

---

**FACT SHEET / STATEMENT OF BASIS**

**U.S. Army Air Defense  
Artillery Center and Fort Bliss**

**Request for Corrective Action Complete with Controls for  
Two Solid Waste Management Units**

**RCRA Permit Number NM 4213720101-01**

**April 28, 2006**

---

## **FACT SHEET / STATEMENT OF BASIS**

### **Proposals For No Further Action with Controls for Two Solid Waste Management Units at Fort Bliss**

#### **RCRA Permit No. NM 4213720101-01**

Under authority of the New Mexico Hazardous Waste Act (Section 74-4-1 *et seq.*, NMSA 1978, as amended, 1992) and the New Mexico Hazardous Waste Management Regulations (20.4.1 NMAC), the New Mexico Environment Department (NMED) intends, pending public input, to approve a permit modification for the U.S. Army Air Defense Artillery Center and Fort Bliss (Fort Bliss) for Corrective Action Complete with Controls status for two (2) Solid Waste Management Units (SWMU) listed in Fort Bliss's Resource Conservation and Recovery Act (RCRA) Permit pursuant to 40 CFR 270.41 of the Hazardous and Solid Waste Amendments of 1984.

The proposed modification would grant Corrective Action Complete with Controls based on the requirements for future monitoring included in a settlement agreement for two SWMUs: Doña Ana Range Wastewater Lagoon (SWMU 27B) and Meyer Range Wastewater Lagoon (SWMU 76). If this modification is approved by NMED, these two SWMUs will be removed from Table 2 (*List of SWMUs and AOCs Requiring Corrective Action*) and will be placed on a new table (Table 4 - Corrective Action Complete With Controls) within the Permit. NMED is also moving the operating unit (SWMU 17 - Subpart-X Open Detonation), pending closure activities, from Table 3 (*List of SWMUs and AOCs Not Currently Requiring Corrective Action*) to a new table (Table 5 – *List of Hazardous Waste Management Units*).

#### **A. Facility Description**

Fort Bliss is located on approximately 1.2 million acres of land in southern New Mexico and west Texas and (see Figure 1). Fort Bliss encompasses parts of two states and three counties (Doña Ana and Otero counties in New Mexico and El Paso County in Texas). Fort Bliss is an active training facility under the U.S. Army Training and Doctrine Command (TRADOC) with a primary mission of air defense.

#### **B. History of Investigation**

Fort Bliss was jointly issued a Hazardous Waste Management Permit to operate a RCRA Subpart X Open Detonation Treatment Unit on July 21, 1995, by NMED and the Environmental Protection Agency (EPA). The operating portions of the joint RCRA Permit were issued by NMED. Because the State of New Mexico was not yet authorized to implement the corrective action program required pursuant to the Hazardous and Solid Waste Amendments (HSWA) of 1984, EPA Region 6 issued the HSWA part of Fort Bliss' RCRA Permit. On January 2, 1996, NMED received authorization for corrective action and consequently is the Administrative Authority for this action.

Section H below, briefly describes the location, history, evaluation of relevant information, and the bases for determination for each of the SWMUs proposed for Corrective Action Complete Status. More detailed descriptions of the particulars for each SWMU can be found in the original No Further Action (NFA) proposal and accompanying references constituting the Administrative Record.

This Statement of Basis describes two of the SWMUs that were identified as potentially appropriate for a Corrective Action Complete Determination. In summary, these two units will be listed on the new Table 4 (*List of SWMUs and AOCs Corrective Action Complete with Controls*) of Fort Bliss's permit.

### **C. Administrative Record**

The Administrative Record for this proposed action consists of the Fact Sheet / Statement of Basis, the Public Notice, the draft Permit consisting of Tables 2, 3, 4 and 5, and the referenced supporting documentation for each site. References for this Statement of Basis are listed in Section J. The complete Administrative Record may be reviewed at the following location during the public comment period:

NMED – Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
(505) 428-2500  
Monday - Friday from 8:00 a.m. to 5:00 p.m.

The Fact Sheet / Statement of Basis, the Public Notice, and Fort Bliss's draft Permit, that consists of Tables 2, 3, 4 and 5, may be reviewed at the following locations during the public comment period:

NMED – Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
Phone 505-428-2500  
Fax 505-428-2567  
Monday - Friday from 8:00 a.m. to 5:00 p.m.

