



*Melrose 05*

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27TH CIVIL ENGINEER SQUADRON (ACC)  
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Dear Mr. Cobrain

Enclosed for your review and records are two copies of the Analytical Results of Samples Collected 13, 14, 15 and 16 Dec 04 from groundwater monitoring at Melrose Air Force Range, New Mexico, dated Apr 05.

The purpose of this sampling is to provide biannual groundwater quality data and groundwater altitude data to aid in the protection of the local aquifer.

If you have any questions regarding this information, please contact Mrs. Sheila Newman, Environmental Flight, at (505) 784-6391 or email [sheila.newman@cannon.af.mil](mailto:sheila.newman@cannon.af.mil).

Sincerely

ALEXANDER P. KARIBIAN, Lt Col, USAF

**Attachments:**

Analytical Results of Samples Collected 13, 15, 15 and 16 Dec 04, Groundwater Monitoring at Melrose Air Force Range. (2 cys)

United States Air Force

Ground-Water Monitoring at Melrose Air Force Range

Analytical Results of  
Samples Collected December 13, 14, 15, and 16, 2004

Prepared for  
Cannon Air Force Base

April 2005

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**APPENDIX I**

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## EXECUTIVE SUMMARY

The U.S. Geological Survey (USGS), in cooperation with the U.S. Air Force, is performing biannual ground-water sampling and analysis at Melrose Air Force Range (Range), New Mexico, for evaluation and protection of the local aquifer. The primary objective of this monitoring is to evaluate of ground-water quality and ground-water altitude at the Range. Current ground-water monitoring is an extension of the ground-water characterization completed at the Range by the USGS and the U.S. Air Force in 2002 and 2003. The ground-water characterization provided baseline ground-water quality and ground-water flow properties of the local aquifer to assist the U.S. Air Force in protection of this resource. The current ground water monitoring network includes 13 ground-water-quality/ground-water-altitude wells and 7 ground-water-altitude wells, listed in table 1 and shown in figure 1.

This report presents water-quality data for samples collected December 13, 14, 15, and 16, 2004, at the Range. Ground-water field parameters collected at the Range during sample collection are presented in table 2. Filtered ground-water samples were analyzed for volatile organic compounds (method SW8260B), semivolatile organic compounds (method SW8270C), organochlorine pesticides (method SW8081A), organophosphorus pesticides (method SW8141A), trace and major elements (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, molybdenum, nickel, selenium, silver, vanadium, and zinc by method SW6020; mercury by method SW7470A; and calcium, magnesium, potassium, sodium, and titanium by method SW6010B), anions (bromide, chloride, fluoride, and sulfate by method MCAWW300.0A), alkalinity (method MCAWW310.1), dissolved solids (method MCAWW160.1), organic carbon (method SW9060), phosphorus (method MCAWW365.3), sulfide (method SW9030B/9034), ammonia (method MCAWW350.1), nitrate plus nitrite (method MCAWW353.2), and perchlorate (method SW8321A). Severn Trent Laboratories in Arvada, Colorado, conducted all laboratory analyses. Concentrations of the analytes are presented in table 3. Only those concentrations that exceeded the reporting limits are discussed in this summary because values below the reporting limit are possibly unreliable. A list of all volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and organophosphorus pesticides that were included in the ground-water analyses are presented in Appendix I, table I-1. Quality control results are presented in Appendix II, table II-1.

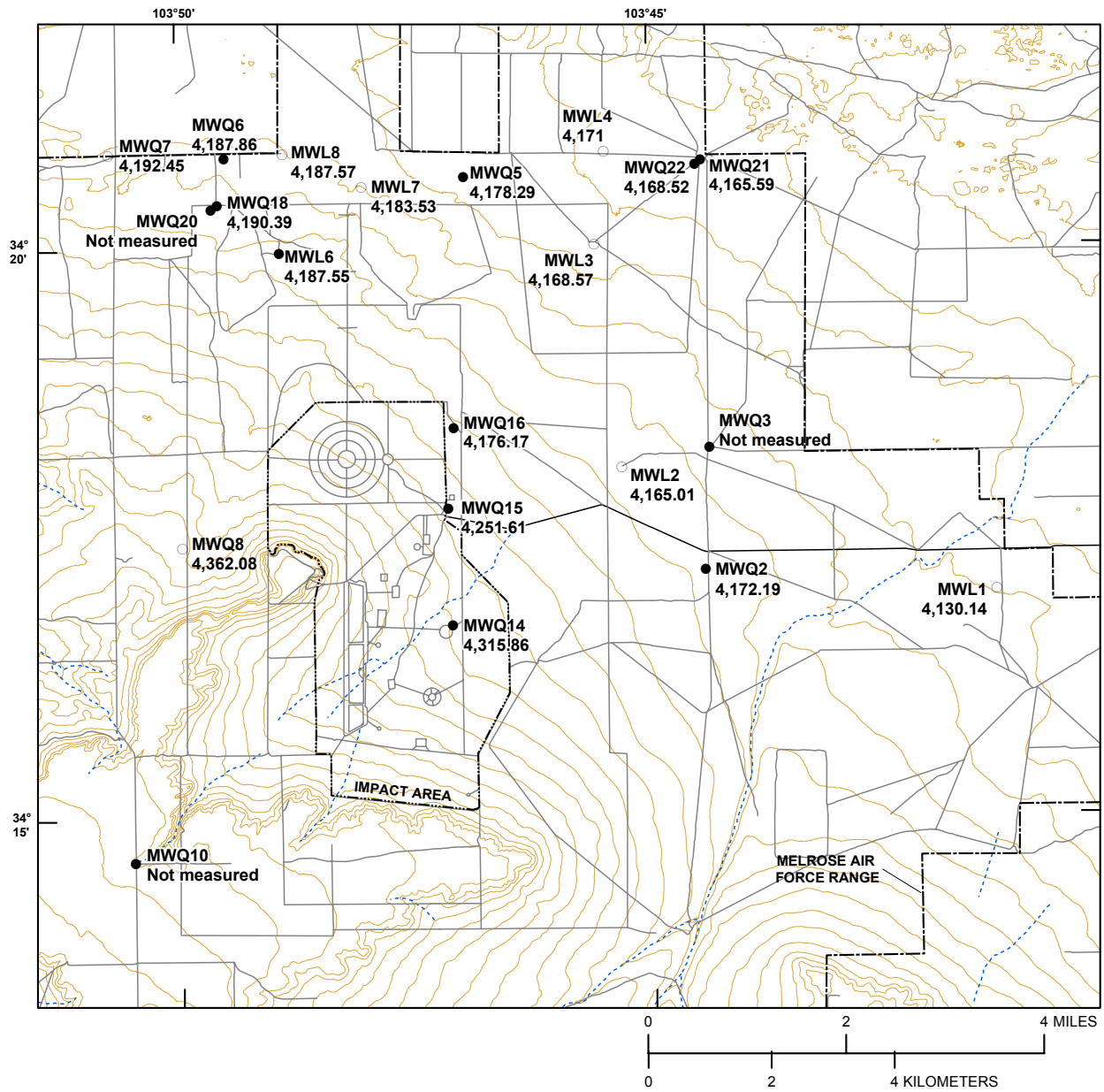
Water-quality results from the December 2004 sampling round were consistent with earlier data. Volatile-organic compounds, semivolatile-organic compounds, organochlorine pesticide compounds, and organophosphorus compounds were not detected above the reporting limit in samples from any wells.

