



KAFB 05

DEPARTMENT OF THE AIR FORCE

377th Civil Engineer Division (AFMC)

CERTIFIED MAIL 7000 1530 0004 0493 3982

RETURN RECEIPT REQUESTED

3 Jan 05

MEMORANDUM FOR MR. GEORGE SCHUMAN, PROGRAM MANAGER
POLLUTION PREVENTION SECTION
GROUNDWATER QUALITY BUREAU
NEW MEXICO ENVIRONMENT DEPARTMENT (NMED)
PO BOX 26110
SANTA FE NM 87502



FROM: 377 MSG/CEVR
2050 Wyoming Blvd. SE, Suite 118
Kirtland AFB, NM 87117-5270

SUBJECT: Request for Continued Exemption from Discharge Plan Requirement for Disposal of Purge Water from Groundwater Monitoring Wells at Kirtland Air Force Base (KAFB), New Mexico

1. On 6 Jul 01, we submitted a request for continued exemption from a discharge plan requirement to discharge purge water associated with our Long-Term Groundwater Monitoring Plan (LTM), Site ST-105, Trichloroethylene and Nitrates in the Groundwater, which includes the Abatement Plan for Nitrate Contaminated Groundwater and Site ST-106, the Abatement Plan for the Release of Jet Fuel at the Bulk Fuel Facility. These monitoring programs/site investigations involve groundwater monitoring conducted at KAFB. On 16 Aug 01, we received a letter from the NMED Groundwater Bureau stating that a discharge plan was not required for the discharge as described in our request. The letter also states that in the future, if we change the amount of discharge, we must file a new request for exemption.

2. We are submitting the subject request to include disposal of purge water from fourteen newly installed groundwater monitor wells at KAFB during FY04 that will require purge water disposal on a quarterly basis. The monitor wells were installed as part of ST-105 and two LTM sites, Landfill No. 1 (LF-01) and McCormick Ranch (OT-28). The following table lists the locations of the newly installed groundwater monitor wells and the purge water volumes that will be discharged from the respective monitor wells.

<u>SITE</u>	<u>WELL</u>	<u>LOCATION</u>	<u>ACTUAL DISCHARGE VOLUME PER SAMPLING EVENT</u>
ST-105	KAFB-0520	T9N, R3E, SEC1	35 Gal
	KAFB-0521	T9N, R3E, SEC1	35 Gal
	KAFB-0522	T9N, R4E, SEC6	45 Gal

KAFB2779



<u>SITE</u>	<u>WELL</u>	<u>LOCATION</u>	<u>ACTUAL DISCHARGE VOLUME PER SAMPLING EVENT</u>
ST-105 (cont)	KAFB-0617	T9N, R4E, SEC10	70 Gal
	KAFB-0618	T9N, R4E, SEC9	125 Gal
	KAFB-0619	T9N, R4E, SEC9	50 Gal
	KAFB-0620	T9N, R4E, SEC8	50 Gal
	KAFB-0621	T9N, R4E, SEC3	50 Gal
	KAFB-0622	T9N, R4E, SEC15	40 Gal
	KAFB-0623	T9N, R4E, SEC8	50 Gal
SUBTOTAL			550 Gal
LF-01	KAFB-1118	T9N, R3E, SEC1	75 Gal
	KAFB-1119	T9N, R3E, SEC1	75 Gal
OT-28	KAFB-1008	T8N, R3E, SEC1	75 Gal
	KAFB-1009	T9N, R3E, SEC36	75 Gal
SUBTOTAL			300 Gal
TOTAL:			850 Gal

Additionally, each of the newly installed groundwater monitoring wells will require a one-time disposal of well development water that will amount to a total volume of of 2647 gallons.

3. This letter confirms the discussion between Ms. Karen Menetrey of your staff and Mr. Mark Holmes of my staff, which concerned our request for continued exemption from submitting a discharge plan for the additional volume of purge water from the above listed monitor wells. As per the conversation, it was agreed that a discharge plan would not be required for the additional discharge, which would be exempt as long as the discharge was as described to you, as documented in this letter.

4. As described in the 6 Jul 01 request, the purge water is stored in poly tanks or metal drums adjacent to the wellhead, pending receipt of analytical results. Groundwater samples collected from the monitor wells from the respective sites will be analyzed for the following analytes:

Site ST-105:

- General Groundwater Parameters: Specific conductance, pH, Temperature, Turbidity, Alkalinity, Bicarbonate and Total Dissolved Solids
- Assess Nitrogen Species: Nitrate, Nitrite, Ammonia, and Total Kjeldhal nitrogen (TKN)
- Identifying Nitrate Sources: Nitroaromatics, Stable isotope (Nitrogen, Oxygen and Hydrogen), Chloride, Bromide

- Denitrification Parameters: Ferrous iron, Oxidation-reduction potential, Dissolved Oxygen, Dissolved Organic Carbon, Total iron, Manganese, and Sulfate

Sites LF-01 and OT-28:

- Volatile Organic Compounds
- Groundwater quality parameters: chloride, iron, manganese, phenols, sodium and sulfate)
- Contaminant indicator parameters: specific conductance, pH, total organic carbon, total dissolved solids and total organic halogen.
- Radioactivity: Gross Alpha and Beta, and Radium 226 and 228
- Table 1 of 40 CFR Part 264.94, as follows:
 - Dissolved RCRA Metals: arsenic, barium, beryllium, cadmium, chromium, lead, mercury (total and dissolved), selenium, and silver, and beryllium.
 - Pesticides and herbicides
 - Nitrate nitrogen
 - Fluoride
 - Anions: Chloride, Fluoride, Sulfate and Nitrate
 - Total Mercury

5. In continuation of our current practice, we will discharge the additional purge water to the ground surface adjacent to the wellhead. The discharges will continue to be made only after receipt of groundwater analytical results for the monitor wells and if the results are below NMWQCCR, Part 2, 3103 A, B, and C groundwater quality standards where applicable. We will continue to obtain approval to discharge purge water containing constituents above the WQCC standards.