Alamogordo Public Library  
920 Oregon Ave  
Alamogordo New Mexico  
Phone 505-439-4140

### **D. NFA Criteria**

NMED's determination that corrective action is complete at these sites is based on reports submitted by Fort Bliss that demonstrate that no additional corrective action is required to protect human health and the environment. General criteria that NMED considers include the following NFA criteria:

1. The SWMU cannot be located, does not exist, or is a duplicate SWMU.

2. The SWMU/AOC has never been used for the management (that is, generation, treatment, storage, or disposal) of RCRA solid or hazardous wastes and/or constituents or other CERCLA hazardous substances.
3. No release to the environment has occurred or is likely to occur in the future from the SWMU.
4. There was a release from the SWMU to the environment but the site was characterized and/or remediated under another authority that adequately addressed corrective action, and documentation such as a closure letter is available.
5. The SWMU has been characterized or remediated in accordance with current applicable state and/or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use.

#### **E. Public Participation**

NMED issued this public notice on **April 28, 2006**, to announce the beginning of a 45-day comment period that will end at **5:00 p.m., June 12, 2006**. Any person who wishes to comment on this action or request a public hearing should submit written or electronic mail (e-mail) comment(s) with the commenter's name and address to the respective address below. Only comments and/or requests received on or before 5:00 p.m., June 12, 2006 will be considered.

John E. Kieling, Program Manager  
Hazardous Waste Bureau – New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303  
or e-mail: john.kieling@state.nm.us  
Ref: HAFB – No Further Actions (April 28, 2006)

Written comments must be based on the administrative record. Documents in the administrative record need not be re-submitted if expressly referenced by the commenter. Requests for a public hearing shall provide: (1) a clear and concise factual statement of the nature and scope of the interest of the person requesting the hearing; (2) the name and address of all persons whom the requestor represents; (3) a statement of any objections to the proposed action, including specific references; and (4) a statement of the issues which such persons proposes to raise for consideration at the hearing. Written comment and requests for Public Hearing must be filed with Mr. John Kieling on or before 5:00 p.m., **June 12, 2006** at NMED Hazardous Waste Bureau, 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505-6303. The NMED will provide a thirty (30) day notice of a public hearing, if scheduled.

#### **F. Next Steps**

The NMED will notify Fort Bliss and each person on the public comment mailing list of the final decision. The final decision will become effective 30 days after service of the decision unless a later date is specified or unless review is required under New Mexico Hazardous Waste Regulations, 20.4.1.900 NMAC.

## **G. Contact Person for Additional Information**

For additional information, contact Mr. John Kieling at the address above.

## **H. Description of SWMUs Proposed to Approve a Corrective Action Complete with Controls Determination**

### **1. SWMU 27 B, Doña Ana Range Wastewater Lagoon**

#### **Location**

The Doña Ana Range Camp lies to the west of US Highway 54 and north of the New Mexico-Texas border. The Doña Ana Range Wastewater Lagoon (SWMU 27B) is located one-half mile southwest of the Doña Ana Range training camp. This Lagoon and the associated range training camp are part of the Fort Bliss Military Reservation in Southern New Mexico, situated in the Hueco Bolson Basin between the Franklin Mountains to the west and the Hueco Mountains to the east.

#### **History/Current and Anticipated Future Land Use**

SWMU 27B is a two-cell wastewater pond that receives sanitary wastewater and washwater generated by Army personnel, maintenance operations, and training camp related activities. An overflow pipe through a common berm connects the two cells. The southwest cell currently receives wastewater from the Dona Ana Range Camp. The northeast cell, originally intended as a backup cell in case of overflow conditions, has been abandoned.

Output volumes to this pond vary based on Fort Bliss's training schedule and the number of personnel occupying the camp. This pond was added to the permit and designated as SWMU because there was insufficient data available during the initial EPA/NMED inspection to clearly determine whether past practices by the military at this camp had added regulated constituents to the pond and/or the associated sediments.

The current land use of SWMU 27B is a wastewater lagoon for the Doña Ana Range Camp. According to the Fort Bliss master plan, the land will continue to serve as a wastewater lagoon for the Doña Ana Range Camp.

