



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

DOE Oversight Bureau

121 Tijeras Ave., NE Suite 1000
Albuquerque, NM 87102
Phone (505) 383-2073 Fax (505) 222-9510
www.nmenv.state.nm.us



RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

June 24, 2016

Karen Agogino, P.E.
Point of Contact
U.S. Department of Energy
Sandia Site Office
P.O Box 5400 MS 0184
Albuquerque, New Mexico 87185-5400

Subject: Data Submittal for Groundwater Monitoring at Sandia National Laboratories/New Mexico Technical Area-V Groundwater Conducted by the NMED/DOE Oversight Bureau for FFY 2009 Q-1

Ms. Agogino:

This letter transmits the subject report as final. The report shows groundwater data results from Technical Area-V Groundwater monitoring wells collected by the New Mexico Environment Department DOE Oversight Bureau during the first quarter of FFY 2009.

The enclosed monitoring results were provided to the U.S Department of Energy in draft form on February 16, 2009, for 30-day comment and review. The final monitoring results are provided to DOE, the State of New Mexico and federal agencies, the NMED website and interested members of the public. If you have any questions, or if you would like copies of the complete data set, please contact me by phone at (505) 383-2070, by email at chris.armijo1@state.nm.us, or by mail to the address in the above letterhead.

Sincerely,

A handwritten signature in blue ink, appearing to read "Chris Armijo".

Chris Armijo
Geoscientist, Sandia Oversight Section
DOE Oversight Bureau

Enclosure: (1) Groundwater Monitoring at Sandia National Laboratories/New Mexico
Technical Area-V Conducted by NMED/DOE OB for FFY 2009 Q-1
(2) Table 1 Detected Volatile Organic Compounds Results
(3) Table 2 Nitrate plus Nitrite Results
(4) Figure 1 LWDS-MW1 TCE Trending Analysis
(5) Figure 2 TAV-MW6 TCE Trending Analysis
(6) Figure 3 LWDS-MW1 NPN Trending Analysis

Distribution: David Rast, DOE/SSO
Tim Jackson, SNL/NM Groundwater
Michael Skelly, SNL/NM Groundwater
Susan Lucas Kamat, Bureau Chief, DOE OB

File: SGE42.Groundwater Monitoring. TAV. FFY 2009 Q-1



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**Groundwater Monitoring at Sandia National Laboratories/New Mexico Technical Area V
Conducted by NMED/DOE Oversight Bureau for FFY 2009 Q-1**

The New Mexico Environment Department (NMED) DOE Oversight Bureau (Bureau) has compiled and assessed groundwater data collected in December 2008. The Bureau collected groundwater samples from Technical Area-V monitoring wells: LWDS-MW1, TAV-MW6 and TAV-MW10. Split samples were collected using standard Sandia National Laboratories/New Mexico (SNL/NM or Sandia) sampling procedures and equipment. The samples were submitted for analysis to an independent analytical laboratory for volatile organic compounds (VOCs) and nitrate plus nitrite (NPN). Elevated concentrations of trichloroethylene (TCE) and nitrates were noted in several wells.

Data Assessment

Data results are compared to applicable Maximum Allowable Concentrations (MACs) from the New Mexico Water Quality Control Commission (WQCC) (20.6.2.3103A NMAC Human Health Standards) and Maximum Contaminant Levels (MCLs) from the U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations (40 CFR 141).

Results

Volatile organic compounds (VOCs) detected above the method detection limit (MDL) are listed in Table 1. Trichloroethylene (TCE) was detected above the EPA MCL of 5 µg/L at LWDS-MW1, TAV-MW6 and TAV-MW10. Concentrations were 15 µg/L, 10 µg/L and 14 µg/L, respectively.

Nitrate plus nitrite (NPN) results are listed in Table 2. Concentrations at LWDS-MW1 and TAV-MW10 exceeded the EPA MCL of 10 mg/L. Concentrations were 12 mg/L and 11 mg/L, respectively.

Conclusion

Trichloroethylene concentrations at LWDS-MW1 have consistently exceeded the EPA MCL of 5 µg/L, but concentrations have steadily decreased over the life of the well (Figure 1). Trending data at TAV-MW6 indicate that TCE concentrations have been increasing over time (Figure 2).

