



**DEPARTMENT OF THE AIR FORCE**

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

08 FEB 1999

MEMORANDUM FOR NEW MEXICO ENVIRONMENT DEPARTMENT

Attn: Cornelius Amindyas  
Hazardous & Radioactive Materials Bureau  
P.O. Box 26110  
Santa Fe NM 87502

FROM: 49 CES/CEV  
550 Tabosa Avenue  
Holloman AFB NM 88330-8458

SUBJECT: Hazardous and Solid Waste Amendments (HSWA) Quarterly Report (Oct-Dec 98)

1. In accordance with Module IV, Section E, of Holloman AFB HSWA permit, attached please find the Oct-Dec 98 Quarterly Report.
2. If you have any questions, please contact Drew Lessard at (505) 475-5395.

HOWARD E. MOFFITT  
Deputy Base Civil Engineer

Attachment:  
HSWA Quarterly Report

cc: w/Atch

Mr Rich Mayer  
US Environmental Protection Agency, Region 6  
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HOLLOMAN AIR FORCE BASE, NM

HAZARDOUS AND SOLID WASTE AMENDMENT

QUARTERLY REPORT

OCT-DEC 98

ATCH 1

I. INTRODUCTION

A. Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), as amended by the RCRA Statute (42 U.S.C. 6701, et seq.), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), a permit has been issued to Holloman AFB to operate a hazardous waste disposal facility.

B. This Quarterly Report is consistent with the terms and conditions of the permit found under Module IV, Section E.

II. DESCRIPTION OF WORK COMPLETED.

A. The following is a list of solid waste management units (SWMUs) and Installation Restoration Program (IRP) sites investigated under the IRP program. Also listed are the site descriptions and status as of this quarter.

**SUMMARY OF HOLLOMAN AFB IRP/SWMU SITES**

| IRP/<br>SWMU # | Site Description                 | Material Disposed  | Dates of<br>Operation | Status |
|----------------|----------------------------------|--|-----------------------|--------|
| 1/106          | Main Base Landfill               | Construction rubble, small quantities of solvents, waste oil, and pesticides | 1958-Present          | SC/LTM |
| 2/AOC-T        | POL Spill Site No. 1             | JP-4 and other fuels   | 1960-1970s            | SC     |
| 3/114          | POL Tank Sludge Burial Site      | Sludges, rags, iron fragments  | 1955-1975             | SC     |
| 4/102          | Acid Trailer Burial Site         | Acid trailer, lab equipment, bottles, spent rockets                          | 1958                  | SC     |
| 5/AOC-T        | POL Spill Site No. 2             | JP-4   | 1978                  | SC     |
| 6/AOC-R        | Fuel Line Spill Site No. 2       | JP-4   | 1979                  | SC     |
| 7/110          | Rubble Disposal Site             | Wood, nails, sheet metal   | 1965 - Present        | SC     |
| 8/82           | Refuse Collection Truck Washrack | Pesticides   | 1970s                 | SC/LTM |
| 9/42           | POL Drum Storage/Spill Area      | Waste oils, solvents, hydraulic fluid, fuels                                 | 1965-1980             | SC     |
| 10/101,109     | Old Main Base Landfill           | Domestic waste, incinerator ash, solvents, waste oil                         | 1942-1958             | SC/LTM |
| 11/107         | Main Base Electrical Substation  | PCBs   | Unknown-1979          | SC     |
| 12/AOC-K       | Fuel Line Spill Site No. 1       | JP-4   | 1975                  | SC     |

