



C HAFB 2004

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 49TH FIGHTER WING (ACC)  
HOLLOMAN AIR FORCE BASE, NEW MEXICO

21 MAY 2004

MEMORANDUM FOR NEW MEXICO ENVIRONMENT DEPARTMENT

Attn: Mr. John Kieling  
Program Manager  
Permit Management Program  
Hazardous Waste Bureau  
2905 Rodeo Park Dr., East  
Santa Fe, NM 87505-6303



FROM: 49 CES/CC  
550 Tabosa Ave  
Holloman AFB NM 88330-8458

SUBJECT: Characterization Requirements for Seven Solid Waste Management Units (SWMUs)  
at Holloman AFB, New Mexico

1. Representatives of your staff, the Air Force, Air Combat Command and Holloman AFB met on 21 Apr 04 to discuss and agree to additional characterization requirements for seven SWMUs on Holloman AFB. The attached summary identifies the general scope of work that was agreed to at the meeting. As was discussed at the meeting, no response from your office will constitute concurrence with the proposed scope for each site and will allow Holloman to request funding to complete the scope of work.
2. If you have any questions, please contact Mr. Dan Holmquist at (505) 572-5395.

DAVID F. DeMARTINO, Lt Col, USAF  
Commander, 49 CES

Attachment:  
Summary of the 21 April 2004 NMED Site Visit to Holloman AFB

cc (w/Atch)  
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## **Summary of the 21 April 2004 New Mexico Environment Department (NMED) Site Visit to Holloman AFB and the Agreed Upon Additional Characterization Requirements for Seven Solid Waste Management Units (SWMUs) at Holloman Air Force Base, (HAFB) New Mexico**

On April 21, 2004 representatives of NMED Hazardous Waste Bureau (Will Moats, Cornelius Amindyas, Steve Jetter and Bill McDonald) visited HAFB to discuss requirements for additional characterization of seven solid waste management units (SWMUs). The group also toured the sites to get a better idea of present conditions. Other attendees at the 21 April 2004 meeting and site visit were:

Jim Haggins (USAF Air Combat Command)  
Daniel Holmquist (HAFB)  
Daniel Scruggs (HAFB)  
Tom Zink (US Army Corps of Engineers – Omaha)  
Frank Gardner (Bhate Environmental Associates, Inc.)  
Chuck Schick (Bhate Environmental Associates, Inc.)

In February 2004, HAFB submitted a statement of basis summary and the request for No Further Action (NFA) and subsequent removal of eighteen SWMUs from Table A.1 of the Holloman AFB Part B RCRA Permit. Immediately after the submittal, Will Moats and Cornelius Amindyas visited the base to visit seven of the aforementioned SWMUs. At the conclusion of the February 2004 visit, NMED informed HAFB that approval of the seven sites presented in the Statement of Basis for NFA and removal from the RCRA Part B Permit would only be considered after additional site characterization activities at each site. The following SWMUs were determined by NMED to require additional characterization:

<b>SWMU 105</b>	<b>LF-19 Golf Course Landfill</b>
<b>SWMU 108</b>	<b>LF-23 MOBSS Landfill Disposal Trench</b>
<b>SWMU 101 &amp; 109</b>	<b>LF-10 Old Main Base Landfill</b>
<b>SWMU 115</b>	<b>LF-22 West Area Landfill No. 1</b>
<b>SWMU 116</b>	<b>LF-21 West Area Landfill No. 2</b>
<b>SWMU 113B</b>	<b>DP-30/SD-33 Sludge Disposal Trenches</b>

Following is a brief description of each SWMU and the proposed scope of work for additional characterization. Further, HAFB requested and Will Moats (NMED) agreed that Long-Term Monitoring (LTM) of groundwater at these sites could be suspended pending the additional characterization.

### **SWMU 105 LF-19 Golf Course Landfill**

The Golf Course Landfill (LF-19) is approximately 2 acres in size and is located due south of fairway No. 7 at the base Golf Course. The landfill accepted green wastes such as grass clippings and tree limbs from routine course maintenance. Documentation reviewed indicated that perhaps rat poison had been disposed of at the site. In 1992, a Remedial Investigation (RI)

was conducted at this site. Three groundwater monitoring wells were installed along the perimeter of the site. Long Term Groundwater Monitoring (LTM) was initiated at the site in 1995. During 10 years of LTM, no Volatile Organic Compounds (VOCs), pesticides or herbicides have been identified in groundwater. Only manganese (maximum concentration 0.597 mg/L) exceeds the New Mexico Water Quality Control Commission (WQCC) standards in one well.