Perchlorate was detected above the reporting limit in wells MWQ3, MWQ5, MWQ6, MWL6, MWQ14-16, MWQ18, MWQ21, and MWQ22. Perchlorate ranged from a concentration of 2.1  $\mu\text{g/L}$  (MWQ22) to a concentration of 20  $\mu\text{g/L}$  (MWQ15). The spatial distribution of perchlorate detections does not indicate a point source from which the compound may have originated. These concentrations are potentially natural, and the USGS is continuing to monitor current research involving natural sources of perchlorate.

Composition of ground water in the Impact Area (fig. 1) continues to be substantially different from ground water in other parts of the Range. This compositional difference is evident in the larger concentrations of dissolved solids (fig. 2) and major elements in ground water from wells MWQ14-16. Ground water from parts of the Chinle Formation (MWQ2 and MWQ20) continues to indicate compositional similarities with ground water from the Ogallala Formation in the Impact Area. In cooperation with the U.S Air Force, the USGS will continue to investigate the possible sources of perchlorate and the compositional differences between ground water in the Impact Area and ground water in other parts of the Range.

**Table 1.** Monitoring well network, Melrose Air Force Range, New Mexico, December 2004.  
[---, not applicable; **NA**, not available]

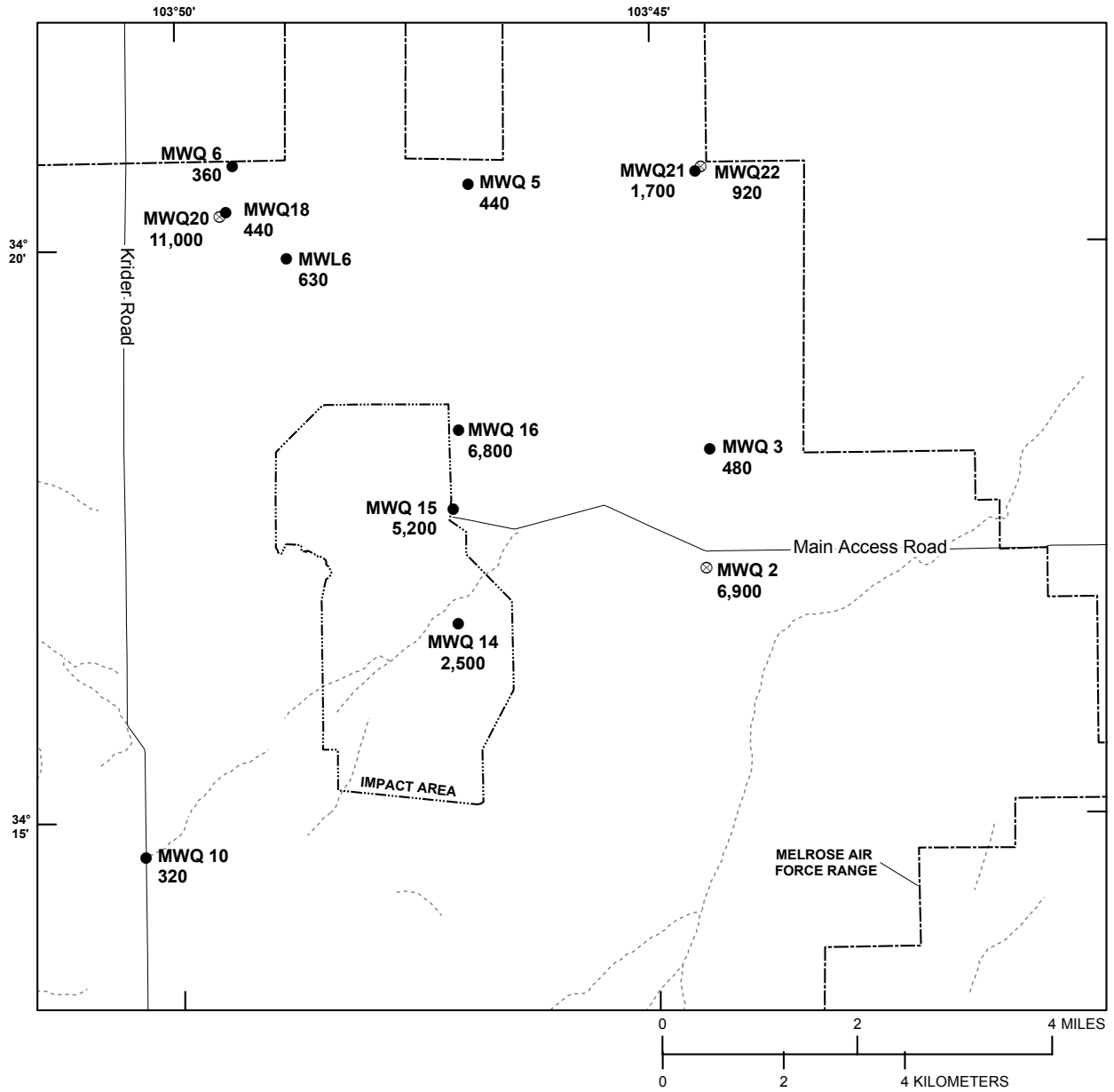
Well number (fig 1)	USGS well site identification number	Cannon AFB common name	Land-surface altitude (ft above NAVD88)	Well depth (feet below land surface)	Date added to the network
Ground-water-quality and ground-water-altitude wells completed in the Ogallala Formation					
MWQ3	341820103442601	Ashley pump	4,266.30	163	6/2002
MWQ5	342031103464701	Telephone pole	4,229.80	101	6/2002
MWQ6	342048103492701	Homestead	4,268.68	Not measured	6/2002
MWQ10	341954103503101	Luce jog	4,637.69	58	6/2002
MWQ14	341640103470501	EOD pit	4,378.68	120	6/2002
MWQ15	341743103470801	MA02MW001D	4,354.29	183	6/2002
MWQ16	341825103470301	SWMU114MW004	4,321.25	181	6/2002
MWQ18	342023103493401	---	4,289	148	7/2004
MWQ21	342045103442601	---	4,208	65	12/2004
MWL6	341958103485401	Brackish mill	4,301.08	110	6/2002
Ground-water-quality and ground-water-altitude wells completed in the Chinle Formation					
MWQ2	341714103442502	---	4,288.80	240	6/2002
MWQ20	342023103493403	---	4,289	300	12/2004
MWQ22	342045103442602	---	4,208	154	12/2004
Ground-water-altitude wells completed in the Ogallala Formation					
MWQ7	342046103503501	Grider at gate	4,258.18	99	6/2002
MWL1	341658103411901	Mini-mute east	4,237.38	120	6/2002
MWL2	341758103450401	NE100 mill	4,289.45	139	6/2002
MWL3	341956103452201	Luce NW	4,222.34	74	6/2002
MWL4	342044103451401	Firebreak fence	4,215.80	57	6/2002
MWL7	341958103485401	Fence line dip	4,253.91	110	6/2002
MWL8	342050103485101	Davis trap mill	4,257.51	114	6/2002



EXPLANATION

- DIRT ROAD
- PAVED ROAD
- TOPOGRAPHIC CONTOUR -- 20-foot interval, vertical coordinate information is referenced to NAVD 1988
- MWQ14 WATER-QUALITY AND WATER-ALTITUDE WELL -- Top characters - well site identifier; bottom number - altitude of water level, in feet above NAVD 1988.
- MWL1 WATER-ALTITUDE WELL -- Top characters - well site identifier; bottom number - altitude of water level, in feet above NAVD 1988.