6. During the previous fiscal year, KAFB proposed to discharge up to 10,580 gallons of purge water from the monitor wells. This annual volume will need to be increased by 1400 gallons, two semi-annual events for the ST-105 well (550 gal x 2 events = 1100 gallons) and one annual event for the LF-01 and OT-28 wells (300 gal x 1 event = 300 gallons) for the additional volume from the new monitor wells as outlined above. The revised total annual volume of purge water to be discharged by KAFB will be 11,980 gallons per year. The revised annual total would not include the one-time disposal of 2647 Gal of development water discussed at the end of Paragraph 2.

7. NMED approval of this request will update our exemption to include all groundwater monitor wells from the Long-Term Groundwater Monitoring Plan, the Groundwater Monitoring System Plan, Site ST-105, TCE and Nitrates in the Groundwater at KAFB (which includes the Abatement Plan for Nitrate Contaminated Groundwater) and Site ST-106, the Abatement Plan for the Jet Fuel Release at the Bulk Fuels Facility.

8. Please contact Mr. Mark Holmes at 505-846-9005 or me at 505-53-6534, if you have any questions on this matter.



CARL J. LANZ, P.G., GS-13
Chief, Restoration Section

Attachment:

KAFB Letter, dated 6 Jul 01

NMED letter, dated 16 Aug 01

cc:

NMED-HWB, Mr. Kieling

NMED-HWB KAFB, Mr. McDonald

NMED-GWQB, Ms. Menetrey

EPA Region 6, Ms. Thomas

AFMC-CEVR, Ms. Linthicum

AFMC-CEVC, Mr. Fort

377 MSG/CEVC, Mr. Montañó

USACE Omaha District, Mr. Rowe

AFCEE, Mr. Hatfield

Tetra Tech FW, Ms. Moss

CH2MHill, Ms. Minchak

MWH, Ms. Jarocki

TVI, Admin Record

**Response to Request for Supplemental Information from New Mexico Environmental
Department (NMED) Hazardous Waste Bureau: October 7, 2004 Response to the July 13,
2004 Request for Supplemental Information for the Voluntary Corrective Measures Report for
Corrective Action Units 10-3, Building 20205, Waste Oil Storage Tank (ST-249); 6-16, Fire
Training Area (FT-13); and ST-64, U.S. Army Corps of Engineers Vehicle Maintenance Yard,
April 2003
Kirtland Air Force Base, New Mexico
ID# NMD9570024423**

Comments by State of New Mexico Environment Department, Hazardous Waste Bureau

Specific Comments:

1. **Comment #9, Addendum G, Tables 1,2,3.** *The NMED-approved background values are shown on all three tables as coming from the Southwest Supergroup Soils. This should read the North Supergroup. It should be noted that the values shown in the Surface and Subsurface columns do correspond to the North Supergroup values.*

The column heading has been corrected to "NMED-Approved Background (North)". The values in the Surface and Subsurface columns have been compared with the North Supergroup Approved Background Concentration values, and are correct. The revised tables are presented in Addendum A.

2. **Comment #9, Addendum G, Table 1, Front Page.** *The headers for the Background and soil Screening Level columns are missing the second line of text.*

The formatting error in Table 1 has been corrected. The revised table is presented in Addendum A.

3. **New Comment Related to comment #11.** *NMED agrees that the response to Comment #11 adequately shows that the vertical extent of contamination has been adequately determined at the site. However, the following constituents remain in place at 10' below ground surface (bgs) or more at concentrations above the default dilution attenuation factor of 20 (DAF 20) for the migration to ground water pathway, as shown on the February 2004 NMED Soil Screening Levels Table A-1:*

Boring Number	Depth (bgs)	Constituent	Result (mg/kg)	DAF 20 (mg/kg)	SSL (mg/kg)
ST-337C-03	10'-13'	Naphthalene	13	0.393	71.9
ST-337C-04	10'	Phenol	0.58	0.0211	18,000
ST-64C-10	10'-12'	Phenol	0.41	0.0211	18,000
ST-64C-10	20'-22'	Phenol	0.54	0.0211	18,000
ST-64C-11	10'-12'	Naphthalene	2.9	0.393	71.9

ST-64C-11	30'32'	Phenol	0.38	0.0211	18,000
-----------	--------	--------	------	--------	--------

NMED requests that KAFB provides site-specific documentation addressing the potential leaching of these contaminants from the vadose zone to ground water, as it relates to the protection of ground water standards.

The 1997 interim corrective measure (ICM) removed contaminated soil down to a depth of 10 feet below land surface. Confirmation soil sample and soil boring data indicate that residual soil contamination at the site is limited to depths of 10 to 13 feet below land surface. The contaminated soil zone thickness of 3 feet represents a very small contaminant mass. Additionally, residual soil contamination present at this depth is limited semi-volatile organic compounds (SVOCs) and diesel range-total petroleum hydrocarbons (TPH). These large organic molecules commonly sorb to organic matter, clay, and silt particles in the soil, making them less mobile. The SWMU ST-64 area is underlain by unconsolidated alluvial sediment that is predominantly fine-grained silty sand to very fine-grained silty sand (USAF, 1995). These silty sediments represent a potential sorption media for the SVOC and TPH contaminants.

The nearest perched aquifer monitoring well to SWMU ST-64 is KAFB-8282, located just west of Wyoming about two blocks south of ST-64 in the large open parking lot area immediately north of the former Atomic Museum. The depth to water in Well KAFB-8282 is approximately 268 feet below ground surface. Although, the existence of perched water is unknown at SWMU ST-64 this is considered to be a reasonable estimate of the vadose zone thickness at the site. The unsaturated soil thickness of over 250 feet between the residual soil contamination and the top of the perched aquifer and the absence of a continuing source severely limits potential contaminant migration.

Finally, the installed MatCon cap at SWMU ST-64 prevents infiltration of precipitation and the necessary dissolution and hydraulic head to mobilize the residual contamination. Therefore, the residual soil contamination presents no risk of groundwater contamination.

