

CAFB 2002

Stenna



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 27th MISSION SUPPORT GROUP (ACC)
CANNON AIR FORCE BASE NEW MEXICO

9 Oct 02

MEMORANDUM FOR DISTRIBUTION LIST

FROM: 27 CES/CEV
506 N DL Ingram Blvd
Cannon AFB NM 88103-5003

2002

SUBJECT: Restoration Advisory Board Quarterly Meeting

1. The quarterly meeting of the Restoration Advisory Board (RAB) started with a tour of three Solid Waste Management Units and a new monitoring well data collection platform on 26 Sep at 1800. Attachment 2 includes a brief history/background of sites that were toured.
2. After returning from the tour all members met in the CE Conference Room. Meeting minutes were approved from the previous RAB. NMED regulators discussed their visit to CAFB regarding the Hazardous Waste RCRA part B permit renewal and visiting solid waste management units awaiting remedial action. Attendance is reflected in attachment 3.
3. The next RAB meeting is tentatively scheduled for 23 Jan 03 in Portales. The particular date, time and location will be determined later so they have minimal conflict with other community activities.

A handwritten signature in black ink, appearing to read "Jo A. O'Connell".

JO A. O'CONNELL, GS-05
Recorder

Attachments:

1. Distribution List
2. History of sites
3. Attendance

1st Ind to 27 MSG/CC, 26 Sep 02, Restoration Advisory Board Quarterly Meeting

MEMORANDUM FOR DISTRIBUTION LIST

NOV 13 2002

Approved/~~Disapproved~~



CHRIS HARRELL
Co-Chairman, Restoration Advisory Board



D.H. SHOWERS, Colonel, USAF
Co-Chairman, Restoration Advisory Board

Distribution List
Restoration Advisory Board (RAB)

Ms Mona Lee Norman-Armstrong
104 Sandzen Dr.
Clovis NM 88101

✓ Mr. Glenn von Gonten
NMED Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505

The Honorable Orlando Ortega
Mayor of Portales
500 W 1st Street
Portales NM 88130

Ms. Millie Boyle
137 Texas Drive
Portales NM 88130

Mr. Charles R. Ferguson
2101 Jonquil Pk. Dr.
Clovis NM 88101

Mr. Mike Tessmer
City of Clovis
P. O. Box 760
Clovis, NM 88101

The Honorable Ray Hester
Mayor of Melrose
P.O. Box 235
Melrose NM 88124

Mr. Forest Carper
1416 Wilshire Blvd
Clovis NM 88102

Mr. Christopher Harrell
187 New Mexico 88
Portales NM 88130

Mr. Jimmie Richards
1828 S. Roosevelt RD 7
Portales NM 88130

Ms. Julie Jacobs
NMED Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505

Mr. Bob Sturdivant
US EPA – Region VI
1445 Ross Avenue Suite 1200
Dallas TX 75202-2733

Mr. David Grunig
255 Floyd Golden Circle
Portales NM 88130

CANNON AIR FORCE BASE

RESTORATION ADVISORY BOARD

26 SEP 02 @ CAFB

TOUR OF FOUR SITES

**LANDFILL 25 (SWMU 97)
SEWAGE LAGOONS (SWMU 101)
FIRE TRAINING AREA 4 (SWMUs 109, 110, 111, 112)
DATA COLLECTOR PLATFORM/NEW MW**

CANNON AFB RAB TOUR – 26 SEP 02

STOP #1 LANDFILL 25

Landfill 25 (SWMU 97) is a 29 acre site on the east central portion of the base directly west of the weapons storage area. It was apparently a trench and burn landfill in the late 1940s and 1950s that got transformed into a dumping ground for demolition rubble at a later time. Construction rubble was dumped on the site from the 1950s to the late 1970s and was covered with concrete, wood, siding, metal, and asphalt demolition rubble. The site was heavily vegetated with volunteer trees and weeds.

The site was investigated by the Tulsa District Corps of Engineers in 1991 and nine trenches were dug in the north half as part of an environmental assessment. The results showed some elevated levels of metals and semi-volatile organics. In 1992, Radian Corporation drilled a total of 14 soil borings to depths up to 60 feet and excavated nine trenches in the south half collecting a total of 139 field samples. Metals were found in several samples at elevated levels. Pesticides were detected although not at very high levels. Volatile and semi-volatile organic compounds were detected infrequently at levels less than 1000 parts per billion. Total petroleum hydrocarbons were detected in many samples with a maximum of 1700 parts per million.