**Figure 1.** Monitoring well network and ground-water altitude at Melrose Air Force Range, December 2004.



#### EXPLANATION

- **MWQ10** WELL -- Top characters are well number and bottom number is the total dissolved solids concentration in milligrams per liter
- WELL COMPLETED IN THE OGALLALA FORMATION
- ⊙ WELL COMPLETED IN THE CHINLE FORMATION

**Figure 2.** Dissolved-solids concentrations in ground water at Melrose Air Force Range, December 2004.



**Table 2.** Summary of field properties for ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico.

[°C, degrees Celsius;  $\mu\text{S/cm}$ , microsiemens per centimeter;  $\text{mg/L}$ , milligrams per liter; NTU, nephelometric turbidity units; NA, parameter not recorded]

Sample ID:	MWQ2	MWQ3	MWQ5	MWQ6	MWL6	MWQ10	MWQ14
Sample date & time:	12/15/04 1000	12/13/04 1425	12/16/04 0935	12/14/04 0910	12/14/04 1435	12/14/04 1100	12/15/04 0700
Analytes	Result	Result	Result	Result	Result	Result	Result
<b>FIELD PROPERTIES</b>							
Temperature (°C)	18.3	18.6	17.5	17.6	17.9	NA	17.2
pH	7.74	8.03	7.41	8.28	8.25	8.12	7.76
Specific conductance ( $\mu\text{S/cm}$ )	11,640	809	659	555	955	500	3,960
Dissolved oxygen (mg/L)	0.6	6.05	6.73	NA	6.96	9.62	2.90
Turbidity (NTU)	341	0.17	0.53	0.30	11	0.24	7

Sample ID:	MWQ15	MWQ16	MWQ18	MWQ20	MWQ21	MWQ22
Sample date & time:	12/15/04 0745	12/15/04 0835	12/14/04 1220	12/16/04 1135	12/15/04 1140	12/15/04 1245
Analytes	Result	Result	Result	Result	Result	Result
<b>FIELD PROPERTIES</b>						
Temperature (°C)	15.9	18.2	17.6	19	17.7	18.1
pH	7.71	7.64	8.39	7.73	7.17	7.87
Specific conductance ( $\mu\text{S/cm}$ )	8,650	12,260	684	NA	2,360	NA
Dissolved oxygen (mg/L)	2.79	4.37	7.15	2.14	3.21	0.83
Turbidity (NTU)	57	1	1.2	83.1	13	25

**Table 3.** Summary of analyte concentrations in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico.

[**RL**, reporting limit; **µg/L**, micrograms per liter; **B**, estimated concentration - detected below the reporting limit; **ND**, not detected; **J**, the associated method blank contained the target analyte at a reportable limit]

Sample ID: Sample date & time:	MWQ2		MWQ3		MWQ5		MWQ6		MWL6	
	12/15/04	1000	12/13/04	1425	12/16/04	0935	12/14/04	0910	12/14/04	1435
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
VOLATILE ORGANIC COMPOUNDS										
Chloroform, SW8260B (µg/L)	0.28 B	1	ND	1	ND	1	ND	1	ND	1
TRACE ELEMENTS										
Antimony, SW6020(µg/L)	ND	10	ND	2	ND	2	ND	2	ND	2
Arsenic, SW6020 (µg/L)	5.6 B, J	25	10 J	5	7.3	5	6.7 J	5	7.6 J	5
Barium, SW6020 (µg/L)	24 J	5	25 J	1	28	1	31 J	1	20 J	1
Beryllium, SW6020 (µg/L)	ND	5	ND	1	ND	1	ND	1	ND	1
Cadmium, SW6020 (µg/L)	ND	5	ND	1	ND	1	ND	1	ND	1
Chromium, SW6020(µg/L)	1.8 B	10	1.4 B	2	1.3 B, J	2	1.2 B	2	1.2 B	2
Cobalt, SW6020 (µg/L)	1.9 B	5	0.056 B	1	0.074 B	1	0.059 B	1	0.31 B	1
Copper, SW6020 (µg/L)	5.9 B, J	10	1.2 B, J	2	1 B	2	0.77 B, J	2	0.84 B, J	2
Lead, SW6020 (µg/L)	ND	5	0.13 B	1	0.14 B	1	0.33 B	1	ND	1
Manganese, SW6020 (µg/L)	320	5	ND	1	ND	1	0.39 B	1	66	1
Molybdenum, SW6020(µg/L)	21	10	5.7	2	3.8	2	2.1	2	1.9 B	2
Nickel, SW6020 (µg/L)	12	10	ND	2	ND	2	ND	2	ND	2
Selenium, SW6020 (µg/L)	ND	25	5	5	3.3 B	5	1.6 B	5	6.1	5
Silver, SW6020 (µg/L)	ND	25	ND	5	ND	5	ND	5	ND	5
Vanadium, SW6020 (µg/L)	1.2 B	25	74	5	62	5	51	5	46	5
Zinc, SW6020 (µg/L)	ND	50	3.8 B	10	9 B	10	25	10	9.4 B	10
Mercury, SW7470A (µg/L)	ND	0.2	ND	0.2	ND	0.2	ND	0.2	ND	0.2

**Table 3.** Summary of analyte concentrations in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico - Continued.

[**RL**, reporting limit; **mg/L**, milligrams per liter; **B**, estimated concentration - detected below the reporting limit; **ND**, not detected; **J**, method blank contamination; associated method blank contains target analyte at a reportable level; **Q**, reporting limit elevated due to high analyte concentration; **G**, reporting limit elevated due to matrix interference; **µg/L**, micrograms per liter]

Sample ID: Sample date & time:	MWQ2		MWQ3		MWQ5		MWQ6		MWL6	
	12/15/04	1000	12/13/04	1425	12/16/04	0935	12/14/04	0910	12/14/04	1435
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
GENERAL CHEMISTRY										
Calcium, SW6010B (mg/L)	180	0.2	31	0.2	46	0.2	35	0.2	67	0.2
Magnesium, SW6010B (mg/L)	120	0.2	33	0.2	24	0.2	18	0.2	33	0.2
Potassium, SW6010B (mg/L)	8	3	5.8	3	3.2	3	2.2 B	3	4.1	3
Sodium, SW6010B (mg/L)	2,200	5	83	5	71	5	59	5	69	5
Titanium, SW6010B(mg/L)	ND	0.01	ND	0.01	ND	0.01	ND	0.01	ND	0.01
Chloride, MCAWW300.0A (mg/L)	3,300 J,Q	300	63 J, Q	15	22 J	3	12 J	3	100 J, Q	15
Fluoride, MCAWW300.0A (mg/L)	ND G	5	2	1	2.6	1	2.6	1	1.6	1
Bromide, MCAWW300.0A (mg/L)	7.1 G	1	0.35	0.2	0.15 B	0.2	0.1 B	0.2	0.56	0.2
Sulfate, MCAWW300.0A (mg/L)	1,300 Q	500	140 Q	25	98 Q	25	70 Q	25	200 Q	25
Alkalinity, MCAWW310.1 (mg/L)	68	5	160	5	180	5	170	5	130	5
Dissolved Solids, MCAWW160.1 (mg/L)	6,900 Q	100	480	10	440	10	360	10	630	10
Organic Carbon, SW9060 (mg/L)	0.65 B	1	0.89 B	1	0.75 B	1	1.2	1	1.2	1
Phosphorus, MCAWW365.3 (mg/L)	ND	0.05	ND	0.05	ND	0.05	ND	0.05	ND	0.05
Sulfide, SW9030B (mg/L)	ND	4	ND	4	ND	4	ND	4	ND	4
Ammonia, MCAWW350.1 (mg/L)	0.42	0.1	0.041 B	0.1	ND	0.1	0.021 B	0.1	0.07 B	0.1
Nitrate & Nitrite, MCAWW353.2 (mg/L)	ND	0.1	0.95	0.1	6.3	0.1	5.8	0.1	0.64	0.1
Perchlorate, SW8321A (µg/L)	ND	0.2	7	2	3.3	2	2.2	0.2	9.1	2