Addendum A

Revised Data Tables

Table 1. Appendix III Phase 1 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64
Borehole Number		ST-337C-01	ST-337C-01	ST-337C-02	ST-337C-02	ST-337C-02	ST-337C-02	ST-337C-02	ST-337C-02	ST-337C-03	ST-337C-03	ST-337C-03	ST-337C-04
Depth (ft bgs)		5-7	10-12	0-2	5-8	10-13	0-2	5-8	10-13	0-2	5-8	10-13	0-2
Sample ID		KAFB-ST337C-01-0507	KAFB-ST337C-01-1012	KAFB-ST337C-02-0002	KAFB-ST337C-02-0508	KAFB-ST337C-02-1013	KAFB-ST337C-03-0002	KAFB-ST337C-03-0508	KAFB-ST337C-03-1013	KAFB-ST337C-04-0002			
Date Collected		6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/08/1994	
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c										
	Surface	Subsurface	Residential	Industrial									
VOCs (µg/kg) / SW-846 8240													
Acetone	NA	NA	70,400,000	100,000,000	ND	6	4	3	ND	ND	180	87	<11
Ethylbenzene	NA	NA	10,600,000	25,400,000	ND	ND	ND	ND	ND	ND	3,200	1,800	<2.2
Methyl Ethyl Ketone	NA	NA	573,000	2,100,000	ND	ND	ND	ND	ND	ND	23	9	<11
Methyl Isobutyl Ketone	NA	NA	5,430,000	6,900,000	ND	ND	ND	ND	ND	ND	9	ND	<11
Methylene Chloride	NA	NA	165,000	440,000	3	3	4	14	13	10	6	8	5.1
Toluene	NA	NA	248,000	248,000	ND	3	ND	ND	ND	ND	3	3	<3.3
Total Xylenes	NA	NA	132,000	132,000	ND	ND	ND	ND	ND	ND	3,100	260	<5.6
SVOCs (µg/kg) / SW-846 8270													
Acenaphthene	NA	NA	4,690,000	34,800,000	<370	<360	440	<380	<360	<7,300	<7,400	<7,300	<360
Anthracene	NA	NA	23,500,000	264,000,000	<370	<360	600	<380	<360	<7,300	<7,400	<7,300	<360
Benzo(a)anthracene	NA	NA	6,210	23,400	<370	<360	2,600	<380	<360	<7,300	<7,400	<7,300	370
Benzo(a)pyrene	NA	NA	621	2,340	<370	<360	1,800	<380	<360	<7,300	<7,400	<7,300	410
Benzo(b)fluoranthene	NA	NA	6,210	23,400	<370	<360	2,500	<380	<360	<7,300	<7,400	<7,300	480
Benzo(g,h,i)perylene	NA	NA	NA	NA	<370	<360	1,200	<380	<360	<7,300	<7,400	<7,300	<360
Benzo(k)fluoranthene	NA	NA	62,100	234,000	<370	<360	1,500	<380	<360	<7,300	<7,400	<7,300	380
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	<370	<360	<360	<380	<360	<7,300	<7,400	<7,300	<360
Chrysene	NA	NA	621,000	2,340,000	<370	<360	2,400	<380	<360	<7,300	<7,400	<7,300	470
Dibenz(a,h)anthracene	NA	NA	621	2,340	<370	<360	570	<380	<360	<7,300	<7,400	<7,300	<360
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	<370	<360	<360	<380	<360	<7,300	<7,400	<7,300	<360
Fluoranthene	NA	NA	2,250,000	24,400,000	<370	<360	6,300	<380	550	<7,300	<7,400	<7,300	820
Indeno(1,2,3-c,d)pyrene	NA	NA	6,210	23,400	<370	<360	1,200	<380	<360	<7,300	<7,400	<7,300	<360
2-Methylnaphthalene	NA	NA	NA	NA	<370	<360	<360	<380	<360	<7,300	50,000	59,000	<360
Naphthalene	NA	NA	71,900	98,300	<370	<360	<360	<380	<360	<7,300	11,000	13,000	<360
Phenanthrene	NA	NA	1,800,000	20,500,000	<370	<360	2,800	<380	<360	<7,300	<7,400	<7,300	<360
Phenol	NA	NA	18,000,000	100,000,000	<370	<360	<360	<380	<360	<7,300	<7,400	<7,300	<360
Pyrene	NA	NA	2,300,000	31,300,000	<370	<360	5,000	<380	<360	<7,300	<7,400	<7,300	660
Metals / SW 6010 (mg/kg)													
Aluminum	NA	NA	77,800	100,000	5,450	3,750	6,860	8,090	9,580	10,800	9,750	6,660	11,300
Arsenic	5.6	4.4	3.9	17.7	3.1	2.7	9.5	3.7	3.8	10.6	3.6	2.3	17.1
Barium	200	200	5,450	78,300	153	100	160	236	221	176	200	168	125
Beryllium	0.8	0.8	156	2,250	0.45	0.33	0.43	0.58	0.55	0.56	0.56	0.33	0.54
Cadmium	<1	0.9	74.1	8,600	<0.56	<0.55	0.54	<0.58	<0.55	<0.56	<0.56	<0.55	<0.54
Calcium	NA	NA	NA	NA	36,900	48,200	44,600	48,500	46,600	41,700	47,300	71,800	27,500
Chromium	17.3	12.8	234	3,400	8.6	5.5	11.6	11	6.9	7.6	10.2	6.5	9.5
Cobalt	7.1	8.8	1,520	20,500	5	2.4	5.7	7.5	5.8	6.6	5.6	4.1	6.4
Copper	17	17	3,130	45,400	16	25.1	20.8	22.8	14.3	13.7	31.3	17.6	14.2
Iron	NA	NA	23,500	100,000	8,690	5,110	10,100	12,100	14,100	14,500	14,200	9,850	14,700
Lead	39	11.2	400	750	6.5	3.4	37.5	8	10.6	8.9	5.5	3.4	20.4
Magnesium	NA	NA	NA	NA	3,820	2,190	3,870	5,430	4,250	4,600	4,250	3,490	4,090
Manganese	NA	NA	1,550	21,800	194	81	219	274	211	197	177	120	215

