NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

1190 St. Francis Drive
Santa Fe, New Mexico 87503

GARREY CARRUTHERS
Governor

CARLA L. MUTH
Secretary

MICHAEL J. BURKHART
Deputy Secretary

File

ENTERED

XVII

April 7, 1989

Colonel David E. Benson
Headquarters 27th Combat Support Group/CC
Cannon Air Force Base, NM 88103

RE: NM752124454, Revised Sampling and Analysis Plan

Dear Colonel Benson:

I have received Cannon's revised Sampling and Analysis Plan. The Hazardous Waste Program does not approve or disapprove reports submitted by facilities however, if the sampling and analysis plan is inadequate, Cannon AFB will be required to prepare and use an adequate plan.

My review of the revised sampling and analysis plan will be included with my review of the Comprehensive Groundwater Monitoring Evaluation report on Cannon AFB from the Environmental Protection Agency, Region VI, which I have not received at this date.

Sincerely,

V. Suzanne Moore-Mayne

V. Suzanne Moore-Mayne
Water Resource Specialist II
Hazardous Waste Program

SMM/smm

cc: Bobby Williams, EPA, Region VI

CAFB 89

SPECIFICATIONS FOR

CLOSURE OF CELL NO. 3
OF LANDFILL AREA 5

TRAK. 1
1499

CANNON AIR FORCE BASE, NEW MEXICO

MARCH 1989

F29605- 89-C0009

F29605-89 B0010

CANNON AIR FORCE BASE PROJECT 86-0056

Approved Lucy D Daugherty Date 89 Mar 22

CAFB 03 6

Attachment 3

CAFB 88-

void 8-6-90

CLOSURE AND POST CLOSURE PLAN FOR LANDFILL CELL NO. 3 AT CANNON AIR FORCE BASE

QUALITY ASSURANCE PLAN

December 1988

Submitted to:

Headquarters Tactical Air Command/DEEV
Langley Air Force Base, Virginia 23665

and

27 CSG/DEEV
Cannon Air Force Base, New Mexico 88103

Submitted by:

Hazardous Materials Technical Center
The Dynamac Building
11140 Rockville Pike
Rockville, Maryland 20852

HAZARDOUS WASTE SECTION
MEMORANDUM

TO: Gedi Cibus
Program Support Bureau

FROM: A. Elizabeth Gordon AEG
Hazardous Waste Section

RE: Draft Remedial Investigation Report from Cannon Air Force Base
EID File # 397 ER

DATE: July 28, 1988

Each of these units has been designated as a solid waste management unit (SWMU) and will be regulated according to the Solid and Hazardous Waste Amendments of 1984 (HSWA) during the permitting process. EPA will be the regulatory agent because the State EID is not presently authorized for the HSWA. EPA has contracted with A.T. Kearney to do a preliminary review and visual site inspection and the report was issued in 1987. All of these units were addressed in that report and the information and suggested actions pertaining to them are attached. A summary of the differences between the preliminary review report (PRR) and this draft remedial investigation report (RIR), which postdates the preliminary review report, follows.

The main thrust of the draft remedial investigative thrust is that no further action is warranted at any of the units because site characteristics hinder the migration of organic and inorganic pollutants. These site characteristics are very low annual precipitation; high evapotranspiration; low soil moisture, silty sands with relatively high porosity, high specific retention, alkaline pH and considerable depth to ground water (RIR, p. xiv).

Site 9: Underground Storage Tank Runoff at FPTA-4.

The PR identifies a cluster of four SWMU's is this area and they and the suggested further actions are:

SWMU 109 Fire Department Training Area No. 4; construct a berm to reduce runoff from the unit.
SWMU 110 Underground Waste Oil Tank No. 2336; determine the integrity of the unit.
SWMU 111 Unlined Pit; conduct soil sampling to determine if contamination exists.
SWMU 112 Oil/Water Separator No. 2336; consider assessing the integrity of the unit.