**Table 3.** Summary of analyte concentrations in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico - Continued.

[**RL**, reporting limit; **µg/L**, micrograms per liter; **ND**, not detected; **B**, estimated concentration - detected below the reporting limit; **J**, the associated method blank contained the target analyte at a reportable limit]

Sample ID: Sample date & time:	MWQ10		MWQ14		MWQ15		MWQ16	
	12/14/04	1100	12/15/04	0700	12/15/04	0745	12/15/04	0835
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL
<b>TRACE ELEMENTS</b>								
Antimony, SW6020 (µg/L)	ND	2	1.1 B	2	ND	4	1.6 B	10
Arsenic, SW6020 (µg/L)	6 J	5	6.1 J	5	13 J	10	5.6 B, J	25
Barium, SW6020 (µg/L)	76 J	1	13 J	1	8.6 J	2	19 J	5
Beryllium, SW6020 (µg/L)	ND	1	ND	1	ND	2	ND	5
Cadmium, SW6020 (µg/L)	ND	1	0.04 B	1	ND	2	ND	5
Chromium, SW6020 (µg/L)	0.46 B	2	1.3 B	2	1.6 B	4	3.1 B	10
Cobalt, SW6020 (µg/L)	0.12 B	1	0.43 B	1	1.5 B	2	0.64 B	5
Copper, SW6020 (µg/L)	2.4 J	2	3.1 J	2	6.9 J	4	4.6 B, J	10
Lead, SW6020 (µg/L)	0.23 B	1	0.66 B	1	ND	2	1.3 B	5
Manganese, SW6020 (µg/L)	ND	1	1.6	1	90	2	3.2 B	5
Molybdenum, SW6020 (µg/L)	3.7	2	26	2	16	4	11	10
Nickel, SW6020 (µg/L)	ND	2	2.9	2	2.2 B	4	ND	10
Selenium, SW6020 (µg/L)	0.47 B	5	23	5	140	10	20 B	25
Silver, SW6020 (µg/L)	ND	5	ND	5	ND	10	ND	25
Vanadium, SW6020 (µg/L)	38	5	4.3 B	5	6.9 B	10	6 B	25
Zinc, SW6020 (µg/L)	16	10	43	10	7.8 B	20	68	50
Mercury, SW7470A (µg/L)	ND	0.2	ND	0.2	ND	0.2	ND	0.2

**Table 3.** Summary of analyte concentrations in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico - Continued.

[**RL**, reporting limit; **mg/L**, milligrams per liter; **ND**, not detected; **B**, estimated concentration - detected below the reporting limit; **J**, the associated method blank contained the target analyte at a reportable limit; **Q**, elevated reporting limit due to high analyte levels; **G**, elevated reporting limit due to high matrix interference; **µg/L**, micrograms per liter]

Sample ID:	MWQ10		MWQ14		MWQ15		MWQ16	
Sample date & time:	12/14/04	1100	12/15/04	0700	12/15/04	0745	12/15/04	0835
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL
<b>GENERAL CHEMISTRY</b>								
Calcium, SW6010B (mg/L)	61	0.2	68	0.2	100	0.2	290	0.2
Magnesium, SW6010B (mg/L)	20	0.2	62	0.2	57	0.2	260	0.2
Potassium, SW6010B (mg/L)	5.5	3	10	3	7.2	3	14	3
Sodium, SW6010B (mg/L)	15	5	670	5	1,700	5	2,000	5
Titanium, SW6010B(mg/L)	ND	0.1	ND	0.01	ND	0.01	ND	0.01
Chloride, MCAWW300.0A (mg/L)	2.5 B, J	3	620 J, Q	150	1,400 J, Q	300	2,800 J, Q	300
Fluoride, MCAWW300.0A (mg/L)	2.4	1	2.7 G	2	3.2 B, G	5	0.68 B, G	5
Bromide, MCAWW300.0A (mg/L)	0.09 B	0.2	4.7 G	0.4	33 Q	1	6.5 G	1.0
Sulfate, MCAWW300.0A (mg/L)	28	5	870 Q	250	1,700 Q	500	1,400 Q	500
Alkalinity, MCAWW310.1 (mg/L)	210	5	140	5	150	5	45	5
Dissolved Solids, MCAWW160.1 (mg/L)	320	10	2,500	10	5,200 Q	20	6,800 Q	100
Organic Carbon, SW9060 (mg/L)	1.6	1	0.74 B	1	6.6	1	0.52 B	1
Phosphorus, MCAWW365.3 (mg/L)	ND	0.05	ND	0.05	ND	0.05	ND	0.05
Sulfide, SW9030B (mg/L)	ND	4	ND	4	ND	4	ND	4
Ammonia, MCAWW350.1 (mg/L)	ND	0.1	0.023 B	0.1	0.079 B	0.1	ND	0.10
Nitrate & Nitrite, MCAWW353.2 (mg/L)	6.5	0.1	2.8	0.1	6.3	0.1	0.93	0.1
Perchlorate, SW8321A (µg/L)	0.07 J	0.2	4.6	0.2	20	2	2.5	0.2

**Table 3.** Summary of analyte concentrations in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico - Continued.

[**RL**, reporting limit; **µg/L**, micrograms per liter; **B**, estimated concentration - detected below the reporting limit; **ND**, not detected; **J**, the associated method blank contained the target analyte at a reportable limit]

Sample ID: Sample date & time:	MWQ18		MWQ20		MWQ21		MWQ22	
	12/14/04	1220	12/16/04	1135	12/15/04	1140	12/15/04	1245
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL
TRACE ELEMENTS								
Antimony, SW6020 (µg/L)	0.27 B	2	0.81 B	10	0.21 B	2	ND	2
Arsenic, SW6020 (µg/L)	7.4 J	5	5.4 B	25	6.4 J	5	1.4 B, J	5
Barium, SW6020 (µg/L)	31 J	1	96	5	49 J	1	24 J	1
Beryllium, SW6020 (µg/L)	ND	1	ND	5	ND	1	ND	1
Cadmium, SW6020 (µg/L)	ND	1	0.33 B	5	ND	1	ND	1
Chromium, SW6020 (µg/L)	1.2 B	2	2.9 B, J	10	1.3 B	2	1.4 B	2
Cobalt, SW6020 (µg/L)	1.7	1	2.8 B	5	0.45 B	1	0.27 B	1
Copper, SW6020 (µg/L)	0.6 B, J	2	5.9 B	10	2.7 J	2	0.98 B, J	2
Lead, SW6020 (µg/L)	ND	1	ND	5	0.16 B	1	ND	1
Manganese, SW6020 (µg/L)	2.5	1	670	5	10	1	8.3	1
Molybdenum, SW6020 (µg/L)	4.7	2	21	10	12	2	8.6	2
Nickel, SW6020 (µg/L)	ND	2	10	10	ND	2	ND	2
Selenium, SW6020 (µg/L)	3.2 B	5	5.2 B	25	11	5	8.2	5
Silver, SW6020 (µg/L)	ND	5	ND	25	ND	5	ND	5
Vanadium, SW6020 (µg/L)	54	5	2.1 B	25	37	5	32	5
Zinc, SW6020 (µg/L)	4.4 B	10	260	50	27	10	29	10
Mercury, SW7470A (µg/L)	ND	0.2	ND	0.2	ND	0.2	ND	0.2