Table 1. Appendix III Phase 1 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	
Borehole Number		ST-337C-01	ST-337C-01	ST-337C-02	ST-337C-02	ST-337C-02	ST-337C-03	ST-337C-03	ST-337C-03	ST-337C-03	ST-337C-03	ST-337C-04	
Depth (ft bgs)		5-7	10-12	0-2	5-8	10-13	0-2	5-8	10-13	0-2	5-8	0-2	
Sample ID		KAFB-ST337C-01-0507	KAFB-ST337C-01-1012	KAFB-ST337C-02-0002	KAFB-ST337C-02-0508	KAFB-ST337C-02-1013	KAFB-ST337C-03-0002	KAFB-ST337C-03-0508	KAFB-ST337C-03-1013	KAFB-ST337C-04-0002	KAFB-ST337C-04-0002	KAFB-ST337C-04-0002	
Date Collected		6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/07/1994	6/08/1994	
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c										
	Surface	Subsurface	Residential	Industrial									
Metals / SW 6010 (mg/kg) (cont.)													
Nickel	25.4	25.4	1,560	22,500	8.3	6.4	9.3	13	18.3	10.2	7.9	5.9	9.2
Potassium	NA	NA	NA	NA	971	645	1,630	1,380	1,770	2,250	1,660	1,070	2,460
Selenium	<1	<1	391	5,680	<0.45	<0.44	<0.43	<0.47	<0.44	<0.45	<0.45	<0.44	<0.43
Sodium	NA	NA	NA	NA	83.2	62.9	89.1	117	198	106	138	151	107
Vanadium	33	33	548	7,950	18.8	11.9	20.8	25.4	31.6	31	33	23.5	31.7
Zinc	76	76	23,500	100,000	30.3	36.8	67.2	41.7	30.7	37.1	30.4	22.2	37.2
TPH / SW 8015 (mg/kg)													
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	<4.5	9.9	46	93	140	3,300	5,600	4,400	7.9
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	ND	ND	ND	0.37	0.45	ND	150	86	0.29
Pesticides / SW 8080 (µg/kg)													
DDE	NA	NA	17,200	78,100	<1.1	<1.1	<11	<5.8	<1.1	<1.1	<1.1	6.4	8
DDT	NA	NA	17,200	78,100	<5.6	<5.5	<54	<29	<5.5	<5.6	<5.6	<11	22

Table 1. Appendix III Phase 1 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64 (concluded)

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64			
Borehole Number		ST-337C-04	ST-337C-04	ST-337C-04	ST-337C-05	ST-337C-05	ST-337C-05			
Depth (ft bgs)		5-7	10-12	30-32	0-2	5-8	10-13			
Sample ID		KAFB-ST337C-	KAFB-ST337C-	KAFB-ST337C-	KAFB-ST337C-	KAFB-ST337C-	KAFB-ST337C-			
Date Collected		6/08/1994	6/08/1994	6/08/1994	6/08/1994	6/08/1994	6/08/1994			
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c							
	Surface	Subsurface	Residential	Industrial						
VOCs (µg/kg) / SW-846 8240										
Acetone	NA	NA	70,400,000	100,000,000	<11	6.7	<10	<11	14	5.2
Ethylbenzene	NA	NA	10,600,000	25,400,000	<2.2	<2.2	<2	<2.3	<2.1	<2.2
Methyl Ethyl Ketone	NA	NA	573,000	2,100,000	<11	<11	<10	<11	4.1	<11
Methyl Isobutyl Ketone	NA	NA	5,430,000	6,900,000	<11	<11	<10	<11	<11	<11
Methylene Chloride	NA	NA	165,000	440,000	4	3.6	3	5.3	5.1	4.2
Toluene	NA	NA	248,000	248,000	<3.3	<3.3	<3	<3.4	<3.2	<3.3
Total Xylenes	NA	NA	132,000	132,000	<5.5	<5.4	<5.1	<5.6	<5.3	<5.5
SVOCs (µg/kg) / SW-846 8270										
Acenaphthene	NA	NA	4,690,000	34,800,000	<360	<350	<340	<350	<350	<360
Anthracene	NA	NA	23,500,000	264,000,000	<360	<350	<340	360	<350	<360
Benzo(a)anthracene	NA	NA	6,210	23,400	<360	<350	<340	870	<350	<360
Benzo(a)pyrene	NA	NA	621	2,340	<360	<350	<340	770	<350	<360
Benzo(b)fluoranthene	NA	NA	6,210	23,400	<360	<350	<340	690	<350	<360
Benzo(g,h,i)perylene	NA	NA	NA	NA	<360	<350	<340	400	<350	<360
Benzo(k)fluoranthene	NA	NA	62,100	234,000	<360	<350	<340	770	<350	<360
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	<360	<350	450	<350	<350	<360
Chrysene	NA	NA	621,000	2,340,000	<360	<350	<340	950	<350	<360
Dibenz(a,h)anthracene	NA	NA	621	2,340	<360	<350	<340	<350	<350	<360
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	471	<350	490	<350	<350	<360
Fluoranthene	NA	NA	2,250,000	24,400,000	<360	<350	<340	2,100	<350	<360
Indeno(1,2,3-c,d)pyrene	NA	NA	6,210	23,400	<360	<350	<340	410	<350	<360
2-Methylnaphthalene	NA	NA	NA	NA	<360	<350	<340	<350	<350	<360
Naphthalene	NA	NA	71,900	98,300	<360	<350	<340	<350	<350	<360
Phenanthrene	NA	NA	1,800,000	20,500,000	<360	<350	<340	1500	<350	<360
Phenol	NA	NA	18,000,000	100,000,000	540	580	<340	<350	<350	<360
Pyrene	NA	NA	2,300,000	31,300,000	<360	<350	<340	1,700	<350	<360
Metals / SW 6010 (mg/kg)										
Aluminum	NA	NA	77,800	100,000	9,490	5,990	4,340	10,600	7,210	8,980
Arsenic	5.6	4.4	3.9	17.7	3.4	3.3	1.1	10.9	2.1	2.8
Barium	200	200	5,450	78,300	224	94.8	67.7	191	179	137
Beryllium	0.8	0.8	156	2,250	0.54	0.42	0.31	0.54	0.43	0.43
Cadmium	<1	0.9	74	8,600	<0.54	<0.53	<0.52	<0.54	<0.53	<0.54
Calcium	NA	NA	NA	NA	31,100	33,000	17,600	33,700	31,500	49,400
Chromium	17.3	12.8	234	3,400	1.1	5.5	5.2	8.2	10.6	6.7
Cobalt	7.1	8.8	1,520,000	20,500,000	6.1	4.2	6.5	6.4	5.2	5.3
Copper	17	17	3,130	45,400	29.9	76.2	76.3	13.5	58.6	11.2
Iron	NA	NA	23,500	100,000	13,500	8,820	13,000	14,400	10,400	10,900
Lead	39	11.2	400	750	4.2	3.9	3.8	14.9	4.1	5
Magnesium	NA	NA	NA	NA	4,450	2,450	2,870	4,200	3,700	3,400
Manganese	NA	NA	1,550	21,800	205	105	189	221	169	119
Nickel	25.4	25.4	1,560,000	22,500,000	8.6	5.5	11.3	8.2	6.7	7.7