The RIR indicates that, in 1987, the undergound waste oil tank was found to be leaking and, consequently, its use suspended. CAFB has done some sampling to determine the extent of contamination, but, for the reasons given above, thinks no further action is needed. EPA will probably request further sampling and clean up of the area. Although the tank is no longer being used, this area is still in use and should be carefully monitored to be sure that further contamination does not occur. Althourgh soil sampling was conducted in the area of the oil/water separator no. 2336, it is not clear that the area sampled was large

HAZARDOUS WASTE SECTION
MEMORANDUM

TO: Gedi Cibas
Program Support Bureau

FROM: A. Elizabeth Gordon
Hazardous Waste Section

RE: Installation Restoration Program: FPTA-4, Site 9 Tank Removeal
EID File # 405 ER

DATE: August 4, 1988

This unit was addressed in the July 28, 1988 correspondence regarding CAFB's Draft Remedial Investigation Report, EID File # 397 ER. Site 9: Underground Storage Tank Runoff at FPTA-4 is identified as Solid Waste Management Units (SWMU's) 109 and 110 in the Preliminary Review Report by A.T. Kearney. Copies of the pertinent pages from the July 28th correspodence are attached. The concern I have regarding this work proposal is the extent of excavation. On pages IP-2 and 2C-1, it is stated that the soils will be excavated to at least a depth of 5 feet. Previous sampling at FPTA-4 revealed high levels of oil and grease and lead at 10.5-11.5 feet (page 6-149 of attached papers). Also, "The excavation shall extend horizontally from the tank until the soil is visually clean (page IP-2)." Do they know the extent of the contamination vertically and horizontally and are they excavating enough?

c.c: Janie Hernandez, EPA VI

enough to include the unlined pit which overlaps with this separator. More sampling may be required to determine that there are no problems with the unlined pit.

Site 11: Engine Test Cell Overflow Pit and Leach Field.

Again, A.T. Kearney identifies a cluster of units in this area; they and the suggested action are:

SWMU 86	Engine Test Cell; conduct soil sampling to determine if contamination exists.
SWMU 87	Former Overflow Pit; conduct further soil sampling.
SWMU 88	Former Leaching Field--Engine Test Cell; conduct further soil sampling.
SWMU 89	Evaporation Pond--Engine Test Cell; conduct soil sampling.
SWMU 90	Oil/Water Separator No. 5114; assess integrity of unit.
SWMU 91	Recovered Fuel Tank No. 5114; determine the integrity of the unit on a regular basis and provide internal and external protection.

The evaporation pond area was sampled in two locations and found to have low levels of the Antitoxidant 425. EPA will probably require further sampling along with that suggested for the overflow pit and engine test cell. Only two samples have been taken at SWMU 88 and SWMU 89 and that is not enough to determine the full impact of any unit. Also, the evaporation pond is in use and therefore can supply a hydraulic head on the underlying stratum (PR, cover letter). The tank may require an inspection schedule.

Site 12: South Stormwater Collection Point.

SWMU 85 Storm Water Collection Point; conduct surface water sampling to determine the source of contamination.

CAFB has sampling this area extensively and found barium, mercury and selenium above background levels. EPA may require some level of monitoring primarily because this unit is providing a hydraulic head to the underlying stratum (PR, cover letter) and is also within 800 feet of drinking well no. 6.

Site 20: Northeast Stormwater Collection Point.

SWMU 95 Northeast Storm Water Drainage Area; conduct soil, surface water and sediment sampling for presence of hazardous constituents.

CAFB did study this area for the first time under this remedial investigation and found a variety of long chain organics and barium and selenium above background levels. Because the unit is still receiving a discharge which can provide a driving force, EPA may require further work at this site.

We do not have copy of this draft report and would appreciate a copy of it or one of the final report for the permit file. Thank you.

cc: Jenya Wenike, EPA RI

109. UNIT NAME	Fire Department Training Area No. 4
Soil/Groundwater:	The potential for release to soil is high due to the past disposal of hazardous wastes and the unlined nature of the unit. The potential for release to groundwater is lower. The caliche layers could possibly act as an aquitard and inhibit downward migration of hazardous constituents to the aquifer.
Surface Water:	The potential for release to surface water is high due to the surface disposal of wastes.
Air:	The potential for release to air is low due to the fact that this unit has not been used in 13 years.
Subsurface Gas:	The potential for generation of subsurface gas is low due to the method of disposal.
Suggested Further Actions:	Construct a berm to reduce runoff from the unit.

110. UNIT NAME	Underground Waste Oil Tank No. 2336
Soil/Groundwater:	The potential for release to soil is high due to the unit's being located underground. The potential for release to groundwater is lower. The caliche layers could possibly act as an aquitard and inhibit downward migration of hazardous constituents to the aquifer.
Surface Water:	The potential for release to surface water is low due to the location of the unit being underground; surface drainage does not flow in the direction of the nearest surface water body--the Playa Lake Stormwater Collection Point (SWMU No. 85).
Air:	The potential for release to air is low due to the nature of the unit.
Subsurface Gas:	The potential for generation of subsurface gas is high due to the nature of the unit.
Suggested Further Actions:	Determine the integrity of the unit.