During the February and April site visits, NMED has indicated that additional characterization to assess subsurface conditions is required before NFA can be considered at this site. The general scope of work agreed upon by NMED and HAFB for this site includes:

1. Characterization trenching to identify the contents of the landfill. If hazardous material are encountered, they will be isolated and removed from the site.
2. Documentation of the material encountered in the trenches.
3. Sampling and analysis of soil samples collected from beneath the waste placement and above the water table.
4. Backfill the trenches, remove surface debris, and restore the surface of the site as necessary.
5. Submit the characterization data and observations to NMED in report form including a summary of previous characterization data..
6. Suspend LTM activities at LF-19.

#### **SWMU 108 LF-23 MOBSS Landfill Disposal Trench**

The MOBSS Landfill is 2 to 3 acres in size and located west of the Solar Observatory. The landfill was active from 1976 to 1979 and was used to dispose of construction debris, concrete and asphalt. However, records and direct observations indicate the presence of cans of diazinon, dibromochloromethane and rusted drums of unknown content. In 1992, an RI was conducted at the site. Four groundwater monitoring wells were installed along the perimeter of the site. LTM was initiated at the site in 1995. During 10 years of LTM, no VOCs, pesticides, herbicides or Polychlorinated Biphenyl (PCBs) were detected in groundwater samples. Two metals, cadmium and manganese, were identified in the RI groundwater sampling. However, during the LTM, only one metal, selenium (maximum 96.9 µg/L) exceeded NMWQCC standard.

During the February and April site visits, NMED has indicated that additional characterization to assess subsurface conditions is required before NFA can be considered at this site. The general scope of work agreed upon by NMED and HAFB for this site includes:

1. Characterization trenching to identify the contents of the landfill. If hazardous materials are encountered, they will be isolated and removed from the site.
2. Documentation of the material encountered in the trenches.
3. Sampling and analysis of soil samples collected from beneath the waste placement and and above the water table.
4. Backfill the trenches, remove surface debris, and restore the surface of the site as necessary.

5. Submit the characterization data and observations to NMED in report form including a summary of previous characterization data.
6. Suspend LTM activities at LF-19.

#### **SWMU 101 & 109 LF-10 Old Main Base Landfill**

SWMUs 101 & 109 (collectively known as the Old Main Base Landfill) occupy approximately 20 acres and are located north of the main base and east of the Civil Engineer complex. Presently, a communication facility is located on the landfill. The landfill was operational from 1942 to 1958 and may have accepted small quantities of hazardous constituents such as oils, solvents and pesticides along with domestic refuse. An RI was conducted at the site in 1989. Trash and debris were identified in soil borings. A dark green liquid was encountered in at least one boring (presumed to be leachate). Analysis of the material, however, did not reveal hazardous constituents. Seven groundwater monitoring wells and seven soil borings were installed along the perimeter of the site. Soil samples did not contain significant amounts (i.e., more than 1.0 mg/Kg) of VOCs and Resource Conservation and Recovery Act (RCRA) metal concentrations did not exceed base background levels. No VOCs and pesticides were identified in groundwater samples except from one well. It has since been determined that these constituents are related to the immediately adjacent SWMU 82 where pesticides were routinely applied to trash trucks for insect control. RCRA metals were identified in groundwater samples, but within base background levels. LTM was initiated at the site in 1995 at four of the seven wells. During 10 years of LTM, no VOCs, pesticides, herbicides or PCBs were detected in groundwater samples. Two metals, selenium and manganese were identified during the LTM. However, one metal, manganese (maximum 348 µg/L), exceeded the NMWQCC standard.

During the February and April site visits, NMED has indicated that additional characterization to assess subsurface conditions is required before NFA can be considered at this site. The general scope of work agreed upon by NMED and HAFB for this site includes:

1. Characterization trenching to identify the contents of the landfill. If hazardous materials are encountered, they will be isolated and removed from the site.
2. Documentation of the material encountered in the trenches.
3. Sampling and analysis of soil samples collected from beneath the waste placement and above the water table.
4. Backfill the trenches, remove surface debris, and restore the surface of the site as necessary.
5. Submit the characterization data and observations to NMED in report form including a summary of previous characterization data (RI).
6. Suspend LTM activities at LF-10.

#### **SWMU 115 LF-22 West Area Landfill No. 1**

SWMU 115, the West Area Landfill No. 1, is located near the Solar Observatory and is approximately 3 acres in size. The landfill was active from 1974 to 1978 and used to dispose of construction debris, plastic sheeting, cardboard and empty cans. However, interviews with former base employees indicated that perhaps disposal of drums may have taken place at the site. In 1992, an RI was conducted at the site. Four groundwater monitoring wells were installed along the perimeter of the site. LTM was initiated at the site in 1995. During 10 years of LTM,

no VOCs, PCBs, pesticides or herbicides have been identified. The maximum concentrations of arsenic (16.1 µg/L) barium (20.7 µg/L) and manganese (65.7 µg/L) detected during 10 years of monitoring did not exceed NMWQCC or federal standards.

