	SW-846:8270
	N-nitrosodipropylamine	3.1	10	3.1	E8,U	SW-846:8270
	Pentachlorophenol	14	50	14	E8,U	SW-846:8270
	Phenanthrene	2.2	10	2.2	E8,U	SW-846:8270
	Phenol	3.8	10	3.8	E8,U	SW-846:8270
	Pyrene	2.1	10	2.1	E8,U	SW-846:8270
CYN-MW12 23-Sep-10	1,2,4-Trichlorobenzene	4.1	12	4.1	E8,U	SW-846:8270
	1,2-Dichlorobenzene	3.4	12	3.4	E8,U	SW-846:8270
	1,3-dichlorobenzene	3.9	12	3.9	E8,U	SW-846:8270
	1,4-Dichlorobenzene	3.8	12	3.8	E8,U	SW-846:8270
	2,2'-oxybis[1-chloropropane]	3.4	12	3.4	E8,U	SW-846:8270
	2,4,5-Trichlorophenol	3.1	24	3.1	E8,U	SW-846:8270
	2,4,6-trichlorophenol	3.3	24	3.3	E8,U	SW-846:8270

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

L2 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

U = Analyte not detected at or above the reporting limit or MDL

Table-6 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW12 23-Sep-10	2,4-Dichlorophenol	4	12	4	E8,U	SW-846:8270
	2,4-Dimethylphenol	6.2	12	6.2	E8,U	SW-846:8270
	2,4-dinitrophenol	22	60	22	E8,U	SW-846:8270
	2,4-Dinitrotoluene	9.3	12	9.3	E8,U	SW-846:8270
	2,6-Dinitrotoluene	6.9	12	6.9	E8,U	SW-846:8270
	2-Chloronaphthalene	2.7	12	2.7	E8,U	SW-846:8270
	2-Chlorophenol	4.6	12	4.6	E8,U	SW-846:8270
	2-Methylnaphthalene	3.2	12	3.2	E8,U	SW-846:8270
	2-Methylphenol	3.6	12	3.6	E8,U	SW-846:8270
	2-Nitroaniline	8.5	12	8.5	E8,U	SW-846:8270
	2-Nitrophenol	6.8	18	6.8	E8,U	SW-846:8270
	3,3'-Dichlorobenzidine	3.7	12	3.7	E8,U	SW-846:8270
	3-Nitroaniline	7.6	12	7.6	E8,U	SW-846:8270
	4,6-Dinitro-2-Methylphenol	22	60	22	E8,U	SW-846:8270
	4-Bromophenyl phenyl ether	3.2	12	3.2	E8,U	SW-846:8270
	4-Chloro-3-methylphenol	3.3	12	3.3	E8,U	SW-846:8270
	4-chloroaniline	2.7	12	2.7	E8,U	SW-846:8270
	4-Chlorophenyl phenyl ether	2.8	12	2.8	E8,U	SW-846:8270
	4-Methylphenol	6.8	12	6.8	E8,U	SW-846:8270
	4-Nitroaniline	3.8	12	3.8	E8,U	SW-846:8270
	4-Nitrophenol	11	30	11	E8,U	SW-846:8270
	Acenaphthene	2.4	12	2.4	E8,U	SW-846:8270
	Acenaphthene	2.5	12	2.5	E8,U	SW-846:8270
	Anthracene	2.7	12	2.7	E8,U	SW-846:8270
	Azobenzene	2.6	12	2.6	E8,U	SW-846:8270
	Benzo(a)anthracene	2.6	12	2.6	E8,U	SW-846:8270
	Benzo(a)pyrene	2.7	12	2.7	E8,U	SW-846:8270
	Benzo(b)fluoranthene	2.5	12	2.5	E8,U	SW-846:8270
	Benzo(g,h,i)perylene	4.2	12	4.2	E8,U	SW-846:8270
	Benzo(k)fluoranthene	3.1	12	3.1	E8,U	SW-846:8270
	Benzyl Alcohol	4.9	12	4.9	E8,U	SW-846:8270
	Bis(2-chloroethoxy)methane	3.3	12	3.3	E8,U	SW-846:8270
	Bis(2-chloroethyl)ether	2.9	12	2.9	E8,U	SW-846:8270
	Bis(2-ethylhexyl)phthalate	3.5	12	3.5	E8,U	SW-846:8270
	Butylbenzylphthalate	2.6	12	2.6	E8,U	SW-846:8270
	Chrysene	2.8	12	2.8	E8,U	SW-846:8270
	Dibenz(a,h)anthracene	4.8	12	4.8	E8,U	SW-846:8270
	Dibenzofuran	2.5	12	2.5	E8,U	SW-846:8270
	Diethylphthalate	3	12	3	E8,U	SW-846:8270
	Dimethyl Phthalate	5.9	24	5.9	E8,U	SW-846:8270
	Di-n-butylphthalate	2.9	12	2.9	E8,U	SW-846:8270
	Di-n-octylphthalate	2.9	12	2.9	E8,U	SW-846:8270
	Fluoranthene	3.1	12	3.1	E8,U	SW-846:8270
	Fluorene	2.6	12	2.6	E8,U	SW-846:8270
	Hexachlorobenzene	2.9	12	2.9	E8,U	SW-846:8270
	Hexachlorobutadiene	6.7	12	6.7	E8,U	SW-846:8270
	Hexachlorocyclopentadiene	8.2	12	8.2	E8,U	SW-846:8270
	Hexachloroethane	4.5	12	4.5	E8,U	SW-846:8270
	Indeno(1,2,3-cd)pyrene	4.1	12	4.1	E8,U	SW-846:8270
	Isophorone	3.1	12	3.1	E8,U	SW-846:8270
	Naphthalene	3.2	12	3.2	E8,U	SW-846:8270