**Table 3.** Summary of analyte concentrations in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico - Concluded.

[**RL**, reporting limit; **mg/L**, milligrams per liter; **B**, estimated concentration - detected below the reporting limit; **ND**, not detected; **J**, the associated method blank contained the target analyte at a reportable limit; **Q**, elevated reporting limit due to high analyte levels; **G**, elevated reporting limit due to high matrix interference; **µg/L**, micrograms per liter]

Sample ID: Sample date & time:	MWQ18		MWQ20		MWQ21		MWQ22	
	12/14/04	1220	12/16/04	1135	12/15/04	1140	12/15/04	1245
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL
<b>GENERAL CHEMISTRY</b>								
Calcium, SW6010B (mg/L)	42	0.2	570	0.2	170	0.2	27	0.2
Magnesium, SW6010B (mg/L)	20	0.2	340	0.2	79	0.2	11	0.2
Potassium, SW6010B (mg/L)	2.7 B	3	15	3	10	3	2.5 B	3
Sodium, SW6010B (mg/L)	71	5	3,100	5	240	5	280	5
Titanium, SW6010B(mg/L)	ND	0.01	ND	0.01	ND	0.01	ND	0.01
Chloride, MCAWW300.0A (mg/L)	42 J	3	5,300 J, Q	600	190 J, Q	15	270 J, Q	60
Fluoride, MCAWW300.0A (mg/L)	1.9	1	ND G	5	2.8	1	1.1	1
Bromide, MCAWW300.0A (mg/L)	0.23	0.2	9.2 G	1	1.4	0.2	0.74	0.2
Sulfate, MCAWW300.0A (mg/L)	100 Q	25	1,600 Q	500	750 Q	100	210 Q	25
Alkalinity, MCAWW310.1 (mg/L)	170	5	57	5	200	5	140	5
Dissolved Solids, MCAWW160.1 (mg/L)	440	10	11,000 Q	100	1,700	10	920	10
Organic Carbon, SW9060 (mg/L)	1.2	1	1.1	1	2.5	1	0.48 B	1
Phosphorus, MCAWW365.3 (mg/L)	ND	0.05	ND	0.05	ND	0.05	ND	0.05
Sulfide, SW9030B (mg/L)	ND	4	ND	4	ND	4	ND	4
Ammonia, MCAWW350.1 (mg/L)	0.02 B	0.1	0.36	0.1	0.027 B	0.1	ND	0.1
Nitrate & Nitrite, MCAWW353.2 (mg/L)	0.68	0.1	0.36	0.1	1.5	0.1	0.79	0.1
Perchlorate, SW8321A (µg/L)	5.8	2	ND	0.2	5.4	2	2.1	0.2

## **APPENDIX I**



**Table I-1.** Summary of volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and organophosphorus pesticides that were sampled for in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico.

[ $\mu\text{g/L}$ , micrograms per liter; **RL**, reporting limit]

Analyte	Method	Units	RL
<b>VOLATILE ORGANIC COMPOUNDS</b>			
Acetone	SW846 8260B	$\mu\text{g/L}$	10
Benzene	SW846 8260B	$\mu\text{g/L}$	1.0
Bromobenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Bromochloromethane	SW846 8260B	$\mu\text{g/L}$	1.0
Bromodichloromethane	SW846 8260B	$\mu\text{g/L}$	1.0
Bromoform	SW846 8260B	$\mu\text{g/L}$	1.0
Bromomethane	SW846 8260B	$\mu\text{g/L}$	2.0
2-Butanone (MEK)	SW846 8260B	$\mu\text{g/L}$	5.0
n-Butylbenzene	SW846 8260B	$\mu\text{g/L}$	1.0
sec-Butylbenzene	SW846 8260B	$\mu\text{g/L}$	1.0
tert-Butylbenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Carbon disulfide	SW846 8260B	$\mu\text{g/L}$	1.0
Carbon tetrachloride	SW846 8260B	$\mu\text{g/L}$	1.0
Chlorobenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Chlorodibromomethane	SW846 8260B	$\mu\text{g/L}$	1.0
Chloroethane	SW846 8260B	$\mu\text{g/L}$	2.0
Chloroform	SW846 8260B	$\mu\text{g/L}$	1.0
Chloromethane	SW846 8260B	$\mu\text{g/L}$	2.0
2-Chlorotoluene	SW846 8260B	$\mu\text{g/L}$	1.0
4-Chlorotoluene	SW846 8260B	$\mu\text{g/L}$	1.0
1,2-Dibromo-3-chloropropane (DBCP)	SW846 8260B	$\mu\text{g/L}$	2.0
1,2-Dibromomethane (EDB)	SW846 8260B	$\mu\text{g/L}$	1.0
Dibromomethane	SW846 8260B	$\mu\text{g/L}$	1.0
1,2-Dichlorobenzene	SW846 8260B	$\mu\text{g/L}$	1.0
1,3-Dichlorobenzene	SW846 8260B	$\mu\text{g/L}$	1.0
1,4-Dichlorobenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Dichlorodifluoromethane	SW846 8260B	$\mu\text{g/L}$	2.0
1,1-Dichloroethane	SW846 8260B	$\mu\text{g/L}$	1.0
1,2-Dichloroethane	SW846 8260B	$\mu\text{g/L}$	1.0
cis-1,2-Dichloroethene	SW846 8260B	$\mu\text{g/L}$	1.0
trans-1,2-Dichloroethene	SW846 8260B	$\mu\text{g/L}$	1.0
1,1-Dichloroethene	SW846 8260B	$\mu\text{g/L}$	1.0
1,2-Dichloropropane	SW846 8260B	$\mu\text{g/L}$	1.0
1,3-Dichloropropane	SW846 8260B	$\mu\text{g/L}$	1.0
2,2-Dichloropropane	SW846 8260B	$\mu\text{g/L}$	5.0
cis-1,3-Dichloropropene	SW846 8260B	$\mu\text{g/L}$	1.0

**Table I-1.** Summary of volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and organophosphorus pesticides that were sampled for in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico – Continued.