#### **Evaluation of Relevant Information**

During the 1996 investigation of Doña Ana Wastewater Lagoon, samples of sediment, soil and wastewater were collected to evaluate whether hazardous constituents had been released into the environment from the lagoon. Seven borings within and outside of the wastewater pond cells were drilled to depths ranging from 25 to 31 feet below grade. Groundwater was not encountered in any of the borings, including the soil boring within the pond. Soil and wastewater samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH), RCRA metals, and nitrate (NO<sub>3</sub>). Wastewater samples were also analyzed for biological oxygen

demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), total dissolved solids (TDS), ammonia (NH<sub>3</sub>), and total kjeldahl nitrogen (TKN). Also, thirteen samples from surface and subsurface soils at three boring locations were collected for calculating background concentrations.

Metals concentrations in sediment and subsurface soil samples did not exceed residential NMED Soil Screening Levels applicable in October 2000 with the exception of arsenic. Arsenic does not exceed the current NMED Industrial/Occupational RBSLs. Concentrations of polychlorinated biphenyls (PCBs), VOCs and SVOCs detected in the sediment and subsurface soil were below the U.S. EPA Region 6 Human Health Medium-Specific Screening Levels (HHSL) based on residential exposure. VOCs, pesticides and PCBs were not detected in wastewater samples.

During a December 1997 subsurface investigation, a monitoring well was drilled and installed to a depth of 345 feet below grade. Subsurface soil samples were collected at depths ranging from 188 feet to 342 feet below grade. Two groundwater samples were collected, one sample was collected before the monitoring well was constructed and the other was collected soon after the monitoring well was constructed and developed. Groundwater samples were analyzed for RCRA metals, VOCs, SVOCs and PCBs.

Arsenic, barium, chromium, and lead were detected in subsurface soil at concentrations less than NMED Industrial/Occupational Risk Based Screening Level (RBSL) standards. VOCs, SVOCs, pesticides and PCBs were not detected in the subsurface soil samples. Barium and chromium were detected in both groundwater samples, but at concentrations less than the HHSL for tap water and the Maximum Contaminant Limit (MCL). Arsenic was detected in one groundwater sample at a concentration greater than the MCL.

A Hydrogeologic profile was also determined during the 1997 investigation to evaluate the potential for water and solutes to migrate to the regional aquifer. The potential for constituents in the lagoon to affect the regional aquifer is minimal because thick units of dry, hard, clayey silts and silty clays inhibit infiltration. Furthermore, vadose zone flow modeling indicated a low potential for downward migration of moisture and solutes to the regional aquifer. The potential for groundwater contamination to infiltrate to groundwater in significant concentrations is considered minimal since the depth to groundwater is greater than 320 feet.

Another groundwater sample was collected from the same monitoring well in December 1998 to verify concentrations of constituents detected in the groundwater during the 1997 investigation. The sample was analyzed for RCRA metals, VOCs, pesticides, PCBs, TPH and SVOCs. VOCs, pesticides, PCBs, and metals were not detected in the groundwater samples. Nitrate was detected at a concentration less than the EPA Region 6 HHSL.

In addition to the three investigations conducted at the Dona Ana Wastewater Lagoon, a Wastewater Feasibility study and a Screening Level Ecological Risk Assessment (SLERA) were conducted. Although some constituents exceed HHSLs based on soil-to-groundwater transfer in some cases, site characterization data show constituents detected onsite are present at

concentrations less than human health HHSLs for residential exposure and tap water screening levels. The Risk Assessment also showed that the detected constituents do not pose a risk to ecological receptors.

### **Basis of Determination**

SWMU 27B has been determined to be suitable for Corrective Action Complete with Controls based on NMED NFA Criterion 5: The SWMU has been characterized in accordance with the current applicable state and federal regulations, and the available data indicates that the contaminants present do not appear to pose an unacceptable level of risk under current and projected future land use. By agreement between NMED and Fort Bliss, this determination will be verified by future monitoring that will be conducted as long as the lagoons remain in use.