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

L2 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

U = Analyte not detected at or above the reporting limit or MDL

Table-6 NMED DOE OB FFY 2010 Q-4 Burn Site Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CYN-MW12 23-Sep-10	Nitrobenzene	2.9	12	2.9	E8,U	SW-846:8270
	N-Nitrosodiphenylamine	2.9	12	2.9	E8,U	SW-846:8270
	N-nitrosodipropylamine	3.7	12	3.7	E8,U	SW-846:8270
	Pentachlorophenol	16	60	16	E8,U	SW-846:8270
	Phenanthrene	2.7	12	2.7	E8,U	SW-846:8270
	Phenol	4.5	12	4.5	E8,U	SW-846:8270
	Pyrene	2.5	12	2.5	E8,U	SW-846:8270

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

L2 = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

U = Analyte not detected at or above the reporting limit or MDL

Table-7 NMED DOE OBFFY 2010 Q-4 Burn Site Groundwater Quality Results: Diesel/Gasoline/Oil Range Organics

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CYN-MW6 20-Sep-10	Diesel Range Organics	0.12	0.12	0.12	E8,U	SW-846:8015D
	Total Petroleum Hydrocarbons Diesel Range Organics	0.29	0.37	0.29	E8,U	SW-846:8015D
	Total Petroleum Hydrocarbons Gasoline Range Organics	0.021	0.2	0.021	U	SW-846:8015A/B
	TPH - Oil Range Organics	0.16	0.25	0.16	E8,U	SW-846:8015D
CYN-MW9 28-Sep-10	Diesel Range Organics	0.098	0.1	0.098	E8,U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Diesel Range Organics	0.23	0.3	0.23	U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Gasoline Range Organics	0.021	0.2	0.021	U	SW-846:8015A/B
	TPH - Oil Range Organics	0.13	0.2	0.13	E8,U	SW-846:8015A/B
CYN-MW10 27-Sep-10	Diesel Range Organics	0.098	0.1	0.098	E8,U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Diesel Range Organics	0.23	0.3	0.23	U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Gasoline Range Organics	0.021	0.2	0.021	M1, M2, R-2	SW-846:8015A/B
	TPH - Oil Range Organics	0.13	0.2	0.13	E8,U	SW-846:8015A/B
CYN-MW11 29-Sep-10	Diesel Range Organics	0.11	0.11	0.11	E8, L,U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Diesel Range Organics	0.27	0.34	0.27	U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Gasoline Range Organics	0.021	0.2	0.021	U	SW-846:8015A/B
	TPH - Oil Range Organics	0.15	0.23	0.15	E8,U	SW-846:8015A/B
CYN-MW12 23-Sep-10	Diesel Range Organics	0.098	0.1	0.098	E8,U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Diesel Range Organics	0.23	0.3	0.23	U	SW-846:8015A/B
	Total Petroleum Hydrocarbons Gasoline Range Organics	0.021	0.2	0.021	U	SW-846:8015A/B
	TPH - Oil Range Organics	0.13	0.2	0.13	E8,U	SW-846:8015A/B

E8 = Analyte reported to the MDL per project specification. Target analyte was not detected in the sample.