109. UNIT NAME: Fire Department Training Area No. 4

Unit Description: This unit is an unlined fire training area in the Southeast Area of the Air Force Base, near SWMU Nos. 107, 113, and 56. The area is circular, about 400 feet in diameter with a slight slope towards the center (Ref. 6). A mock aircraft is situated on a concrete pad in the center of the area. Subsurface fuel lines from the underground POL Tank No. 2336 (SWMU No. 110) connect to various points on the aircraft. Recovered JP-4 fuel is pumped from the storage tank to the aircraft prior to practice burns. Runoff from the area is currently collected in an Oil/Water Separator No. 2336 (SWMU No. 112) adjacent to the site. Prior to 1985, runoff was diverted to an Unlined Pit (SWMU No. 111) (Ref. 6 and 47).

This site was reportedly used from 1961 to 1974 as a fuel truck cleaning area in which residual fuels were drained onto the ground, and the fuel tanks were then cleaned at the site. This practice ended about 1974 when the fire training exercises were initiated. For the fire department training exercises, the ground was saturated with water prior to applying commingled wastes or recovered JP-4 fuel onto the ground; however, presaturation was not practiced when fuel trucks were cleaned at the site prior to 1974 (Ref. 6).

Soil borings indicate the topsoil in the Fire Training Area is about 4.5 feet of silty sand. A caliche horizon containing abundant sand and silt layers extends to a depth of 45 feet (Ref. 46). This unit was identified as Site No. 9 in the IRP Phase I study (Ref. 6).

Date of Start-Up: Use of this unit as a fire training area began in 1974. The site was reportedly used as a fuel truck cleaning area between 1961 and 1974 (Ref. 6).

Date of Closure: The unit is active (Ref. 47).

109. (Cont'd.) Fire Department Training Area No. 4

Wastes Managed: From 1974 to 1975, commingled waste oils, solvents, and recovered JP-4 fuels were burned at the site; however, since 1975, only recovered JP-4 fuel has been burned at this site. For each exercise, occurring twice a month, about 300 gallons of wastes have been burned (Ref. 6).

Release Controls: The unit is not lined. Runoff is currently collected in Oil/Water Separator 2336 (SWMU No. 112) (Ref. 47).

Release History: Between 1961 and 1974, the tank truck residual fuels that did not volatilize would have percolated into the ground. From 1974 to the present, during burn exercises, most of the commingled wastes and recovered JP-4 fuel would have been consumed in the fires; however, some minor percolation into the ground has probably occurred. It is not known what quantities of fuels and commingled wastes have percolated into the ground; however, it is estimated that during the pre-1974 practice, up to 4,000 gallons percolated into the ground (Ref. 6).

During 1985, two deep soil borings were drilled at this site to evaluate the impact of past and ongoing activities and to define the site-specific hydrogeologic conditions. Five samples from the soil borings were analyzed. Results of the analysis are summarized in Table 109 and Figure 109 following this page. Sampling at this unit found no purgeable halocarbons or volatile hydrocarbons. Elevated levels of lead (39 mg/kg) and oil and grease (110 mg/kg and 280 mg/kg) were detected in the area where runoff was diverted to an Unlined Pit (SWMU No. 111) in the past. The Unlined Pit was replaced with an Oil/Water Separator (SWMU No. 112) in 1985 (Ref. 46).