## **2. SWMU 76, Meyer Range Wastewater Lagoon**

### **Location**

The Meyer Range Camp lies to the east of US Highway 54 and north of the New Mexico-Texas border. The Meyer Range Wastewater Lagoon, SWMU 76, is located one-half mile southwest of the Meyer Range training camp. This wastewater lagoon and the associated range training camp are part of the Fort Bliss Military Reservation in Southern New Mexico situated in the Hueco Bolson Basin between the Franklin Mountains to the west and the Hueco Mountains to the east.

### **History/Current and Anticipated Future Land Use**

SWMU 76 was constructed as an oxidation/evaporation pond to treat sanitary and liquid waste generated by Army personnel, maintenance operations, and training camp related activities. It consists of two cells; an active eastern cell that receives wastewater pumped to the pond from a small lift station and an inactive western cell for overflow conditions. Observations made during a site investigation revealed that wastewater discharged to the pond was creating an area of standing water beneath the 8-inch outflow pipe. The extent and nature of the vegetation growing within the pond indicate that this pond has not operated as a true oxidation pond, due to minimal flow and a damaged liner.

The current land use of SWMU 76 is a wastewater lagoon for the Meyer Range Camp. According to the Fort Bliss master plan, the land will continue to serve as a wastewater lagoon for the Meyer Range Camp.

### **Evaluation of Relevant Information**

During the 1996 investigation of the Meyer Range Wastewater Lagoon, samples from sediment, soil, wastewater, and groundwater were collected to evaluate whether hazardous constituents have been released into the environment from the lagoon. Eight surface sediment samples from within the active pond and 27 subsurface soil samples from nine soil borings advanced within and outside of the wastewater pond cells were collected for chemical analysis. While drilling soil borings, a perched groundwater zone was encountered between 30 to 35 feet below ground surface, which is likely the result of leakage from the wastewater lagoon. A total of three monitoring wells were installed and groundwater samples were collected from each well. All

soil and groundwater samples were analyzed for VOCs, SVOCs, PCBs, TPH, RCRA metals, and NO<sub>3</sub>. None of the detected constituents exceeded the regulatory standards.

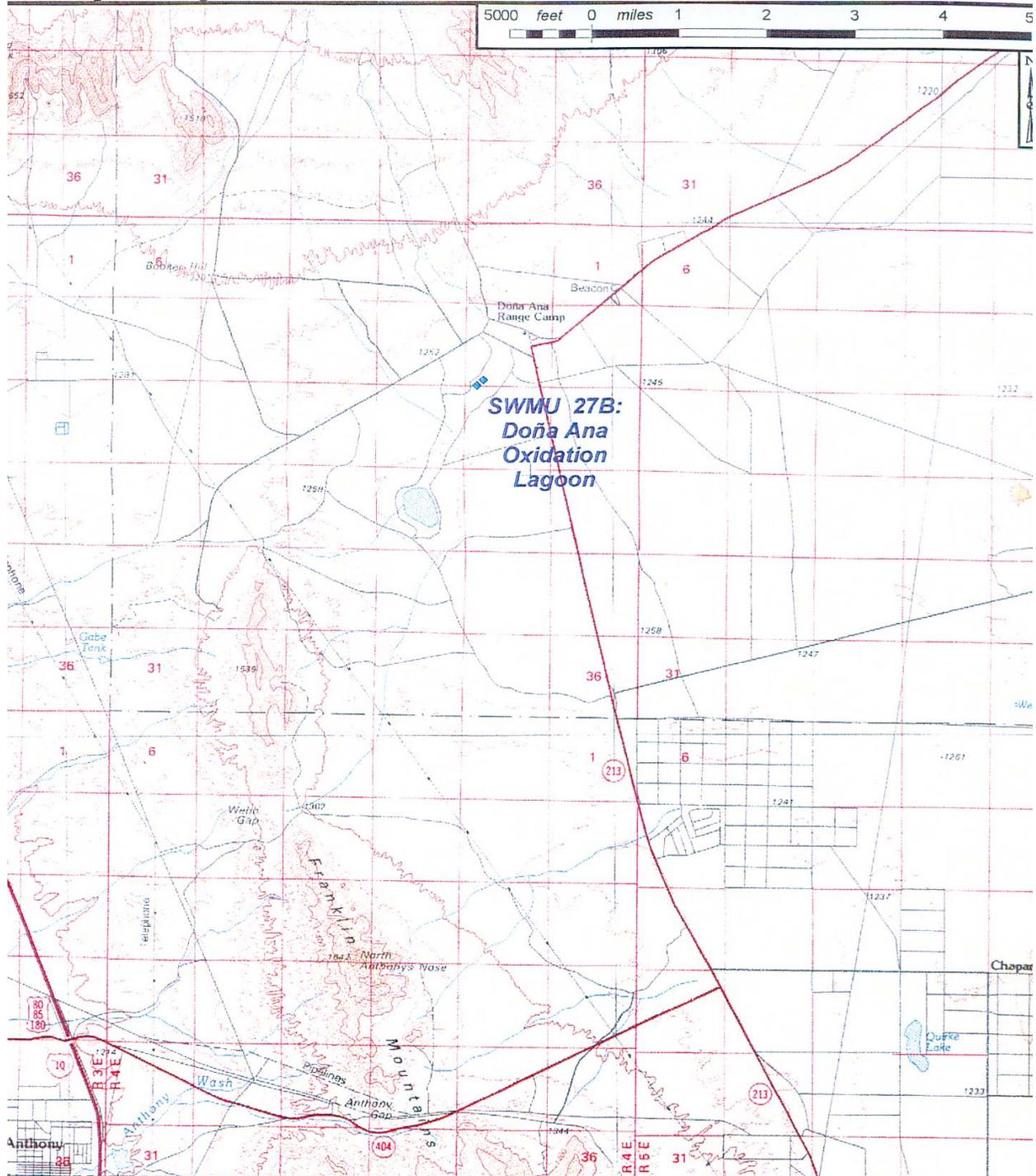
Selenium and chromium were detected at concentrations below the EPA Region 6 HHSL based on residential exposure. Methylene chloride was detected in one soil sample at a concentration less than the residential HHSL.