Woodward Clyde Corporation did additional investigative work and concluded no further action was necessary. A monitoring well was drilled near the middle of the landfill in 1990 and was sampled for several years until it went dry due to a drop in the water table. In 1998, monitoring well 'R' was drilled on the east side of the landfill, and was replaced with an adjacent well 'Ra' in 2001 which continues to be sampled twice yearly.

In 1998, the external ECAMP wrote up Landfill 25 because of the asbestos containing material (ACM) located there. Most of the asbestos containing material was transite siding and concrete/asbestos sewer pipe. The ECAMP inspector was concerned that the ACM might present a hazard to human health in time, and ACC supplied funding to do a cleanup of the landfill. Foster Wheeler Corporation performed a cleanup of the landfill from August 2000 through January 2001, and involved identifying and hauling asbestos off site to a permitted landfill, gathering and crushing the concrete rubble strewn about the site, and re-contouring and grading the site to a certain extent to eliminate high spots and fill in low areas. Additionally, a drainage ditch was dug around the site. As many of the larger trees were preserved as possible in order to provide wildlife habitat and ground cover. The site was seeded with native grasses and wildflowers in May 2001. The crushed concrete from the site was used as fill around the base, and the remaining stockpiled material will be used as cover for the sewage lagoon project immediately to the west across East Perimeter Rd.. The cleanup greatly improved the appearance of the landfill, which was a visible eyesore to drivers passing by it.

CANNON AFB RAB TOUR – 26 SEP 02

STOP #2 SEWAGE LAGOONS

The sewage lagoons comprise 33 acres and are located on the east central side of the base to the west of the munitions storage area and Landfill 25. There are two basins with berms around them and the bottoms are unlined. The north lagoon is 16 acres and the south lagoon is 17 acres. These lagoons were used to treat the base wastewater prior to the time the new sewage treatment plant went on line in 1998. At that time, the effluent from the treatment plant was piped to the playa lake and the lagoons quit receiving wastewater and are now dry. The lagoons have to be closed under the Resource Conservation and Recovery Act (RCRA) since they have been designated as a solid waste management unit (SWMU). The New Mexico Environment Department (NMED) Hazardous Waste Bureau must approve the closure plan for this site. Currently, NMED is nearing the end of its review of the Corrective Measures Study (CMS) completed by Foster Wheeler Corporation for Cannon. The CMS determines the best plan for closure and was submitted to the HWB in May 2001.

In May 2000, Foster Wheeler Corporation drilled 10 borings and took samples to determine the thickness and composition of the sewage sludge. Originally, it was thought that the sewage sludge might be as deep as 3 to 4 feet, but the actual thickness was 8 to 18 inches. The primary contaminant level of concern is nitrate in the sludge. The CMS considered several alternatives including no action and composting the sludge. The preferred alternative is to scrape and haul the sludge from the north lagoon and place it in the south lagoon, compact it, and cover it with the crushed concrete material stockpiled in Landfill 25. The berms on the south would be demolished and the dirt from them spread over the crushed concrete fill. It is anticipated additional fill will be needed to provide a slight crown to the cap to shed water. The cap would be vegetated with a cover of native grasses to prevent erosion. The north lagoon would be left intact, and a future project would line 8 acres of it to be used for emergency upsets or when the playa lake is too full to discharge into.

There are 4 ground water monitoring wells around the sewage lagoons and they are sampled annually. When the lagoons were in operation, sampling results showed high levels of nitrates. Once the treatment plant came on line, levels began dropping off and continue to do so. No contaminate levels of concern have been detected other than the nitrates. When the lagoons are finally closed, Cannon may be able to petition NMED to discontinue sampling.

STOP #3 FIRE TRAINING AREA 4

Fire Training Area 4 is located in the southeastern portion of the base and is comprised of four SWMUs. SWMU 109 is the Fire Training Pit, SWMU 110 is the Underground Waste Oil Tank, SWMU 111 is the Unlined Pit, and SWMU 112 is the Oil/Water

CANNON AFB RAB TOUR – 26 SEP 02

Separator location. The oil/water separator and associated leach field were removed from the site in 1997. The primary concern associated with these SWMUs is soil contaminated with total petroleum hydrocarbons (TPH) as a result of fire training activities in the area.