The sample collected at TAV-MW10 for TCE and NPN was the first sample collected by the Bureau, so no trending analysis could be done at this time. The nitrate concentration at LWDS-MW1 exceeded the MCL of 10 mg/L. Nitrate concentrations at LWDS-MW1 have been slightly decreasing over time (Figure 3).

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.

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(2) Table 2 Nitrate plus Nitrite Results
(3) Figure 1 LWDS-MW1 TCE Trending Analysis
(4) Figure 2 TAV-MW6 TCE Trending Analysis
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Table 1- NMED DOE Oversight Bureau FFY 2009 Q-1 Technical Area-V Groundwater Quality Results: Detected Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	MDL (µg/L)	Quantitation Limit (µg/L)	EPA MCL (µg/L)	NMED MAC (µg/L)	Laboratory Qualifier	Analytical Method
LWDS-MW1 11-Dec-08	Dichloroethene[cis-1,2-]	2.9	0.17	1	70	NE		SW8260_25
	Trichloroethylene	15	0.17	1	5	100		SW8260_25
TAV-MW6 8-Dec-08	Dichloroethene[cis-1,2-]	1.7	0.17	1	70	NE		SW8260_25
	Trichloroethylene	10	0.17	1	5	100		SW8260_25
TAV-MW10 9-Dec-08	Carbon Disulfide	0.59	0.17	1	NE	NE	J	SW8260_25
	Dichloroethene[cis-1,2-]	2.3	0.17	1	70	NE		SW8260_25
	Trichloroethylene	14	0.17	1	5	100		SW8260_25

Values in bold have exceeded the EPA MCL.

J = Estimated value

NE = Not Established

Table 2- NMED DOE Oversight Bureau FFY 2009 Q-1 Technical Area-V Groundwater Quality Results: Nitrate plus Nitrite

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	MDL (mg/L)	Quantitation Limit (mg/L)	EPA MCL (mg/L)	NMED MAC (mg/L)	Laboratory Qualifier	Analytical Method
LWDS-MW1 11-Dec-08	Nitrate-Nitrite as N	12	0.055	0.2	10	10		EPA:353.2
TAV-MW6 8-Dec-08	Nitrate-Nitrite as N	8.7	0.055	0.2	10	10		EPA:353.2
TAV-MW10 9-Dec-08	Nitrate-Nitrite as N	11	0.055	0.2	10	10		EPA:353.2

Values in bold have exceeded the EPA MCL.