[ $\mu\text{g/L}$ , micrograms per liter; <b>RL</b> , reporting limit]			
Analyte	Method	Units	RL
trans-1,3-Dichloropropene	SW846 8260B	$\mu\text{g/L}$	1.0
1,1-Dichloropropene	SW846 8260B	$\mu\text{g/L}$	1.0
Ethylbenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Hexachlorobutadiene	SW846 8260B	$\mu\text{g/L}$	1.0
2-Hexanone	SW846 8260B	$\mu\text{g/L}$	5.0
Isopropylbenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Isopropyl ether	SW846 8260B	$\mu\text{g/L}$	10
4-Isopropyltoluene	SW846 8260B	$\mu\text{g/L}$	1.0
4-Methyl-2-pentanone	SW846 8260B	$\mu\text{g/L}$	5.0
Methyl tert-butyl ether	SW846 8260B	$\mu\text{g/L}$	5.0
Methylene chloride	SW846 8260B	$\mu\text{g/L}$	5.0
Napthalene	SW846 8260B	$\mu\text{g/L}$	1.0
n-Propylbenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Styrene	SW846 8260B	$\mu\text{g/L}$	1.0
1,1,1,2-Tetrachloroethane	SW846 8260B	$\mu\text{g/L}$	1.0
1,1,2,2-Tetrachloroethane	SW846 8260B	$\mu\text{g/L}$	1.0
Tetrachloroethene	SW846 8260B	$\mu\text{g/L}$	1.0
Toluene	SW846 8260B	$\mu\text{g/L}$	1.0
1,2,3-Trichlorobenzene	SW846 8260B	$\mu\text{g/L}$	1.0
1,2,4-Trichlorobenzene	SW846 8260B	$\mu\text{g/L}$	1.0
1,1,1-Trichloroethane	SW846 8260B	$\mu\text{g/L}$	1.0
1,1,2-Trichloroethane	SW846 8260B	$\mu\text{g/L}$	1.0
Trichloroethene	SW846 8260B	$\mu\text{g/L}$	1.0
Trichlorofluoromethane	SW846 8260B	$\mu\text{g/L}$	2.0
1,2,3-Trichloropropane	SW846 8260B	$\mu\text{g/L}$	1.0
Trichlorotrifluoroethane	SW846 8260B	$\mu\text{g/L}$	1.0
1,3,5-Trimethylbenzene	SW846 8260B	$\mu\text{g/L}$	1.0
Vinyl chloride	SW846 8260B	$\mu\text{g/L}$	1.0
m-Xylene & p-Xylene	SW846 8260B	$\mu\text{g/L}$	2.0
o-Xylene	SW846 8260B	$\mu\text{g/L}$	1.0
<b>SEMIVOLATILE ORGANIC COMPOUNDS</b>			
Acenaphthene	SW846 8270C	$\mu\text{g/L}$	10
Acenaphthylene	SW846 8270C	$\mu\text{g/L}$	10
Acetophenone	SW846 8270C	$\mu\text{g/L}$	10
2-Acetylaminofluorene	SW846 8270C	$\mu\text{g/L}$	100
4-Aminobiphenyl	SW846 8270C	$\mu\text{g/L}$	50
Aniline	SW846 8270C	$\mu\text{g/L}$	10

**Table I-1.** Summary of volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and organophosphorus pesticides that were sampled for in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico – Continued.

[ $\mu\text{g/L}$ , micrograms per liter; **RL**, reporting limit]

Analyte	Method	Units	RL
Anthracene	SW846 8270C	$\mu\text{g/L}$	10
Aramite	SW846 8270C	$\mu\text{g/L}$	20
Benzo (a) anthracene	SW846 8270C	$\mu\text{g/L}$	10
Benzo (b) fluoranthene	SW846 8270C	$\mu\text{g/L}$	10
Benzo (k) fluoranthene	SW846 8270C	$\mu\text{g/L}$	10
Benzo (ghi) perylene	SW846 8270C	$\mu\text{g/L}$	10
Benzo (a) pyrene	SW846 8270C	$\mu\text{g/L}$	10
Benzyl alcohol	SW846 8270C	$\mu\text{g/L}$	10
bis (2-Chloroethoxy) methane	SW846 8270C	$\mu\text{g/L}$	10
bis (2-Chloroethyl)-ether	SW846 8270C	$\mu\text{g/L}$	10
bis (2-Ethylhexyl) phthalate	SW846 8270C	$\mu\text{g/L}$	10
4-Bromophenyl phenyl ether	SW846 8270C	$\mu\text{g/L}$	10
Butyl benzyl phthalate	SW846 8270C	$\mu\text{g/L}$	10
4-Chloroaniline	SW846 8270C	$\mu\text{g/L}$	10
4-Chloro-3-methylphenol	SW846 8270C	$\mu\text{g/L}$	10
2-Chloronaphthalene	SW846 8270C	$\mu\text{g/L}$	10
2-Chlorophenol	SW846 8270C	$\mu\text{g/L}$	10
4-Chlorophenyl phenyl ether	SW846 8270C	$\mu\text{g/L}$	10
Chrysene	SW846 8270C	$\mu\text{g/L}$	10
Dibenz (a,h) anthracene	SW846 8270C	$\mu\text{g/L}$	10
Dibenzofuran	SW846 8270C	$\mu\text{g/L}$	10
Di-n-butyl phthalate	SW846 8270C	$\mu\text{g/L}$	10
1,2-Dichlorobenzene	SW846 8270C	$\mu\text{g/L}$	10
1,3-Dichlorobenzene	SW846 8270C	$\mu\text{g/L}$	10
1,4-Dichlorobenzene	SW846 8270C	$\mu\text{g/L}$	10
3,3'-Dichlorobenzidine	SW846 8270C	$\mu\text{g/L}$	50
2,4-Dichlorophenol	SW846 8270C	$\mu\text{g/L}$	10
2,6-Dichlorophenol	SW846 8270C	$\mu\text{g/L}$	10
Diethyl phthalate	SW846 8270C	$\mu\text{g/L}$	10
4-Dimethylaminoazobenzene	SW846 8270C	$\mu\text{g/L}$	20
7,12-Dimethylbenz(a)-anthracene	SW846 8270C	$\mu\text{g/L}$	20
3,3'-Dimethylbenzidine	SW846 8270C	$\mu\text{g/L}$	20
alpha,alpha-Dimethylphenethylamine	SW846 8270C	$\mu\text{g/L}$	50
2,4-Dimethylphenol	SW846 8270C	$\mu\text{g/L}$	10
Dimethyl phthalate	SW846 8270C	$\mu\text{g/L}$	10
1,3-Dinitrobenzene	SW846 8270C	$\mu\text{g/L}$	10
4,6-Dinitro-2-methylphenol	SW846 8270C	$\mu\text{g/L}$	50
2,4-Dinitrophenol	SW846 8270C	$\mu\text{g/L}$	50

**Table I-1.** Summary of volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and organophosphorus pesticides that were sampled for in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico – Continued.

[ $\mu\text{g/L}$ , micrograms per liter; **RL**, reporting limit]

Analyte	Method	Units	RL
2,4-Dinitrotoluene	SW846 8270C	$\mu\text{g/L}$	10
2,6-Dinitrotoluene	SW846 8270C	$\mu\text{g/L}$	10
2-sec-Butyl-4,6-dinitrophenol	SW846 8270C	$\mu\text{g/L}$	10
Di-n-octyl phthalate	SW846 8270C	$\mu\text{g/L}$	10
Diphenylamine	SW846 8270C	$\mu\text{g/L}$	10
Ethyl methansulfonate	SW846 8270C	$\mu\text{g/L}$	10
Fluoranthene	SW846 8270C	$\mu\text{g/L}$	10
Fluorene	SW846 8270C	$\mu\text{g/L}$	10
Hexachlorobenzene	SW846 8270C	$\mu\text{g/L}$	10
Hexachlorobutadiene	SW846 8270C	$\mu\text{g/L}$	10
Hexachlorocyclopentadiene	SW846 8270C	$\mu\text{g/L}$	50
Hexachloroethane	SW846 8270C	$\mu\text{g/L}$	10
Hexachloropropene	SW846 8270C	$\mu\text{g/L}$	100
Indeno (1,2,3-cd) pyrene	SW846 8270C	$\mu\text{g/L}$	10
Isophorone	SW846 8270C	$\mu\text{g/L}$	10
Isosafrole	SW846 8270C	$\mu\text{g/L}$	20
Methapyrilene	SW846 8270C	$\mu\text{g/L}$	50
3-Methylcholanthrene	SW846 8270C	$\mu\text{g/L}$	20
Methyl methanesulfonate	SW846 8270C	$\mu\text{g/L}$	10
2-Methylnaphthalene	SW846 8270C	$\mu\text{g/L}$	10
2-Methylphenol	SW846 8270C	$\mu\text{g/L}$	10
3-Methylphenol	SW846 8270C	$\mu\text{g/L}$	10
4-Methylphenol	SW846 8270C	$\mu\text{g/L}$	10
Naphthalene	SW846 8270C	$\mu\text{g/L}$	10
1,4-Naphthoquinone	SW846 8270C	$\mu\text{g/L}$	50
1-Naphthylamine	SW846 8270C	$\mu\text{g/L}$	10
2-Naphthylamine	SW846 8270C	$\mu\text{g/L}$	10
2-Nitroaniline	SW846 8270C	$\mu\text{g/L}$	50
3-Nitroaniline	SW846 8270C	$\mu\text{g/L}$	50
4-Nitroaniline	SW846 8270C	$\mu\text{g/L}$	50
Nitrobenzene	SW846 8270C	$\mu\text{g/L}$	10
2-Nitrophenol	SW846 8270C	$\mu\text{g/L}$	10
4-Nitrophenol	SW846 8270C	$\mu\text{g/L}$	50
N-Nitrosodi-n-butylamine	SW846 8270C	$\mu\text{g/L}$	10
N-Nitrosodiethylamine	SW846 8270C	$\mu\text{g/L}$	10
N-Nitrosodimethylamine	SW846 8270C	$\mu\text{g/L}$	10
N-Nitrosodiphenylamine	SW846 8270C	$\mu\text{g/L}$	10
N-Nitrosodi-n-propylamine	SW846 8270C	$\mu\text{g/L}$	10