Table 1. Appendix III Phase 1 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64 (concluded)

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64			
Borehole Number		ST-337C-04	ST-337C-04	ST-337C-04	ST-337C-05	ST-337C-05	ST-337C-05			
Depth (ft bgs)		5-7	10-12	30-32	0-2	5-8	10-13			
Sample ID		KAFB-ST337C-04-0507	KAFB-ST337C-04-1012	KAFB-ST337C-04-3032	KAFB-ST337C-05-0002	KAFB-ST337C-05-0508	KAFB-ST337C-05-1013			
Date Collected		6/08/1994	6/08/1994	6/08/1994	6/08/1994	6/08/1994	6/08/1994			
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c							
	Surface	Subsurface	Residential	Industrial						
Metals / SW 6010 (mg/kg)										
Potassium	NA	NA	NA	NA	1,750	974	1,000	2,230	1,240	1,400
Selenium	<1	<1	391	5,680	<0.43	<0.42	0.41	<0.43	<0.43	<0.43
Sodium	NA	NA	NA	NA	286	263	148	161	196	200
Vanadium	33	33	548	7,950	29	21	24.4	31.5	21.7	26.4
Zinc	76	76	23,500	100,000	37.3	44.5	46.3	34.2	42.6	21.4
TPH / SW 8015 (mg/kg)										
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	<4.3	<4.3	<4.1	31.4	<4.3	<4.3
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	<0.55	<0.54	<0.51	<0.56	<0.53	<0.55
Pesticides / SW 8080 (µg/kg)										
DDE	NA	NA	17,200	78,100	<1.1	<1.1	<1	0.052	<1.1	<1.1
DDT	NA	NA	17,200	78,100	<5.4	<5.3	<5.2	<5.4	<5.3	<5.4

Notes:

^a EPA, 1986

^b NMED, 1997

^c NMED, 2004

EPA = United States Environmental Protection Agency

FD = field duplicate

ft bgs = feet below ground surface

HHRB = human health risk-based

ID = identifier

mg/kg = milligrams per kilogram

NA = not applicable

ND = Analyte not detected; original data sheets not recovered for these samples

NMED = New Mexico Environment Department

pCi/g = picocuries per gram

SVOC = semi-volatile organic compounds

TPH = total petroleum hydrocarbons

µg/kg = micrograms per kilogram

VOC = volatile organic compounds

Bold and right-justified data indicate analytical results exceeding analyte-screening levels.

Table 2. Appendix III Phase 2 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	
Borehole Number		ST-64C-06	ST-64C-06	ST-64C-06	ST-64C-06	ST-64C-06	ST-64C-06	ST-64C-06	ST-64C-06	ST-64C-06	ST-64C-07	ST-64C-07	
Depth (ft bgs)		0-2	5-7	10-12	20-22	30-32	40-42	50-52	0-2	5-7			
Sample ID		ST64-06-0002	ST64-06-0507	ST64-06-1012	ST64-06-2022	ST64-06-3032	ST64-06-4042	ST64-06-5052	ST64-07-0002	ST64-07-0507			
Date Collected		02/14/1996	02/14/1996	02/14/1996	02/14/1996	02/14/1996	02/14/1996	02/15/1996	02/27/1996	02/27/1996			
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c										
	Surface	Subsurface	Residential	Industrial									
SVOCs (µg/kg) / SW-846 8270													
Acenaphthene	NA	NA	4,690,000	34,800,000	<370	<350	<350	<350	<340	<410	<340	<330	<360
Anthracene	NA	NA	23,500,000	264,000,000	<370	<350	<350	<350	<340	<410	<340	<330	<360
Benzo(a)anthracene	NA	NA	6,210	23,400	<370	<350	<350	<350	<340	<410	<340	<330	<360
Benzyl butyl phthalate	NA	NA	NA	NA	<370	<350	<350	<350	<340	<410	<340	990	1,300
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	<370	<350	<350	<350	610	<410	1,200	<330	<360
Chrysene	NA	NA	621,000	2,340,000	<370	<350	<350	<350	<340	<410	<340	<330	<360
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	<370	<350	<350	<350	390	1,200	1,600	1,500	2,200
Fluoranthene	NA	NA	2,250,000	24,400,000	<370	<350	<350	<350	<340	<410	<340	<330	<360
Fluorene	NA	NA	3,130,000	29,400,000	<370	<350	<350	<350	<340	<410	<340	<330	<360
2-Methylnaphthalene	NA	NA	NA	NA	<370	<350	<350	<350	<340	<410	<340	<330	<360
Naphthalene	NA	NA	71,900	98,300	<370	<350	<350	<350	<340	<410	<340	<330	<360
Phenanthrene	NA	NA	1,800,000	20,500,000	<370	<350	<350	<350	<340	<410	<340	<330	<360
Phenol	NA	NA	18,000,000	100,000,000	<370	<350	<350	<350	<340	<410	<340	<330	510
Pyrene	NA	NA	2,300,000	31,300,000	<370	<350	<350	<350	<340	<410	<340	<330	<360
TPH / SW 8015 (mg/kg)													
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	<4.4	<4.3	<4.3	<4.2	4.4	<5	17	64	NA
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	<0.22	<0.21	<0.21	<0.21	<0.21	<0.25	<0.21	<0.2	NA

Table 2. Appendix III Phase 2 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64 (continued)