| IRP/<br>SWMU #            | Site Description                          | Material Disposed  | Dates of<br>Operation | Status |
|---------------------------|---|--|-----------------------|--------|
| 13/AOC-J                  | Sodium Arsenite Spill Site                | Sodium Arsenite  | 1979                  | SC     |
| 14/197                    | Former Entomology Shop                    | Pesticides   | 1968-1977             | SC     |
| 15/80                     | Refrigeration/Heat Shop<br>Washrack       | Sulfuric Acid  | 1971-1981             | SC     |
| 16/132,118<br>AOC-A       | Existing Entomology Shop                  | Pesticides   | 1977-Present          | SC/LTM |
| 17/AOC-Q                  | BX Service Station Fuel Leak              | Gasoline   | 1950s-Present         | LTO    |
| 18/AOC-H                  | Chromic Acid Spill Site                   | Chromic Acid   | 1970s                 | SC     |
| 19/105                    | Golf Course Landfill                      | Grass clippings, rodenticides  | 1968-1978             | SC/LTM |
| 20/113A                   | WWTP Grit Burial Site                     | Sludge from grit chamber   | 1947-Present          | SC     |
| 21/116                    | West Area Landfill No. 2                  | Paper bags, boxes, boards  | 1970-1977             | SC/LTM |
| 22/115                    | West Area Landfill No. 1                  | Plastic sheets, boxes, cans  | 1974-1978             | SC/LTM |
| 23/108                    | MOBSS Landfill                            | Diazinon, dibromochloromethane,<br>construction debris, drums, buckets | 1976-1979             | SC/LTM |
| 24/134                    | Former Equipment Maint. Area              | Cleaners, waste solvents, oils   | 1959-1970             | SC     |
| 25/166                    | Possible Drainage Lagoon<br>Disposal Site | Pesticides, HTH, solvents  | 1977                  | SC     |
| 26/AOC-D                  | Possible Missile Fuel Spill Site          | Waste fuels  | 1976                  | SC     |
| 27/141                    | Pad 9 Washrack Area                       | Radioactive Materials  | 1940s                 | SC     |
| 28/212                    | Former North Area Washrack                | Oils, detergents, fuels  | 1950s                 | SC     |
| 29/104                    | Former Army Landfill                      | Spent munitions and missiles   | 1950s-1975            | SC/LTM |
| 30/113B                   | Grease Trap Disposal Pits                 | Wastes from grease trap  | 1959-Present          | SC/LTM |
| 31/170,171,<br>127,135,39 | Fire Department Training Area             | Waste oils, solvents, fuels  | Unknown-1990          | LTO    |
| 32/PRI-A                  | Sewer line from Primate<br>Research Lab   | Carbon-14, iodine, tritium, solvents                                   | 1960s-1981            | SC     |
| 33/113B                   | Cooking Grease Disposal Pits              | Cooking grease   | Unknown-<br>Present   | SC/LTM |
| 34                        | Spent Munitions Burial Site               | Spent munitions  | Unknown               | SC     |

| IRP/<br>SWMU #             | Site Description                            | Material Disposed                           | Dates of<br>Operation | Status |
|----------------------------|---|---|-----------------------|--------|
| 35/PRI-5                   | Spent Solvent Disposal Area                 | Radioactive tracers, solvents               | 1950s                 | SC     |
| 36/129,178                 | Unconventional Fuels Storage Site           | JP-X, nitric acid, UDMH, aniline, JP-4      | 1950s                 | SC     |
| 37/AOC-L                   | Early Missile Testing Site                  | Fuels, lead oxide, nitrate compounds, acids | 1947-1955             | SC     |
| 38/137,138                 | Sled Test Maintenance Area                  | Waste oils, solvents, paint, strippers      | 1951-1979             | SC     |
| 39/165,167,<br>177,179,181 | Missile Fuel Spill Area                     | Oxidizers, fuels                            | Unknown-1975          | SC/LTM |
| 40/103                     | Causeway Rubble Disposal Site               | Concrete rubble                             | Unknown-<br>Present   | SC     |
| 41/192                     | Coco Block House Borehole Disposal Site     | Propellants, oxidizers                      | 1960s                 | SC     |
| 42/111                     | Radioactive Material Burial Site            | Radioactive material                        | 1950s                 | SC     |
| 43/AOC-G                   | Atlas Electrical Substations                | PCBs  | Unknown-1979          | SC     |
| 44/AOC-P                   | Bldg. 301 Aircraft Maintenance Hangar       | Heating oil, fuel                           | Unknown               | SC/LTM |
| 45/AOC-O                   | Old AGE Refueling Station                   | Gasoline, JP-4, diesel                      | Unknown-<br>1980s     | SC     |
| 46/130,AOC-<br>S           | JP-4 Spill Site                             | Waste JP-4                                  | 1978-1990             | SC     |
| 47/21,22                   | POL Washrack Discharge Area                 | Waste JP-4                                  | 1953-1993             | SC     |
| 48/AOC-N                   | Military Gas Station                        | Gasoline                                    | Unknown-<br>Present   | SC/LTM |
| 49/148-154                 | Sewage Lagoons                              | Hazardous wastes                            | 1943-Present          | SC     |
| 50                         | Waste Disposal Pit                          | Can, drums                                  | Unknown               | SC     |
| 51/PRI-S                   | Primate Research Lab Borehole Disposal Site | Radioactive material, solvents              | 1950-Present          | SC     |
| 56                         | West Ramp Fuel Spill                        | Fuels                                       | Unknown-<br>Present   | SC     |
| 57                         | Officer's Club                              | Diesel, sulfurous compounds                 | 1960-Present          | LTO    |
| 58/231                     | Incinerator/Landfill                        | Ash from unconventional fuels, film         | Unknown-<br>Present   | SC     |
| 59/19,20,229               | T-38 Test Cell Fuel Spill Site              | JP-4  | 1966-1991             | LTO    |