**Table I-1.** Summary of volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and organophosphorus pesticides that were sampled for in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico – Continued.

[ $\mu\text{g/L}$ , micrograms per liter; **RL**, reporting limit]

Analyte	Method	Units	RL
N-Nitrosomethylethylamine	SW846 8270C	$\mu\text{g/L}$	10
N-Nitrosomorpholine	SW846 8270C	$\mu\text{g/L}$	10
N-Nitrosopiperidine	SW846 8270C	$\mu\text{g/L}$	10
N-Nitrosopyrrolidine	SW846 8270C	$\mu\text{g/L}$	10
5-Nitro-o-toluidine	SW846 8270C	$\mu\text{g/L}$	20
2,2'-oxybis(1-Chloropropane)	SW846 8270C	$\mu\text{g/L}$	10
Pentachlorobenzene	SW846 8270C	$\mu\text{g/L}$	10
Pentachloroethane	SW846 8270C	$\mu\text{g/L}$	50
Pentachloronitrobenzene	SW846 8270C	$\mu\text{g/L}$	50
Pentachlorophenol	SW846 8270C	$\mu\text{g/L}$	50
Phenacetin	SW846 8270C	$\mu\text{g/L}$	20
Phenanthrene	SW846 8270C	$\mu\text{g/L}$	10
Phenol	SW846 8270C	$\mu\text{g/L}$	10
2-Picoline	SW846 8270C	$\mu\text{g/L}$	20
Pronamide	SW846 8270C	$\mu\text{g/L}$	20
Pyrene	SW846 8270C	$\mu\text{g/L}$	10
Pyridine	SW846 8270C	$\mu\text{g/L}$	20
Safrole	SW846 8270C	$\mu\text{g/L}$	50
1,2,4,5-Tetrachlorobenzene	SW846 8270C	$\mu\text{g/L}$	10
2,3,4,6-Tetrachlorophenol	SW846 8270C	$\mu\text{g/L}$	50
2-Toluidine	SW846 8270C	$\mu\text{g/L}$	10
1,2,4-Trichlorobenzene	SW846 8270C	$\mu\text{g/L}$	10
2,4,5-Trichlorophenol	SW846 8270C	$\mu\text{g/L}$	10
2,4,6-Trichlorophenol	SW846 8270C	$\mu\text{g/L}$	10
1,3,5-Trinitrobenzene	SW846 8270C	$\mu\text{g/L}$	50
<b>ORGANOCHLORINE PESTICIDES</b>			
Aldrin	SW846 8081A	$\mu\text{g/L}$	0.050
alpha-BHC	SW846 8081A	$\mu\text{g/L}$	0.050
beta-BHC	SW846 8081A	$\mu\text{g/L}$	0.050
delta-BHC	SW846 8081A	$\mu\text{g/L}$	0.050
gamma-BHC (Lindane)	SW846 8081A	$\mu\text{g/L}$	0.050
alpha-Chlordane	SW846 8081A	$\mu\text{g/L}$	0.050
gamma-Chlordane	SW846 8081A	$\mu\text{g/L}$	0.050
4,4'-DDD	SW846 8081A	$\mu\text{g/L}$	0.050
4,4'-DDE	SW846 8081A	$\mu\text{g/L}$	0.050
4,4'-DDT	SW846 8081A	$\mu\text{g/L}$	0.050
Dieldrin	SW846 8081A	$\mu\text{g/L}$	0.050
Endosulfan I	SW846 8081A	$\mu\text{g/L}$	0.050

**Table I-1.** Summary of volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, and organophosphorus pesticides that were sampled for in ground water collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico – Concluded.

[µg/L, micrograms per liter; **RL**, reporting limit]

Analyte	Method	Units	RL
Endosulfan II	SW846 8081A	µg/L	0.050
Endosulfan sulfate	SW846 8081A	µg/L	0.050
Endrin	SW846 8081A	µg/L	0.050
Endrin aldehyde	SW846 8081A	µg/L	0.050
Endrin ketone	SW846 8081A	µg/L	0.050
Heptachlor	SW846 8081A	µg/L	0.050
Heptachlor epoxide	SW846 8081A	µg/L	0.050
Methoxychlor	SW846 8081A	µg/L	0.10
Toxaphene	SW846 8081A	µg/L	5.0
<b>ORGANOPHOSPHORUS PESTICIDES</b>			
Azinphos-methyl	SW846 8141A	µg/L	2.5
Bolstar	SW846 8141A	µg/L	0.50
Chlorpyrifos	SW846 8141A	µg/L	0.50
Coumaphos	SW846 8141A	µg/L	0.50
Demeton (total)	SW846 8141A	µg/L	1.0
Diazinon	SW846 8141A	µg/L	0.50
Dimethoate	SW846 8141A	µg/L	0.50
Disulfoton	SW846 8141A	µg/L	0.50
EPN	SW846 8141A	µg/L	0.50
Ethoprop	SW846 8141A	µg/L	0.50
Famphur	SW846 8141A	µg/L	1.0
Fensulfothion	SW846 8141A	µg/L	2.5
Fenthion	SW846 8141A	µg/L	0.50
Malathion	SW846 8141A	µg/L	1.2
Merphos	SW846 8141A	µg/L	5.0
Methyl parathion	SW846 8141A	µg/L	0.50
Mevinphos	SW846 8141A	µg/L	6.2
Naled	SW846 8141A	µg/L	10
Ethyl parathion	SW846 8141A	µg/L	0.50
Phorate	SW846 8141A	µg/L	0.50
Ronnel	SW846 8141A	µg/L	10
Sulfotepp	SW846 8141A	µg/L	0.50
Thionazin	SW846 8141A	µg/L	0.50
Tokuthion	SW846 8141A	µg/L	0.50
Trichloronate	SW846 8141A	µg/L	0.50
O,O,O-Triethylphosphorothioate	SW846 8141A	µg/L	0.50

## **APPENDIX II**

**Table II-1.** Summary of analyte concentrations in quality control samples collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico.