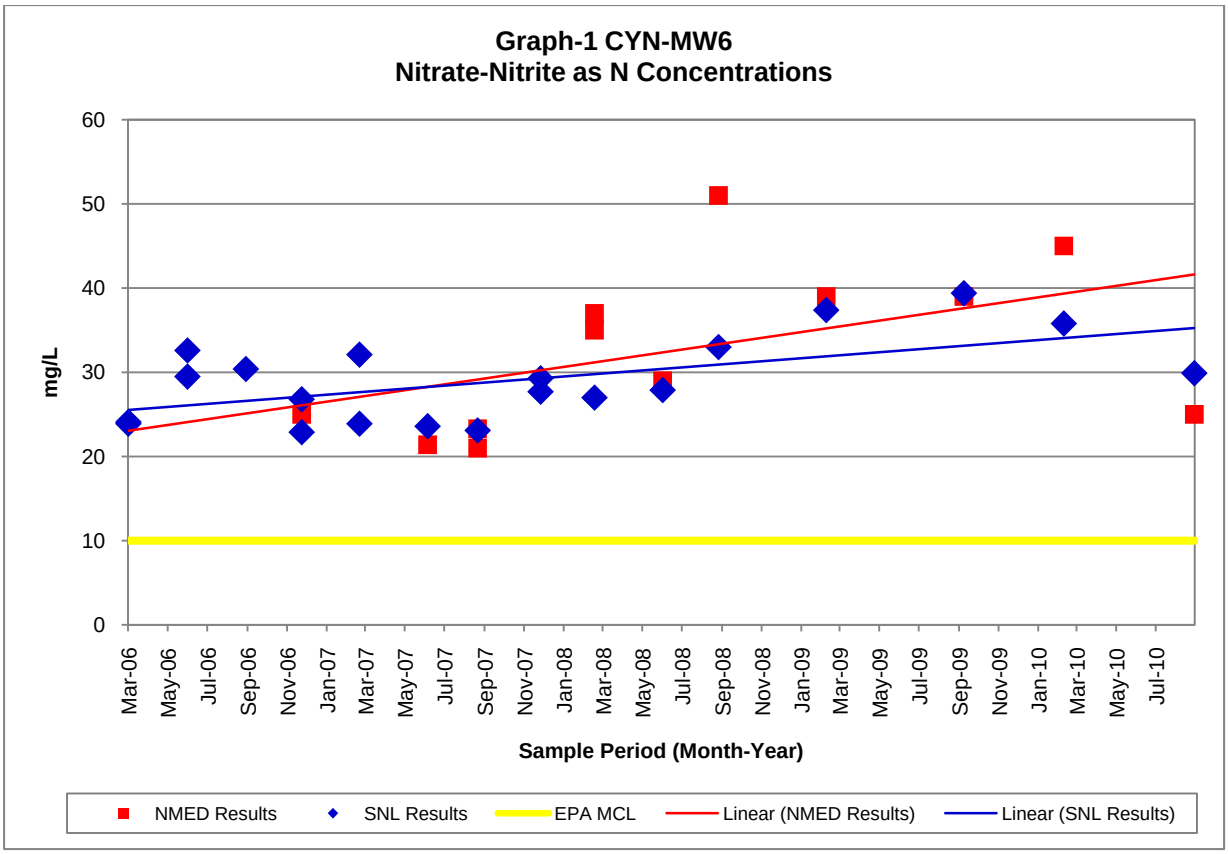
L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.