An initial Remedial Investigation (RI) was performed by Radian Corporation in 1985 and focused on contamination in the area of SWMU 109. Two soil borings were drilled and from these two soil borings five samples were analyzed for oil and grease, lead, and organic compounds. Samples were collected at depths from 5.5 to 45 ft. No TPH data were collected during this investigation.

In 1988 another RI was conducted by Walk, Haydel, and Associates, Inc. This RI included three soil borings with thirteen samples each (0-101.5 ft bgs) analyzed for total benzene, Toluene, ethylbenzene, and xylenes (BTEX); arsenic; barium; cadmium; selenium; and silver. An additional six soil borings with thirteen each (0-101.5 ft bgs) were analyzed for arsenic, barium, cadmium, selenium, and silver. All borings were located near SWMU 110 and the landfarm area associated with the underground waste oil tank removal. No TPH data were collected during this investigation.

Woodward-Clyde performed another RI in 1991 to evaluate the nature and extent of contamination at eighteen Cannon AFB SWMUs, including FTA-4. Four surface soil samples (0 to 0.5 ft bgs) and subsurface samples (61 to 100 ft bgs) were collected. TPH concentrations at two soil boring locations located near SWMU 109 exceeded the action level of 5,000 mg/kg at depths ranging from 0 to 6 ft.

A Phase II RCRA Facility Investigation (RFI) was conducted by Harza from October 1996 through February 1997, and included a passive gas survey. Nineteen soil borings and seventy-seven soil samples were collected at various locations. TPH concentrations in soil detected at two borehole locations associated with SWMU 9 exceeded the action level of 5,000 mg/kg.

In December 2001, Foster-Wheeler finalized the Corrective Measures Study (CMS) conducted for the four SWMUs that comprise FTA-4. The CMS identified and evaluated potential corrective measures to prevent future impact to human health and the environment. Corrective measures alternatives were developed for each SWMU and included consideration of the protection of human health and the environment, attainment of media cleanup standards, control of sources of release, and compliance with applicable standards for management of wastes. Each alternative was evaluated for its ability to meet the above criteria and technical decision factors. The technical decision factors included long-term reliability and effectiveness; reduction in the toxicity, mobility, or volume of wastes; short-term effectiveness; implementability, and a cost estimate.

The Corrective Action Objective (CAO) developed for SWMUs 109, 110, and 111 was to meet the TPH action level of 5,000 mg/kg in soil. To meet this CAO, technologies were screened, corrective measures alternatives were developed from the technologies, and a