[**RL**, reporting limit; **µg/L**, micrograms per liter; **ND**, not detected; **B**, estimated concentration - detected below the reporting limit; **NR**, analysis not requested; **J**, the associated method blank contained the target analyte at a reportable limit]

Sample ID:	Equipment Blank		MWQ2-Trip Blank		MWQ3- Trip Blank		MWQ5 (environmental sample)		MWQ5-2 (duplicate sample)	
Sample date & time:	12/16/04	1631					12/16/04	0935	12/16/04	0940
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
<b>VOLATILE ORGANIC COMPOUNDS</b>										
Acetone, SW8260B (µg/L)	ND	10	2.7 B	10	2.6 B	10	ND	10	ND	10
Carbon disulfide, SW8260B (µg/L)	0.3 B	1	ND	1	ND	1	ND	1	ND	1
<b>TRACE ELEMENTS</b>										
Antimony, SW6020(µg/L)	ND	2	NR	10	NR	2	ND	2	0.15 B	2
Arsenic, SW6020 (µg/L)	ND	5	NR	25	NR	5	7.3	5	7.2	5
Barium, SW6020 (µg/L)	0.068 B	1	NR	5	NR	1	28	1	28	1
Beryllium, SW6020 (µg/L)	ND	1	NR	5	NR	1	ND	1	ND	1
Cadmium, SW6020 (µg/L)	ND	1	NR	5	NR	1	ND	1	ND	1
Chromium, SW6020(µg/L)	0.67 B, J	2	NR	10	NR	2	1.3 B, J	2	1.2 B, J	2
Cobalt, SW6020 (µg/L)	0.32 B	1	NR	5	NR	1	0.074 B	1	0.072 B	1
Copper, SW6020 (µg/L)	0.27 B	2	NR	10	NR	2	1 B	2	0.64 B	2
Lead, SW6020 (µg/L)	ND	1	NR	5	NR	1	0.14 B	1	0.18 B	1
Manganese, SW6020 (µg/L)	0.65 B	1	NR	5	NR	1	ND	1	1.6	1
Molybdenum, SW6020(µg/L)	ND	2	NR	10	NR	2	3.8	2	4	2
Nickel, SW6020 (µg/L)	ND	2	NR	10	NR	2	ND	2	ND	2
Selenium, SW6020 (µg/L)	ND	5	NR	25	NR	5	3.3 B	5	3.3 B	5
Silver, SW6020 (µg/L)	ND	5	NR	25	NR	5	ND	5	ND	5
Vanadium, SW6020 (µg/L)	0.34 B	5	NR	25	NR	5	62	5	59	5
Zinc, SW6020 (µg/L)	3.4 B	10	NR	50	NR	10	9 B	10	7.7 B	10
Mercury, SW7470A (µg/L)	ND	0.2	NR	0.2	NR	0.2	ND	0.2	ND	0.2



**Table II-1.** Summary of analyte concentrations in quality control samples collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico - Continued.

[**RL**, reporting limit; **mg/L**, milligrams per liter; **ND**, not detected; **NR**, analysis not requested; **B**, estimated concentration - detected below the reporting limit; **J**, the associated method blank contained the target analyte at a reportable limit **Q**, reporting limit elevated due to high analyte concentration; **µg/L**, micrograms per liter]

Sample date & time:	Equipment Blank		MWQ2- Trip Blank		MWQ3- Trip Blank		MWQ5 (environmental sample)		MWQ5-2 (duplicate)	
	12/16/04	1631					12/16/04	0935	12/16/04	0940
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
<b>GENERAL CHEMISTRY</b>										
Calcium, SW6010B (mg/L)	ND	0.2	NR	0.2	NR	0.2	46	0.2	45	0.2
Magnesium, SW6010B (mg/L)	0.026 B	0.2	NR	0.2	NR	0.2	24	0.2	24	0.2
Potassium, SW6010B (mg/L)	ND	3	NR	3	NR	3	3.2	3	3.1	3
Sodium, SW6010B (mg/L)	ND	5	NR	5	NR	5	71	5	70	5
Titanium, SW6010B(mg/L)	ND	0.01	NR	0.01	NR	0.01	ND	0.01	ND	0.01
Chloride, MCAWW300.0A (mg/L)	ND	3	NR	3	NR	3	22 J	3	22 J	3
Fluoride, MCAWW300.0A	ND	1	NR	1	NR	1	2.6	1	2.6	1
Bromide, MCAWW300.0A	ND	0.2	NR	0.2	NR	0.2	0.15 B	0.2	0.15 B	0.2
Sulfate, MCAWW300.0A (mg/L)	ND	5	NR	5	NR	5	98 Q	25	99 Q	25
Alkalinity, MCAWW310.1	ND	5	NR	5	NR	5	180	5	170	5
Dissolved Solids, MCAWW160.1	ND	10	NR	10	NR	10	440	10	440	10
Organic Carbon, SW9060 (mg/L)	ND	1	NR	1	NR	1	0.75 B	1	0.91 B	1
Phosphorus, MCAWW365.3	ND	0.05	NR	0.05	NR	0.05	ND	0.05	ND	0.05
Sulfide, SW9030B (mg/L)	ND	4	NR	4	NR	4	ND	4	ND	4
Ammonia, MCAWW350.1	0.021 B	0.1	NR	0.1	NR	0.1	ND	0.1	ND	0.1
Nitrate & Nitrite, MCAWW353.2	ND	0.1	NR	0.1	NR	0.1	6.3	0.1	6.2	0.1
Perchlorate, SW8321A (µg/L)	ND	0.2	NR	0.2	NR	0.2	3.3	2	3.2	2

**Table II-1.** Summary of analyte concentrations in quality control samples collected December 13, 14, 15, and 16, 2004, from monitoring wells at Melrose Air Force Range, New Mexico - Concluded.

[**RL**, reporting limit; **µg/L**, micrograms per liter; **ND**, not detected; **B**, estimated concentration - detected below the reporting limit]

Sample ID: Sample date & time:	MWQ5- Trip Blank		MWQ6- Trip Blank		MWL6- Trip Blank		MWQ10- Trip Blank	
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL
<b>VOLATILE ORGANIC COMPOUNDS</b>								
Acetone, SW8260B (µg/L)	ND	10	4 B	10	2.7B	10	ND	10
Carbon disulfide, SW8260B (µg/L)	ND	1	ND	1	ND	1	ND	1
Methylene chloride, SW8260B (µg/L)	ND	5	ND	5	ND	5	ND	5

Sample ID: Sample date & time:	MWQ14- Trip Blank		MWQ15- Trip Blank		MWQ16- Trip Blank		MWQ18- Trip Blank	
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL
<b>VOLATILE ORGANIC COMPOUNDS</b>								
Acetone, SW8260B (µg/L)	ND	10	4 B	10	2.7 B	10	4.8 B	10
Carbon disulfide, SW8260B (µg/L)	ND	1	ND	1	ND	1	ND	1
Methylene chloride, SW8260B	ND	5	ND	5	ND	5	ND	5

Sample ID: Sample date & time:	MWQ20- Trip Blank		MWQ21- Trip Blank		MWQ22-Trip Blank		EQ-Trip Blank	
Analytes and Method	Result	RL	Result	RL	Result	RL	Result	RL
<b>VOLATILE ORGANIC COMPOUNDS</b>								
Acetone, SW8260B (µg/L)	ND	10	ND	10	2.8 B	10	ND	10
Carbon disulfide, SW8260B (µg/L)	ND	1	ND	1	0.33 B	1	ND	1
Methylene chloride, SW8260B (µg/L)	ND	5	ND	5	ND	5	0.67 B	5