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	
Borehole Number		ST-64C-07	ST-64C-07	ST-64C-08	ST-64C-08	ST-64C-08	ST-64C-08	ST-64C-09	ST-64C-09	ST-64C-09	ST-64C-09	ST-64C-09	
Depth (ft bgs)		10-12	20-22	0-2	5-7	10-12	20-22	0-2	5-7	10-12	10-12	10-12	
Sample ID		ST64-07-1012	ST64-07-2022	ST64-08-0002	ST64-08-0507	ST64-08-1012	ST64-08-2022	ST64-09-0002	ST64-09-0507	ST64-09-1012	ST64-09-1012	ST64-09-1012	
Date Collected		02/27/1996	02/27/1996	02/19/1996	02/19/1996	02/19/1996	02/19/1996	02/15/1996	02/15/1996	02/15/1996	02/15/1996	02/15/1996	
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c										
	Surface	Subsurface	Residential	Industrial									
SVOCs (µg/kg) / SW-846 8270													
Acenaphthene	NA	NA	4,690,000	34,800,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
Anthracene	NA	NA	23,500,000	264,000,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
Benzo(a)anthracene	NA	NA	6,210	23,400	<360	<340	<340	<370	<360	<350	<340	<370	<350
Benzyl butyl phthalate	NA	NA	NA	NA	1,100	730	<340	<370	720	590	<340	<370	<350
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	<360	<340	<340	<370	<360	1,300	<340	<370	<350
Chrysene	NA	NA	621,000	2,340,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	3,900	3,600	2,000	2,300	1,600	1,000	1,600	1,300	940
Fluoranthene	NA	NA	2,250,000	24,400,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
Fluorene	NA	NA	3,130,000	29,400,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
2-Methylnaphthalene	NA	NA	NA	NA	<360	<340	<340	<370	<360	<350	<340	<370	<350
Naphthalene	NA	NA	71,900	98,300	<360	<340	<340	<370	<360	<350	<340	<370	<350
Phenanthrene	NA	NA	1,800,000	20,500,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
Phenol	NA	NA	18,000,000	100,000,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
Pyrene	NA	NA	2,300,000	31,300,000	<360	<340	<340	<370	<360	<350	<340	<370	<350
TPH / SW 8015 (mg/kg)													
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	NA	7.8	33	<4.4	6.4	7.4	6	<4.4	<4.2
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	NA	<0.21	<0.2	<0.22	<0.22	<0.21	<0.21	<0.22	<0.21

Table 2. Appendix III Phase 2 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64 (continued)

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	
Borehole Number		ST-64C-09	ST-64C-09	ST-64C-09	ST-64C-10	ST-64C-10	ST-64C-10	ST-64C-10	ST-64C-10	ST-64C-11	ST-64C-11	ST-64C-11	
Depth (ft bgs)		20-22	30-32	40-42	0-2	5-7	10-12	20-22	0-2	5-7			
Sample ID		ST64-09-2022	ST64-09-3032	ST64-09-4042	ST64-10-0002	ST64-10-0507	ST64-10-1012	ST64-10-2022	ST64-11-0002	ST64-11-0507			
Date Collected		2/15/1996	02/16/1996	02/16/1996	03/26/1996	03/26/1996	03/26/1996	03/26/1996	03/27/1996	03/27/1996			
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c										
	Surface	Subsurface	Residential	Industrial									
SVOCs (µg/kg) / SW-846 8270													
Acenaphthene	NA	NA	4,690,000	34,800,000	<340	<370	<390	<350	<350	<350	<340	<340	<350
Anthracene	NA	NA	23,500,000	264,000,000	<340	<370	<390	<350	<350	<350	<340	<340	<350
Benzo(a)anthracene	NA	NA	6,210	23,400	<340	<370	<390	<350	<350	<350	<340	<340	<350
Benzyl butyl phthalate	NA	NA	NA	NA	<340	<370	<390	430	<350	<350	<340	<340	<350
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	730	740	1,200	<350	<350	<350	<340	<340	<350
Chrysene	NA	NA	621,000	2,340,000	<340	<370	<390	<350	<350	<350	<340	<340	<350
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	730	510	650	7,500	3,600	3,200	3,200	3,500	2,800
Fluoranthene	NA	NA	2,250,000	24,400,000	<340	<370	<390	<350	370	<350	<340	<340	<350
Fluorene	NA	NA	3,130,000	29,400,000	<340	<370	<390	<350	<350	<350	<340	<340	<350
2-Methylnaphthalene	NA	NA	NA	NA	<340	<370	<390	<350	<350	<350	<340	<340	240
Naphthalene	NA	NA	71,900	98,300	<340	<370	<390	<350	<350	<350	<340	<340	<350
Phenanthrene	NA	NA	1,800,000	20,500,000	<340	<370	<390	<350	<350	<350	<340	<340	450
Phenol	NA	NA	18,000,000	100,000,000	<340	<370	<390	<350	<350	410	540	<340	<350
Pyrene	NA	NA	2,300,000	31,300,000	<340	<370	<390	<350	<350	<350	<340	<340	410
TPH / SW 8015 (mg/kg)													
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	<4.2	<4.5	<4.8	420	NA	NA	8.3	NA	NA
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	<0.21	<0.22	<0.24	<0.21	NA	NA	<0.21	NA	NA

Table 2. Appendix III Phase 2 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64 (continued)

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	
Borehole Number		ST-64C-11	ST-64C-11	ST-64C-11	ST-64C-12	ST-64C-12	ST-64C-12	ST-64C-12	ST-64C-12	ST-64C-12	ST-64C-13	ST-64C-13	
Depth (ft bgs)		10-12	20-22	30-32	0-2	5-7	10-12	20-22	0-2	5-7			
Sample ID		ST64-11-1012	ST64-11-0507	ST64-11-3032	ST64-12-0002	ST64-12-0507	ST64-12-1012	ST64-12-2022	ST64-13-0002	ST64-13-0507			
Date Collected		03/27/1996	03/27/1996	03/27/1996	03/27/1996	03/27/1996	03/27/1996	03/27/1996	02/16/1996	02/16/1996			
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c										
	Surface	Subsurface	Residential	Industrial									
SVOCs (µg/kg) / SW-846 8270													
Acenaphthene	NA	NA	4,690,000	34,800,000	<360	<350	<340	<360	<400	<360	<370	<350	<360
Anthracene	NA	NA	23,500,000	264,000,000	780	<350	<340	<360	<400	<360	<370	<350	<360
Benzo(a)anthracene	NA	NA	6,210	23,400	<360	<350	<340	<360	<400	<360	<370	<350	<360
Benzyl butyl phthalate	NA	NA	NA	NA	<360	<350	<340	<360	<400	<360	<370	<350	<360
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	<360	<350	<340	<360	<400	<360	<370	<350	<360
Chrysene	NA	NA	621,000	2,340,000	<360	<350	<340	<360	<400	<360	<370	<350	<360
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	2,900	2,600	1,600	1,500	1,400	<360	<370	<350	<360
Fluoranthene	NA	NA	2,250,000	24,400,000	390	<350	<340	<360	<400	<360	<370	<350	<360
Fluorene	NA	NA	3,130,000	29,400,000	<360	<350	<340	<360	<400	<360	<370	<350	<360
2-Methylnaphthalene	NA	NA	NA	NA	44,000	<350	<340	<360	<400	<360	<370	<350	<360
Naphthalene	NA	NA	71,900	98,300	2,900	<350	<340	<360	<400	<360	<370	<350	<360
Phenanthrene	NA	NA	1,800,000	20,500,000	2,900	<350	<340	<360	<400	<360	<370	<350	<360
Phenol	NA	NA	18,000,000	100,000,000	<360	<350	380	<360	<400	<360	<370	410	<360
Pyrene	NA	NA	2,300,000	31,300,000	750	<350	<340	<360	<400	<360	<370	<350	<360
TPH / SW 8015 (mg/kg)													
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	NA	NA	<4.1	NA	NA	NA	<4.5	<4.2	<4.4
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	NA	NA	<0.2	NA	NA	NA	<0.22	<0.21	<0.22