CANNON AFB RAB TOUR – 26 SEP 02

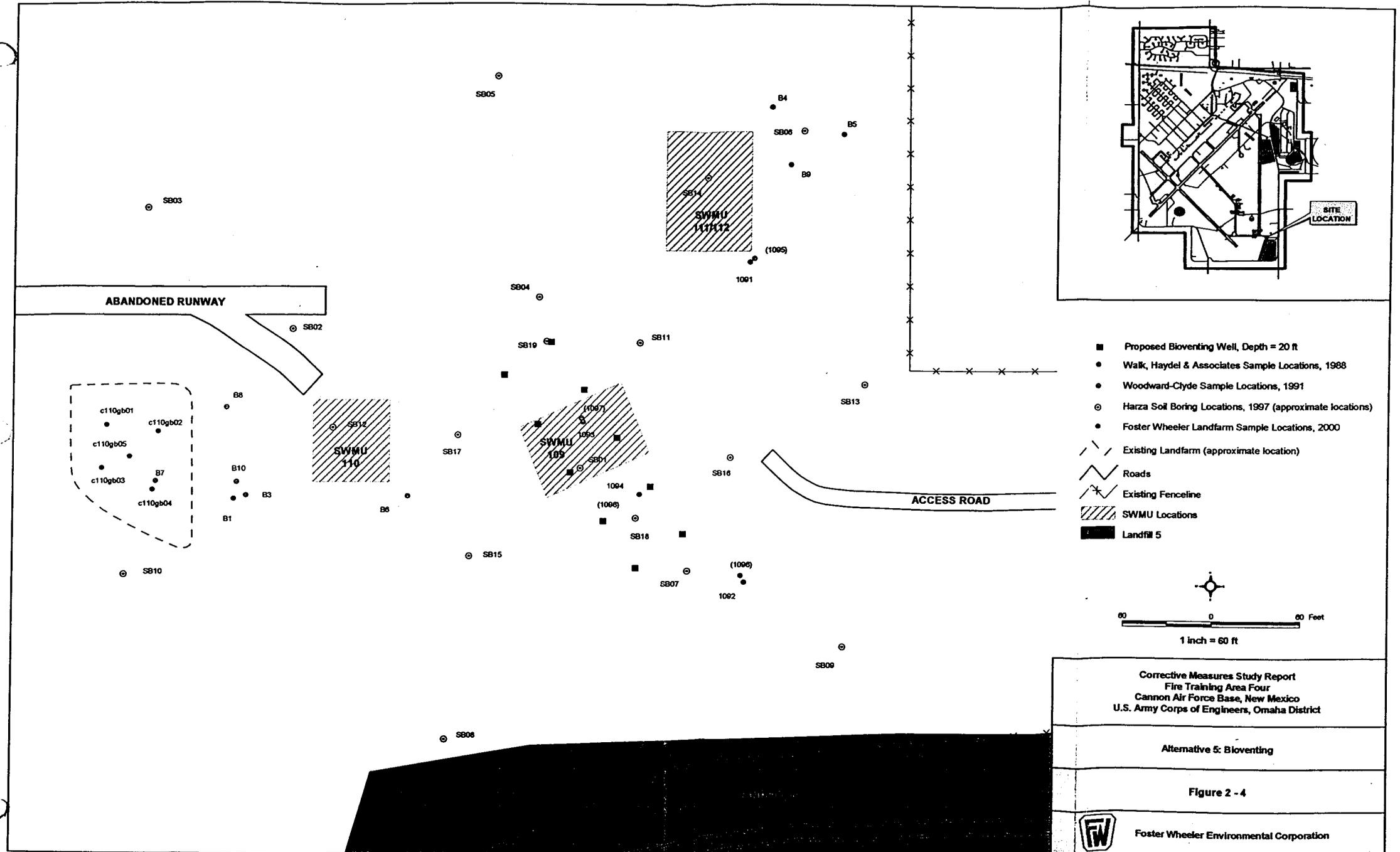
preferred corrective measures alternative was selected for each SWMU at FTA-4 as summarized below:

- Fire Training Pit (SWMU 109) – Bioventing. The preferred alternative includes installing approximately 10 soil venting wells to allow oxygenation of the contaminated vadose-zone soils and to stimulate bioremediation of the TPH.
- Underground Waste Oil Pit (SWMU 110)_ No Action
- Unlined Pit (SWMU 111) _ No Action

A CAO was not developed for SWMU 112 because the oil/water separator and associated leach field are no longer on site and all related soil contamination is addressed under SWMU 111. Because no CAO was developed for this SWMU, no corrective measures alternatives were developed or selected.

STOP #4 DATA COLLECTION PLATFORM/NEW WELL

A new groundwater monitoring well “W” was drilled and installed in the northeast corner of Cannon AFB in May 02. A solar data collector platform was also installed adjacent to the new well. Solar paneled transducers were installed at monitoring wells “V”, “W” and “B”, located in the northwest, northeast and southeast respectively, to measure water levels at these locations. This data will be sent to the data collection platform and then transmitted back to USGS in Albuquerque for compilation. We will then be able to determine fluctuations in the water table throughout the year.



- Proposed Bioventing Well, Depth = 20 ft
- Walk, Haydel & Associates Sample Locations, 1988
- Woodward-Clyde Sample Locations, 1991
- ⊙ Harza Soil Boring Locations, 1997 (approximate locations)
- Foster Wheeler Landfarm Sample Locations, 2000
- - - Existing Landfarm (approximate location)
- Roads
- x-x-x Existing Fenceline
- ▨ SWMU Locations
- Landfill 5