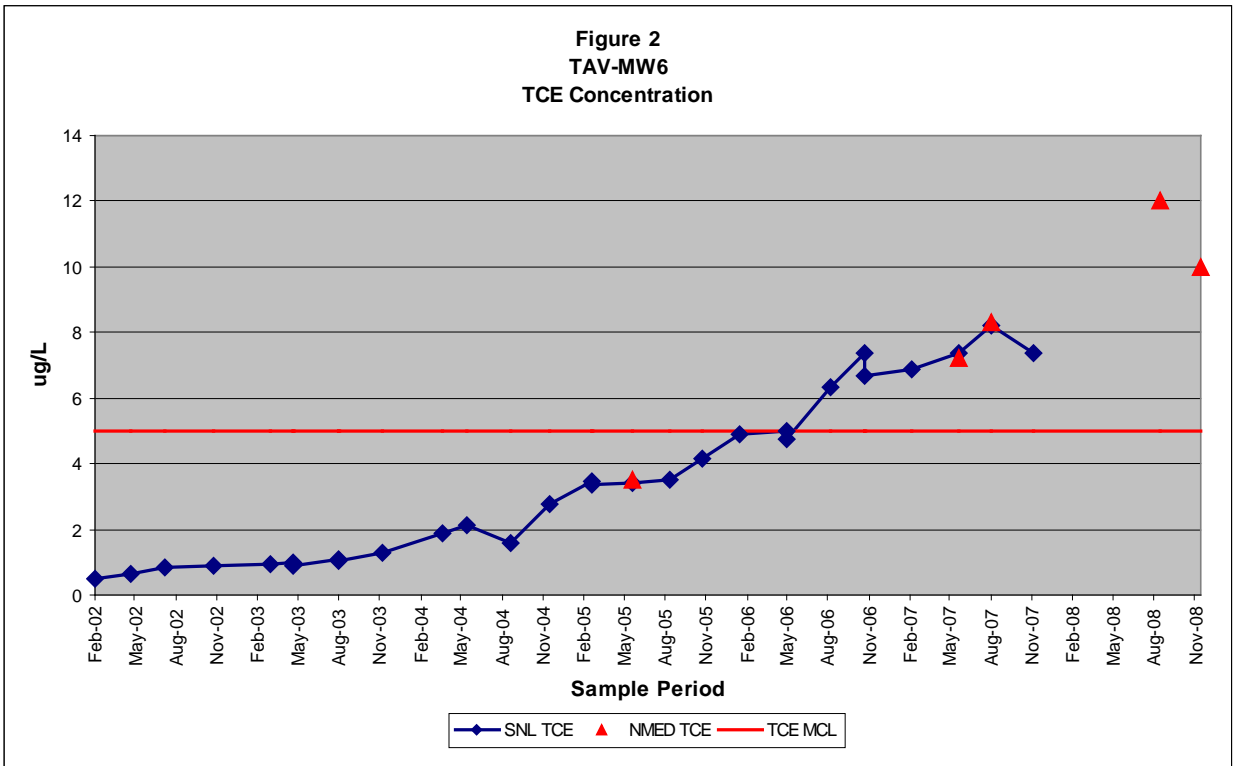
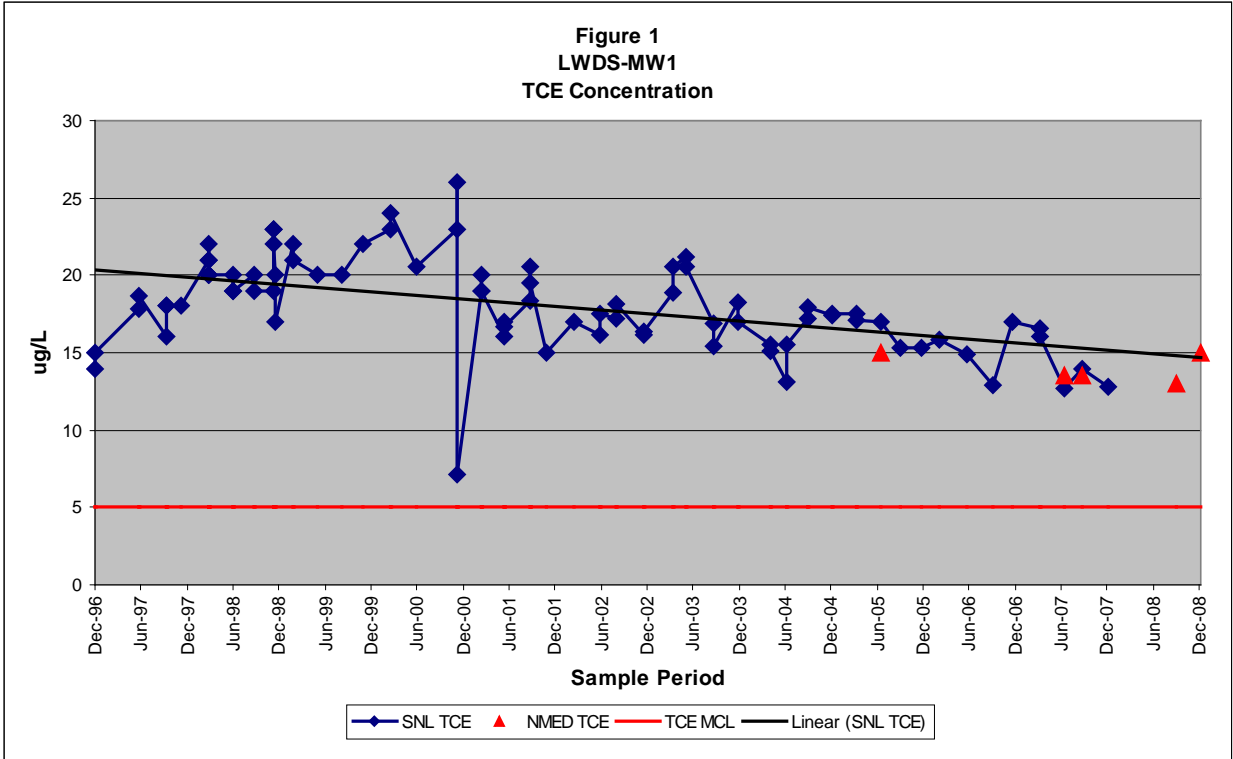


Figure 3
LWDS-MW1
NPN Concentration