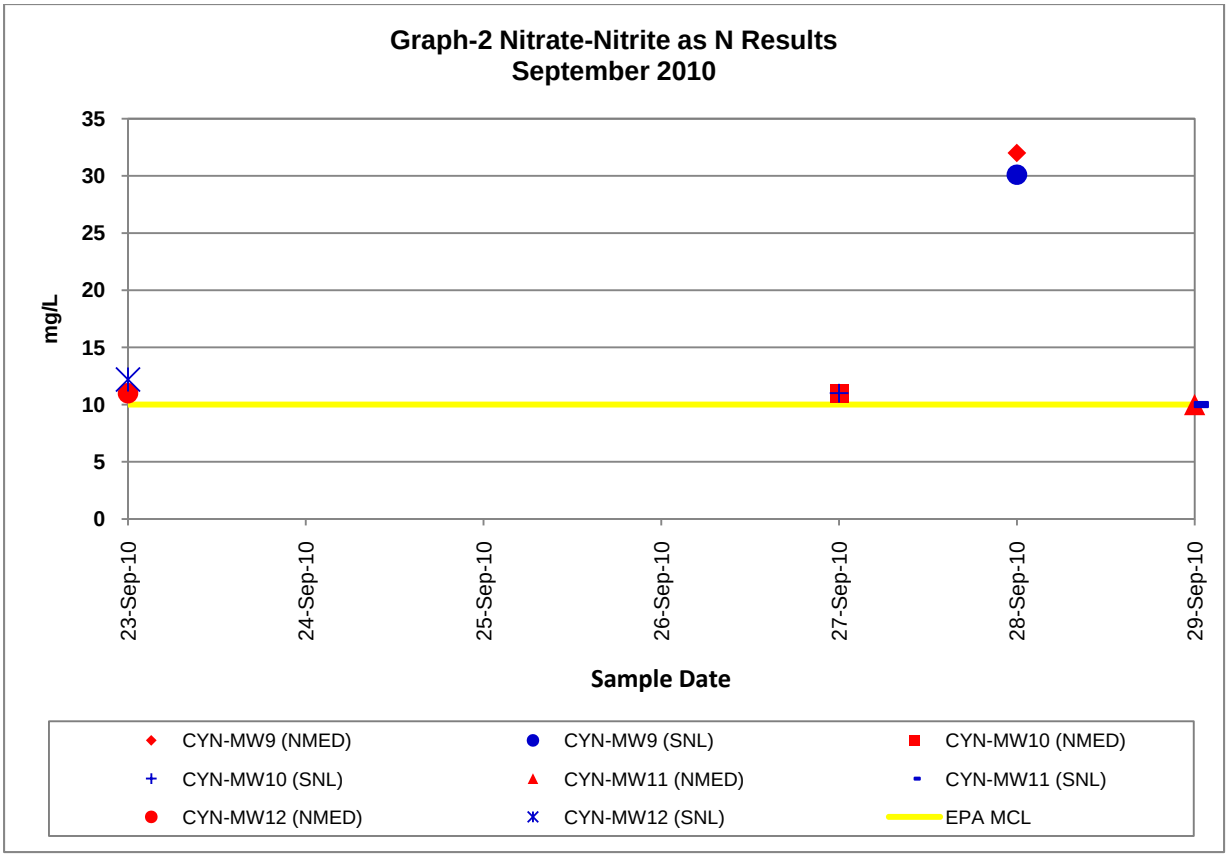
M1= Matrix spike recovery was high; the associated blank spike recovery was acceptable.