In 1997, a subsurface investigation was conducted in the vicinity of the Meyer Range Camp. The regional aquifer was encountered after drilling to a depth of 352 feet. The silty clays and clayey silt layers were encountered from 15 to 20 ft bgs, 35 to 38 ft bgs, 50 to 75 ft bgs, 190 to 206 ft bgs, 283 to 300 ft bgs, and 308 to 352 ft bgs. The thick sequences of dry, hard silty clay and clayey silt likely inhibit vertical migration from the vadose zone to the regional aquifer. In addition to the two investigations conducted at SWMU 76, a Wastewater Feasibility Study to characterize the waste stream into the lagoon and a SLERA as a preliminary evaluation of ecological risk were conducted. Site characterization data demonstrate that constituents detected in soil and water samples are present at concentrations less than human health HHSLs for residential exposure and also tap water screening levels, respectively. The Risk Assessment also showed that the detected constituents do not pose a risk to ecological receptors. The potential for significant groundwater contamination was considered minimal since the depth to groundwater is greater than 350 feet, and vadose zone flow modeling indicated a low potential for downward migration of moisture and solutes to the regional aquifer.

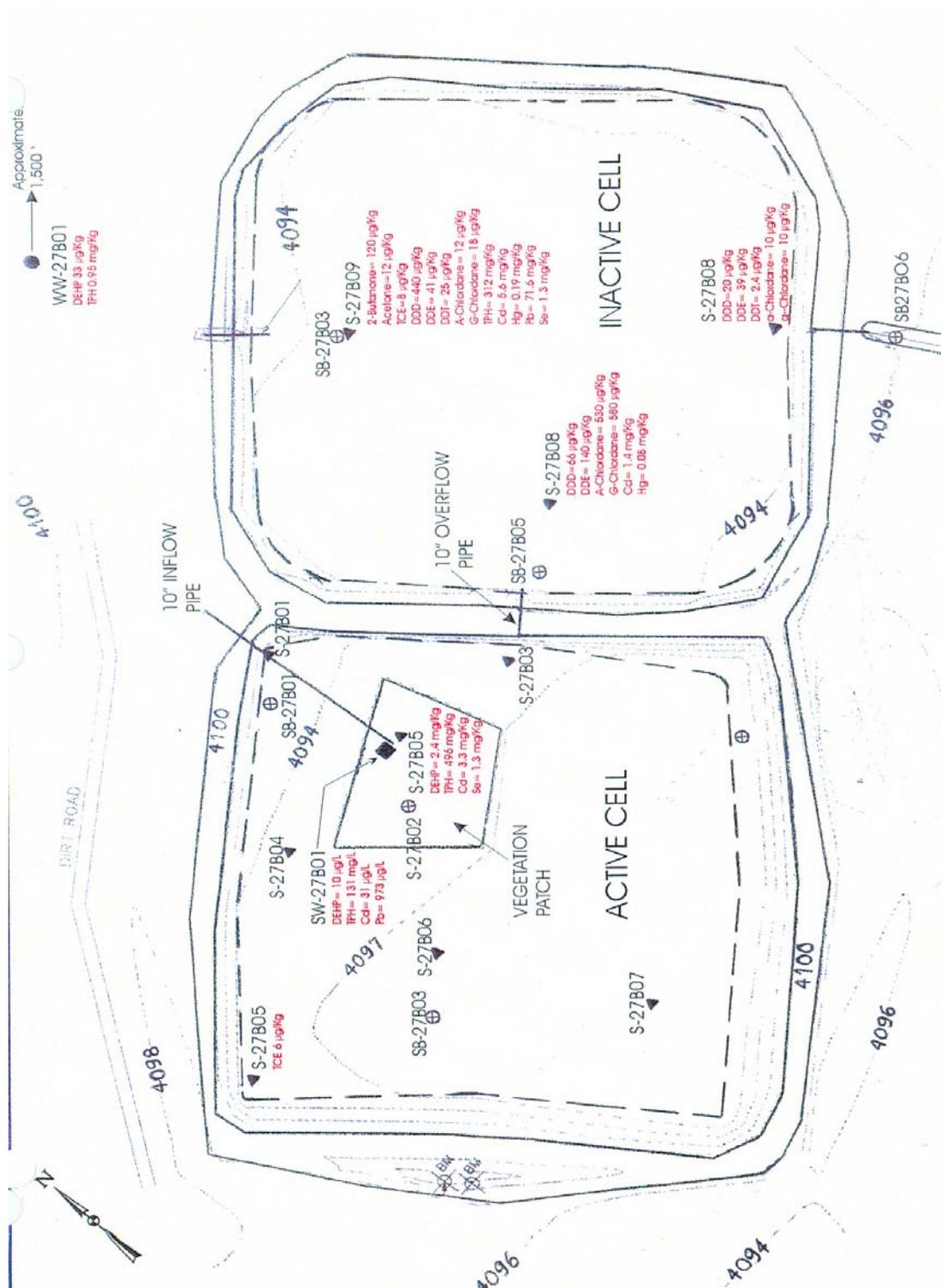
#### **Basis of Determination**

SWMU 76 has been determined to be suitable for a Corrective Action Complete with Controls based on NMED NFA Criterion 5: The SWMU has been characterized in accordance with the current applicable state and federal regulations, and the available data indicates that the contaminants present do not appear to pose an unacceptable level of risk under current and projected future land use. By agreement between NMED and Fort Bliss, this determination will be verified by future monitoring that will be conducted as long as the lagoons remain in use.