Table 2. Appendix III Phase 2 Resource Conservation and Recovery Act Facility Investigation Detected Analytes at Solid Waste Management Unit ST-64 (concluded)

Location		ST-64	ST-64	ST-64	ST-64	ST-64
Borehole Number		ST-64C-13	ST-64C-13	ST-64C-13	ST-64C-13	ST-64C-14
Depth (ft bgs)		10-12	20-22	31-33	40-42	0-2
Sample ID		ST64-13-1012	ST64-13-2022	ST64-13-3133	ST64-13-4042	ST64-14-0002
Date Collected		02/16/1996	02/19/1996	02/19/1996	02/19/1996	03/27/1996
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c			
	Surface	Subsurface	Residential	Industrial		
SVOCs (µg/kg) / SW-846 8270						
Acenaphthene	NA	NA	4,690,000	34,800,000	<360	<340
Anthracene	NA	NA	23,500,000	264,000,000	<360	<340
Benzo(a)anthracene	NA	NA	6,210	23,400	<360	<340
Benzyl butyl phthalate	NA	NA	NA	NA	<360	<340
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	<360	370
Chrysene	NA	NA	621,000	2,340,000	<360	<340
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	<360	1,600
Fluoranthene	NA	NA	2,250,000	24,400,000	<360	<340
Fluorene	NA	NA	3,130,000	29,400,000	<360	<340
2-Methylnaphthalene	NA	NA	NA	NA	<360	<340
Naphthalene	NA	NA	71,900	98,300	<360	<340
Phenanthrene	NA	NA	1,800,000	20,500,000	<360	<340
Phenol	NA	NA	18,000,000	100,000,000	<360	<340
Pyrene	NA	NA	2,300,000	31,300,000	<360	<340
TPH / SW 8015 (mg/kg)						
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	<4.4	5.8
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	<0.22	<0.21

Notes:

^a EPA, 1986

^b NMED, 1997

^c NMED, 2004

EPA = United States Environmental Protection Agency

FD = field duplicate

ft bgs = feet below ground surface

HHRB = human health risk-based

ID = identifier

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department

pCi/g = picocuries per gram

SVOC = semi-volatile organic compounds

TPH = total petroleum hydrocarbons

µg/kg = micrograms per kilogram

VOC = volatile organic compounds

Bold and right-justified data indicate analytical results exceeding analyte-screening levels.

Table 3. Interim Corrective Measures Post-Excavation Detected Analytes at Solid Waste Management Unit ST-64

Chemical Class/ Method ^a (units)	Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	ST-64	
	Sample ID		ST64-ICM-01	ST64-ICM-02	ST64-ICM-03	ST64-ICM-04	ST64-ICM-0499	ST64-ICM-05	ST64-ICM-06	ST64-ICM-07	ST64-ICM-0799		
	Depth (ft bgs)		10	5-7	5-7	5-7	5-7	5-7	stockpile	10	10		
	Date Collected		11/07/1997	11/07/1997	11/07/1997	11/07/1997	11/07/1997	11/07/1997	11/07/1997	11/17/1997	11/17/1997		
	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c										
	Surface	Subsurface	Residential	Industrial									
SVOCs (µg/kg) / SW-846 8270													
Acenaphthene	NA	NA	4,690,000	34,800,000	15,000	<230	<220	290	120	250	NA	<220	<210
Anthracene	NA	NA	23,500,000	264,000,000	<27,000	<230	<220	220	98	<180	NA	<220	<210
Benzo(a)anthracene	NA	NA	6,210	23,400	<27,000	250	<220	440	230	<180	NA	<220	<210
Benzo(a)pyrene	NA	NA	621	2,340	<27,000	230	<220	220	93	<180	NA	<220	<210
Benzo(b)fluoranthene	NA	NA	6,210	23,400	<27,000	300	<220	230	98	<180	NA	<220	<210
Benzo(g,h,i)perylene	NA	NA	NA	NA	<27,000	190	<220	190	<210	<180	NA	<220	<210
Benzo(k)fluoranthene	NA	NA	62,100	234,000	<27,000	250	<220	190	94	<180	NA	<220	<210
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	<27,000	140	120	96	92	390	NA	110	140
Chrysene	NA	NA	621,000	2,340,000	<27,000	310	<220	470	230	<180	NA	<220	<210
1,2-Dichlorobenzene	NA	NA	116,000	116,000	<27,000	<230	<220	<230	<210	200	NA	<220	<210
1,3-Dichlorobenzene	NA	NA	70,400	73,900	<27,000	<230	<220	<230	<210	190	NA	<220	<210
1,4-Dichlorobenzene	NA	NA	36,000	81,400	<27,000	<230	<220	<230	<210	190	NA	<220	<210
2,4-Dinitrotoluene	NA	NA	120,000	1,370,000	<27,000	<230	<220	<230	100	<180	NA	<220	<210
2,6-Dinitrotoluene	NA	NA	NA	NA	19,000	<230	<220	<230	210	<180	NA	<220	<210
Dibenzofuran	NA	NA	313,000	3,170,000	<28,000	<230	<220	<230	<210	<180	NA	<220	<210
Dimethylphthalate	NA	NA	100,000,000	100,000,000	12,000	<230	<220	<230	<210	<180	NA	<220	<210
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	<27,000	110	180	<230	<210	86	NA	210	230
Fluoranthene	NA	NA	2,250,000	24,400,000	<27,000	480	<220	1,400	720	<180	NA	<220	<210
Fluorene	NA	NA	3,130,000	29,400,000	<27,000	<230	<220	220	87	<180	NA	<220	<210
Indeno(1,2,3-cd)pyrene	NA	NA	6,210	23,400	<27,000	150	<220	110	<210	<180	NA	<220	<210
2-Methylnaphthalene	NA	NA	NA	NA	<28,000	100	<220	<230	<210	<180	NA	<220	<210
2-Nitroaniline	NA	NA	NA	NA	<28,000	<230	<220	<230	<210	<180	NA	<220	<210
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	<27,000	230	<220	<230	<210	190	NA	<220	<210
N-Nitroso-di-phenylamine	NA	NA	993,000	3,910,000	<27,000	160	<220	<230	<210	<180	NA	<220	<210
Phenanthrene	NA	NA	1,800,000	20,500,000	<27,000	210	<220	700	300	<180	NA	<220	<210
Pyrene	NA	NA	2,300,000	31,300,000	29,000	520	<220	1,500	770	260	NA	<220	<210
1,2,4-Trichlorobenzene	NA	NA	651,000	853,000	<27,000	<230	<220	<230	<210	190	NA	<220	<210
TPH / SW 8015 (mg/kg)													
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	4,100	28	<20	79	70	21	84.3	NA	NA
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	96.8	0.7	<0.1	2.5	2.7	0.1	<0.1	NA	NA