During the February and April site visits, NMED has indicated that additional characterization to assess subsurface conditions is required before NFA can be considered at this site. The general scope of work agreed upon by NMED and HAFB for this site includes:

1. Characterization trenching to identify the contents of the landfill. If hazardous materials are encountered, they will be isolated and removed from the site.
2. Documentation of the material encountered in the trenches.
3. Sampling and analysis of soil samples collected from beneath the waste placement and above the water table.
4. Backfill the trenches, remove surface debris, and restore the surface of the site as necessary.
5. Submit the characterization data and observations to NMED in report form including a summary of previous characterization data (RI).
6. Suspend LTM activities at LF-22.

#### **SWMU 116 LF-21 West Area Landfill No. 2**

SWMU 116, the West Area Landfill No. 2, is approximately 2 acres in size and located east of the Solar Observatory (Building 910). The landfill was active during the 1970s and its use was discontinued in 1977. Base records indicate that items placed in the landfill included cardboard, tree trimmings and construction debris. However, one former base employee indicated that perhaps some drum disposal had occurred at the site.

In 1992, an RI was conducted at the site. Four groundwater monitoring wells were installed along the perimeter of the site. LTM was initiated at the site in 1995. During 10 years of LTM, no PCBs or herbicides have been detected in groundwater samples. Two metals, arsenic (maximum 11 µg/L) and cadmium (maximum 24 µg/L), have exceeded NMWQCC standards. One VOC, trichloroethene (TCE), has been identified in the up-gradient well (maximum 15 µg/L). The source of the TCE is believed to be from a source north of the landfill. Budgeting and work plans for addressing the TCE have been budgeted for FY05.

During the February and April site visits, NMED has indicated that additional characterization to assess subsurface conditions is required before NFA can be considered at this site. The general scope of work agreed upon by NMED and HAFB for this site includes:

1. Characterization trenching to identify the contents of the landfill. If hazardous materials are encountered, they will be isolated and removed from the site.
2. Documentation of the material encountered in the trenches.
3. Sampling and analysis of soil samples collected from beneath the waste placement and above the water table.
4. Backfill the trenches, remove surface debris, and restore the surface of the site as necessary.

5. Submit the characterization data and observations to NMED in report form including a summary of previous characterization data (RI).
6. Suspend LTM activities at LF-21.
7. Investigate the source and extent of TCE discovered in the up gradient monitoring well.

#### **SWMU 113B DP-30/SD-33 Sludge Disposal Trenches**

Sites DP-30 & SD-33 were open pit disposal trenches used for cooking oil, and grease and grit from oil water separators and sludge from remote septic tanks. Material from clogged sewer lines was also placed in the pits. The pits were in use from approximately 1972 through 1990.

In 1992, an RI was conducted at the site. Several soil borings were advanced into the trenches and four groundwater monitoring wells were installed. Analysis of soil samples identified oil and grease (TRPH 418.1) at concentrations ranging between 35 mg/Kg to 82,000 mg/Kg. VOCs identified included minor amounts of benzene, toluene, ethylbenzene, TCE and Tetrachloroethene. Minor amounts of pesticides, PCBs (19 mg/Kg) and herbicides were also identified in the soil samples along with metals lead, selenium and mercury (although the mercury was not quantified above the detection limit).

Four groundwater monitoring wells were installed along the perimeter of the site. LTM was initiated at the site in 1995. During 10 years of LTM, no pesticides, herbicides or PCBs were positively identified in groundwater samples. VOCs identified during the LTM include chloroform (maximum 2.6 µg/L), 1,1-dichloroethane (maximum 27 µg/L), and TCE (maximum 150 µg/L). Metals identified include arsenic, barium and selenium, but only arsenic (maximum 23.3 µg/L) exceeded the federal standard ( but not the WQCC standard).

During the February and April site visits, NMED has indicated that additional action is required before NFA can be considered at this site. The general scope of work agreed upon by NMED and HAFB for this site includes:

1. Characterization of sludge and soil contaminated with oil and grease to determine if it is characteristically hazardous (TCLP analysis).
2. Excavation of the contaminated soil and treatment in the nearby landfarm (if it is determine to be nonhazardous).
3. Collection and analysis of soil samples from the bottom and sides of the excavation to document remediation.
4. Backfill the trenches and site restoration.
5. Submit the data, and evidence of remediation to NMED in report form.
6. Suspend LTM activities at DP-30/SD-33.