Table 109

Results of Analysis of Soil Samples for
Fire Department Training Area No. 4

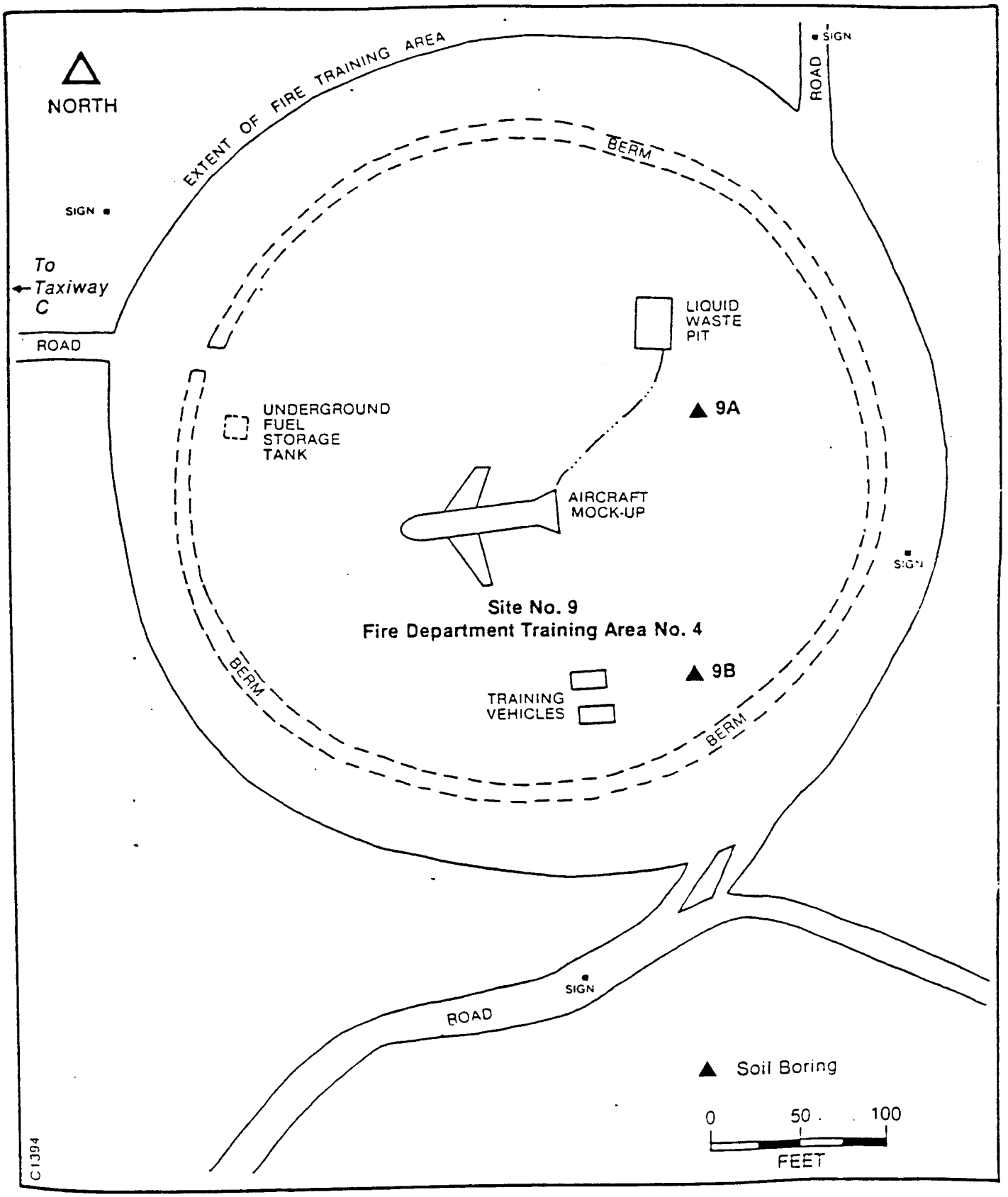
Sample #	Depth	O&G*	Pb*	Purgeable Organic Compounds (EPA 8010/8020) (ug/kg)
9A-2A**	10.5-11.5'	280	5.3	ND
9A-1	5.5-7.0'	ND	4.1	ND
9A-2	10.5-11.5'	110	39.0	ND
9B-1	4.0-5.5'	ND	4.5	ND
9B-2	9.0-10.5'	ND	3.7	ND
9B-3	43.0-45.0'	37	1.3	ND

*all values in mg/kg, except as noted
**duplicate analysis
ND = not detected, detection limits and analytical techniques are listed in Appendix A

Source: Reference 46

Figure 109

Soil Boring Locations
at Fire Department Training Area No. 4



Source: Reference 46

110. UNIT NAME: Underground Waste Oil Tank No. 2336

Unit Description: This unit is an underground 2,000-gallon storage tank, located at the active Fire Department Training Area No. 4 (SWMU No. 11) (Ref. 6). The tank, which is connected to various points on the mock aircraft, is used to store recovered JP-4 fuel prior to burning in the fire training exercises. About 300 gallons of JP-4 fuel is used to ignite a practice burn. The tank, of unknown construction, collects recovered JP-4 fuel from Oil/Water Separator No. 2336 (SWMU No. 112) (Ref. 47). The majority of the recovered JP-4 fuel that is stored in the tank, however, is collected in bowsers and 55-gallon drums from various locations on the base, and is transported to the Fire Department Training Area for disposition in the tank (Ref. 6).

Date of Start-Up: Use of this unit began in 1975 (Ref. 6).

Date of Closure: The unit is active (Ref. 47).

Wastes Managed: The tank contains recovered JP-4 fuel collected from Oil/Water Separator No. 2336 (SWMU No. 112) and other locations on the Air Force Base (Ref. 6 and 47).

Release Controls: No release controls were observed during the VSI (Ref. 47).

Release History: No releases have been documented (Ref. 47).