| IRP/<br>SWMU # | Site Description              | Material Disposed      | Dates of<br>Operation | Status |
|----------------|-------------------------------|------------------------|-----------------------|--------|
| 60/230         | Bldg 828 Fuel Spill Site      | Diesel, gasoline, JP-4 | 1977-1991             | SC     |
| 61             | Bldg 1001 Fuel Spill Site     | Fuel, 1,2-DCA          | 1940's-1970s          | RI/FS  |
| 62             | Ritas Draw                    | Unknown                | Unknown               | PA/SI  |
| 63             | Ammunition Yard Disposal Area | Explosives, Fuel       | 1940's-1960's         | PA/SI  |
| AOC-BBMS       | Bare Base Mobility Squadron   | JP-4                   | Unknown               | SC     |
| AOC-RR         | Buried RR Cars                | Waste oil, fuel        | Unknown               | SC     |

FFCA Federal Facility Compliance Agreement  
 IRA Interim Remedial Action  
 PA/SI Preliminary Assessment/Site Investigation  
 RA Remedial Action  
 RI/FS Remedial Investigation/Feasibility Study  
 SC Site Close-Out  
 SI Site Investigation  
 LTM Long Term Monitoring  
 AOC Area of Concern (Air Force Designation)

### III. SUMMARY OF FINDINGS.

Operation of the T-38 Test Cell (SWMU 229) dual phase vapor extraction (DPVE) continued this quarter. Optimization tests were performed on the unit to maximize system efficiencies. Previous optimization efforts have resulted in recoveries of 500 to 590 gallons per day. Approximately 222,000 gallons of product have been removed from the water table and soil to date. This system is anticipated to operate through 2001.

Operation of the Bldg 828 Fuel Spill (SWMU 230) DPVE system continued this quarter. All free product has been removed from the water table and NMED soil cleanup levels have been reached. Site characterization and no further action (NFA) documentation have been submitted to NMED for approval.

The soil vapor extraction (SVE) system at SWMU AOC-T, the POL Spill Sites, continued to operate this quarter. At this time, approximately 46,700 pounds of JP-4 have been removed. Confirmation borings taken in November show that this system has remediated the site to NMED soil cleanup standards. Site characterization and NFA documentation have been submitted to NMED for approval.

The biovent system at SWMU 133, Building 703, Washrack Discharge Area, has remediated the soil to NMED soil cleanup levels. Site characterization and NFA documentation have been submitted to NMED for approval.

The biovent system at the Fire Training Area (SWMUs 39, 127, 135, 170, 171) continued this quarter. The system has 22 injection wells that inject air into the subsurface which is, in-turn, used by microorganisms to degrade JP-4. Respirometry tests, conducted at the site, have shown the biovent system has been effective in aerating the subsurface and has initiated microbial activity at the site. The system will have respirometry tests run biannually to effectively track the system operation and project the timing of remediation to the required 1,000 ppm TPH. Biannual soil borings will also be taken to compare respirometry results to soil TPH concentrations.

An air sparge/biovent/SVE system was installed at the Officer's Club, SWMU AOC-V, to remediate diesel contamination. The system has a single injection well with three discreet air injection depths. The SVE serves to remove any potential infiltration of diesel vapors into the Officer's Club produced by the air injection. This system is anticipated to operate through 1999.

The biovent system at SWMU 136 became operational Apr 97. The system consists of a positive displacement (rotary-lobe) blower, above grade piping and one air injection well. The blower supplies injected air to bioremediate TPH-contaminated soil.

IV. PROJECTED WORK FOR THE NEXT REPORTING QUARTER – JAN-MAR 98

| <u>TASK</u>   | <u>ANTICIPATED<br/>COMPLETION DATE</u> |
|---|--|
| A. Long-Term Operation of SWMU 229 DPVE System  | Sep 2001                               |
| B. Long-Term Operation of SWMU 230 DPVE System  | Dec 1998                               |
| C. Long-Term Operation of SVE System at SWMU AOC-T                                      | Dec 1998                               |
| D. Long-Term Operation of Biovent System at Fire Training Area (SWMUs 170 & 171)        | Sep 1999                               |
| E. Long-Term Operation of Air Sparg/Biovent/SVE System at SWMU AOC-V, the Officers Club | Sep 1999                               |
| F. Long-Term Operation of Biovent System at SWMU 136                                    | Jun 1999                               |
| G. Long-Term Operation soil sampling  | Mar 1999                               |
| H. RCRA Permit Modification Request (HSPA Module)                                       | Mar 1999                               |