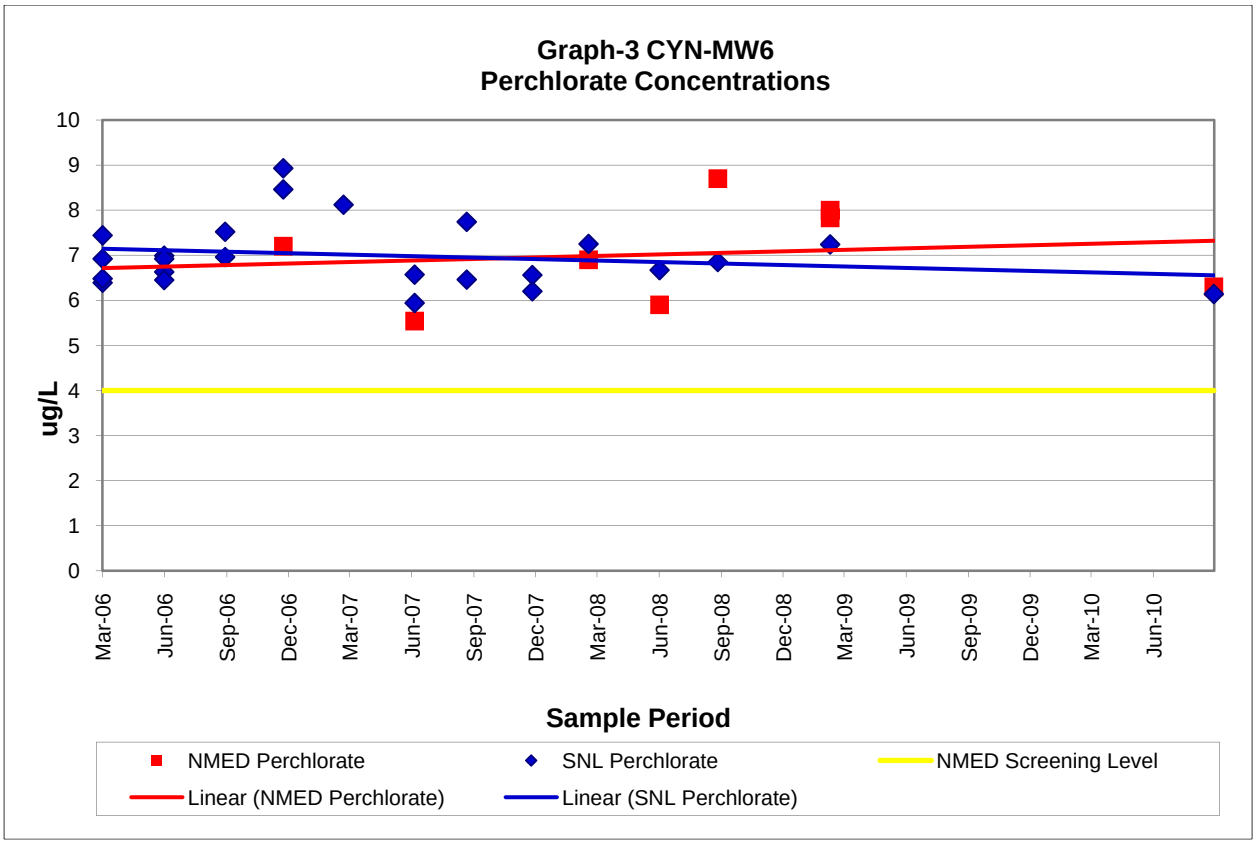
M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

R-2 = The RPD exceeded the acceptance limit.

U = Analyte not detected at or above the reporting limit or MDL


Graph-1 CYN-MW6
Nitrate-Nitrite as N Concentrations
mg/L
60
50
40
30
20
10
0
Mar-06
May-06
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08
May-08
Jul-08
Sep-08
Nov-08
Jan-09
Mar-09
May-09
Jul-09
Sep-09
Nov-09
Jan-10
Mar-10
May-10
Jul-10
Sample Period (Month-Year)
NMED Results
SNL Results
EPA MCL
Linear (NMED Results)
Linear (SNL Results)


Graph-2 Nitrate-Nitrite as N Results
September 2010
mg/L
35
30
25
20
15
10
5
0
23-Sep-10
24-Sep-10
25-Sep-10
26-Sep-10
27-Sep-10
28-Sep-10
29-Sep-10
Sample Date
CYN-MW9 (NMED)
CYN-MW9 (SNL)
CYN-MW10 (NMED)
CYN-MW10 (SNL)
CYN-MW11 (NMED)
CYN-MW11 (SNL)
CYN-MW12 (NMED)
CYN-MW12 (SNL)
EPA MCL


Graph-3 CYN-MW6
Perchlorate Concentrations
ug/L
10
9
8
7
6
5
4
3
2
1
0
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sample Period
NMED Perchlorate
SNL Perchlorate
NMED Screening Level
Linear (NMED Perchlorate)
Linear (SNL Perchlorate)

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