Table 3. Interim Corrective Measures Post-Excavation Detected Analytes at Solid Waste Management Unit ST-64 (concluded)

Location		ST-64	ST-64	ST-64	ST-64	ST-64	ST-64			
Sample ID		ST64-ICM-08	ST64-ICM-09	IDW-01-120297	IDW-02-111997	IDW-03-111997	IDW-99-111997			
Depth (ft bgs)		10	10	stockpile	stockpile	stockpile	stockpile			
Date Collected		11/17/1997	11/17/1997	12/02/1997	11/19/1997	11/19/1997	11/19/1997			
Chemical Class/ Method ^a (units)	NMED-Approved Background (North) ^b		NMED HWB Soil Screening Levels ^c							
	Surface	Subsurface	Residential	Industrial						
SVOCs (µg/kg) / SW-846 8270										
Acenaphthene	NA	NA	4,690,000	34,800,000	<220	<200	NA	<210	<220	740
Anthracene	NA	NA	23,500,000	264,000,000	<220	<200	NA	<210	<220	200
Benzo(a)anthracene	NA	NA	6,210	23,400	<220	<200	NA	<210	210	190
Benzo(a)pyrene	NA	NA	621	2,340	<220	<200	NA	<210	200	200
Benzo(b)fluoranthene	NA	NA	6,210	23,400	<220	<200	NA	<210	220	230
Benzo(g,h,i)perylene	NA	NA	NA	NA	<220	<200	NA	<210	320	350
Benzo(k)fluoranthene	NA	NA	62,100	234,000	<220	<200	NA	<210	160	180
Bis(2-ethylhexyl)phthalate	NA	NA	347,000	1,370,000	190	130	NA	<210	<220	130
Chrysene	NA	NA	621,000	2,340,000	<220	<200	NA	<210	230	250
1,2-Dichlorobenzene	NA	NA	116,000	116,000	<220	<200	NA	<210	<220	<230
1,3-Dichlorobenzene	NA	NA	70,400	73,900	<220	<200	NA	<210	<220	<230
1,4-Dichlorobenzene	NA	NA	36,000	81,400	<220	<200	NA	<210	<220	<230
2,4-Dinitrotoluene	NA	NA	120,000	1,370,000	<220	<200	NA	<210	<220	640
2,6-Dinitrotoluene	NA	NA	NA	NA	<220	<200	NA	<210	<220	<230
Dibenzofuran	NA	NA	313,000	3,170,000	<220	<210	NA	<210	140	280
Dimethylphthalate	NA	NA	100,000,000	100,000,000	<220	<200	NA	<210	<220	<230
Di-n-butylphthalate	NA	NA	6,000,000	68,400,000	570	150	NA	<210	160	130
Fluoranthene	NA	NA	2,250,000	24,400,000	<220	<200	NA	93	490	400
Fluorene	NA	NA	3,130,000	29,400,000	<220	<200	NA	<210	700	1,100
Indeno(1,2,3-cd)pyrene	NA	NA	6,210	23,400	<220	<200	NA	<210	<220	<230
2-Methylnaphthalene	NA	NA	NA	NA	<220	<210	NA	<210	3,800	5,800
2-Nitroaniline	NA	NA	NA	NA	<220	<210	NA	<210	<210	92
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	<220	<200	NA	<210	<220	<230
N-Nitroso-di-phenylamine	NA	NA	993,000	3,910,000	<220	<200	NA	<210	<220	<230
Phenanthrene	NA	NA	1,800,000	20,500,000	<220	<200	NA	<210	960	1,400
Pyrene	NA	NA	2,300,000	31,300,000	<220	<200	NA	110	540	500
1,2,4-Trichlorobenzene	NA	NA	651,000	853,000	<220	<200	NA	<210	<220	<230
TPH / SW 8015 (mg/kg)										
Diesel Range Organics (DRO)	NA	NA	2,500	5,000	NA	NA	210	45.3	267	1,490
Gasoline Range Organics (GRO)	NA	NA	2,500	5,000	NA	NA	4.3	<0.1	3.8	8.3

Notes:

^a EPA, 1986

^b NMED, 1997

^c NMED, 2004

EPA = United States Environmental Protection Agency

FD = field duplicate

ft bgs = feet below ground surface

HHRB = human health risk-based

ID = identifier

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department

pCi/g = picocuries per gram

SVOC = semi-volatile organic compounds

TPH = total petroleum hydrocarbons

µg/kg = micrograms per kilogram

VOC = volatile organic compounds

Bold and right-justified data indicate analytical results exceeding analyte-screening levels.