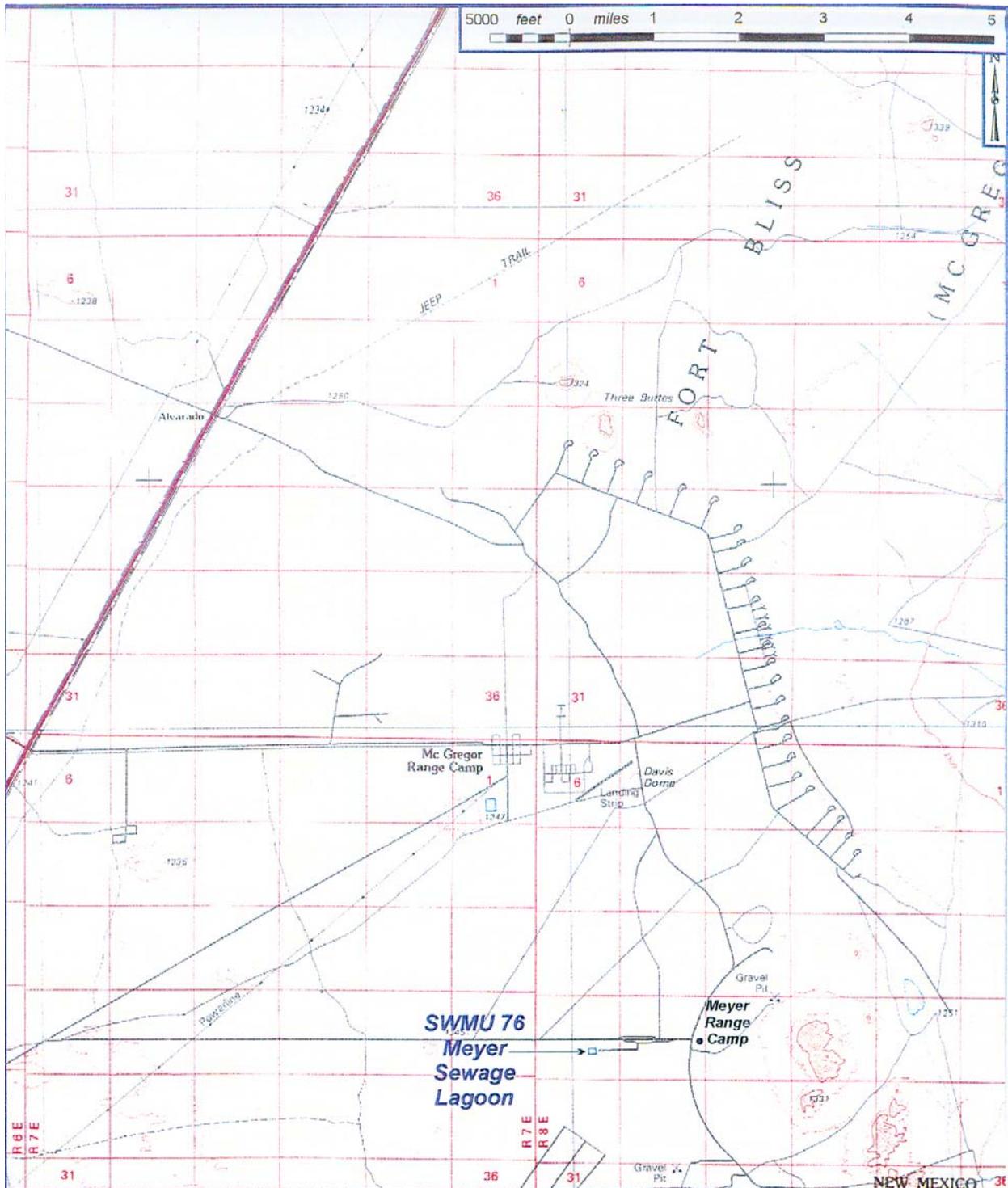
**I. Maps and Figures**



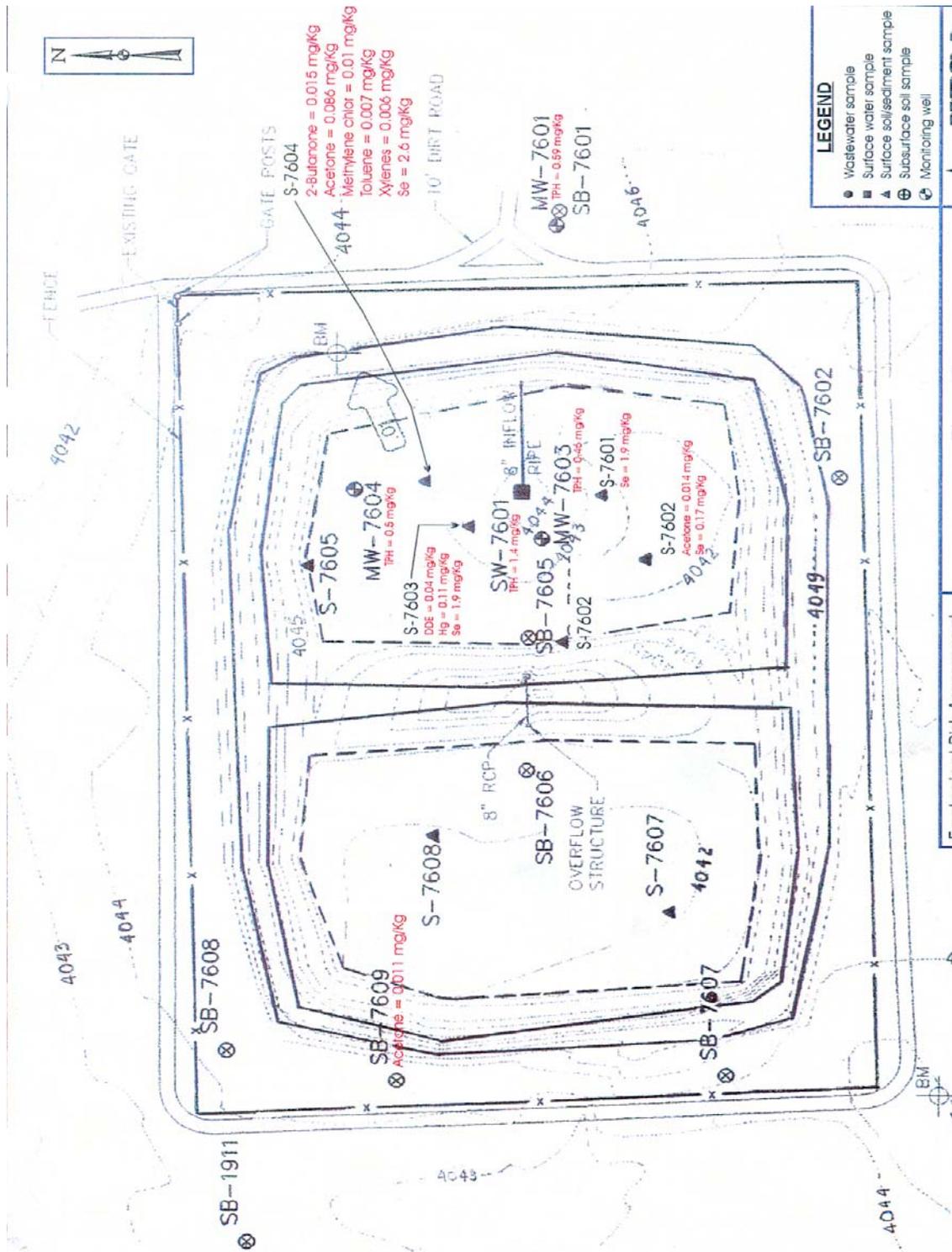
**Figure 1---SWMU 27B  
Topographic Map Showing Dona Ana Range Camp Wastewater Lagoon**



**Figure 2---SWMU 27B  
 RFI Sampling Locations and Results of Chemical Analysis**



**Figure 3---SWMU 76  
Topographic Map Showing Meyer Range Camp Wastewater Lagoon**



**Figure 4---SWMU 76  
 RFI Sampling Locations and Results of Chemical Analysis**

**J. References**

Fort Bliss Fact Sheet / Statement of Basis  
April 28, 2006

Environmental Science & Engineering, Inc., September 1991. RCRA Facility Investigation Report, New Mexico Solid Waste Management Units (SWMUs: 18, 19, 20, 25, 25B, 27, 27B, 29, 76).

Malcolm Pirnie, Inc., December 1998. Ground water Sampling.

Malcolm Pirnie, Inc., August 2000. Screening-Level Ecological Risk Assessment Addendum.

Roy F. Weston, Inc., December 1996. RCRA Facility Investigation (RFI).

Tetra Tech, Inc. July 1998. Subsurface Investigation of the New Mexico Oxidation Lagoons.

Tetra Tech, Inc., December 1997. Subsurface Investigation.

U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), August 1998. Wastewater Feasibility Study.

U.S. Army Corps of Engineers, 1997. Screening Investigation.

VEGA Environmental, May 2000. Screening-Level Ecological Risk Assessment – Meyer Range Camp Sewage Lagoon.

VEGA Environmental, June 2000. Screening-Level Ecological Risk Assessment – Doña Ana Range Camp Sewage Lagoon. Screening Guidelines. New Mexico Environment Department, New Mexico. June.