 60 0 60 Feet
 1 inch = 60 ft

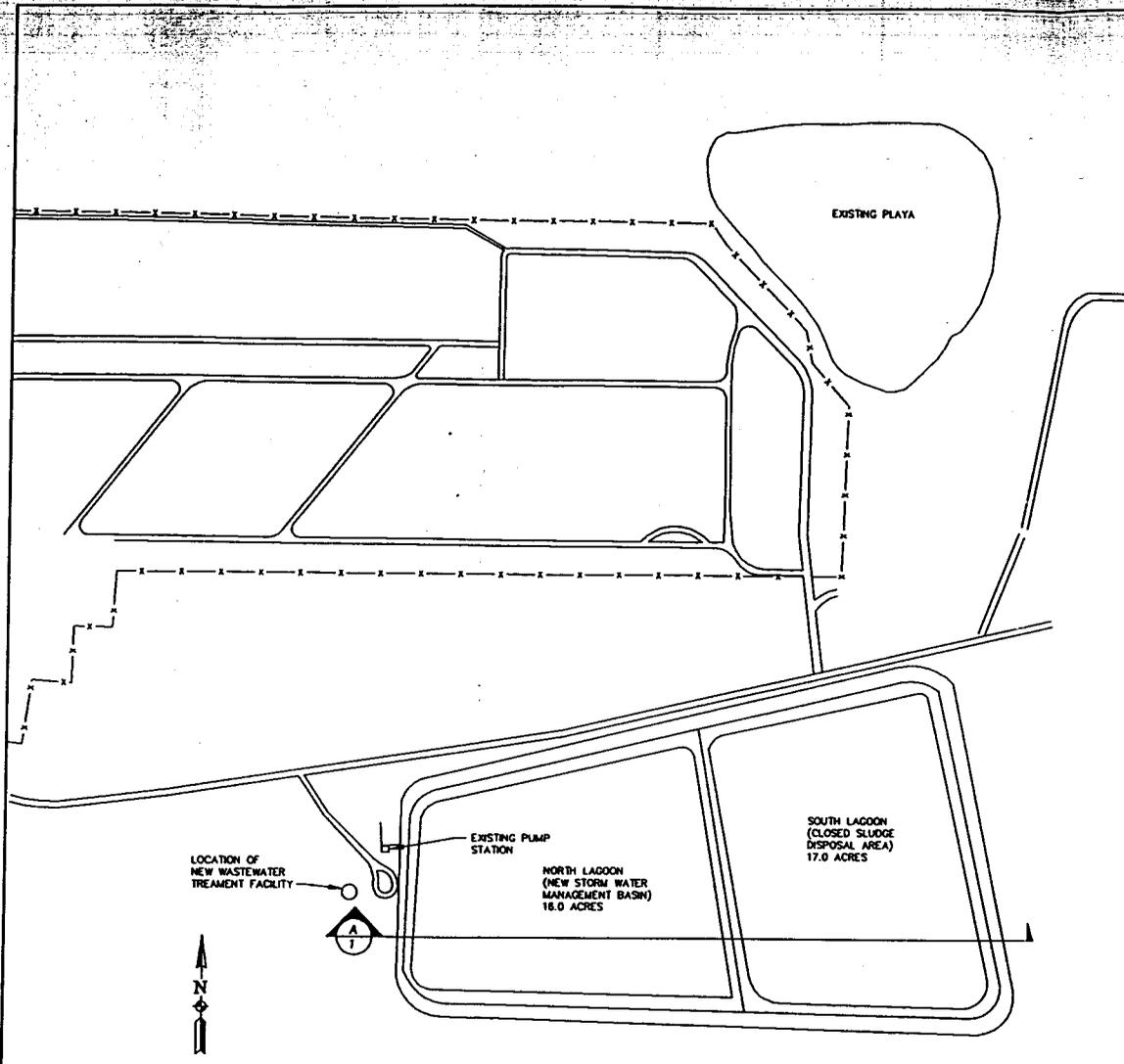
Corrective Measures Study Report
 Fire Training Area Four
 Cannon Air Force Base, New Mexico
 U.S. Army Corps of Engineers, Omaha District

Alternative 5: Bioventing

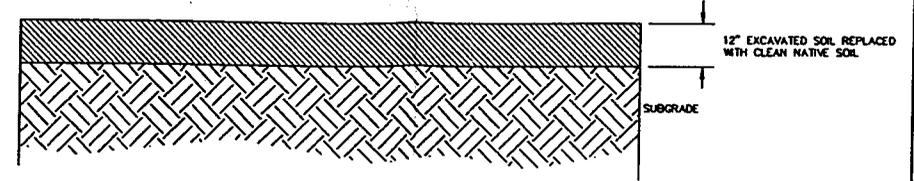
Figure 2 - 4

 Foster Wheeler Environmental Corporation

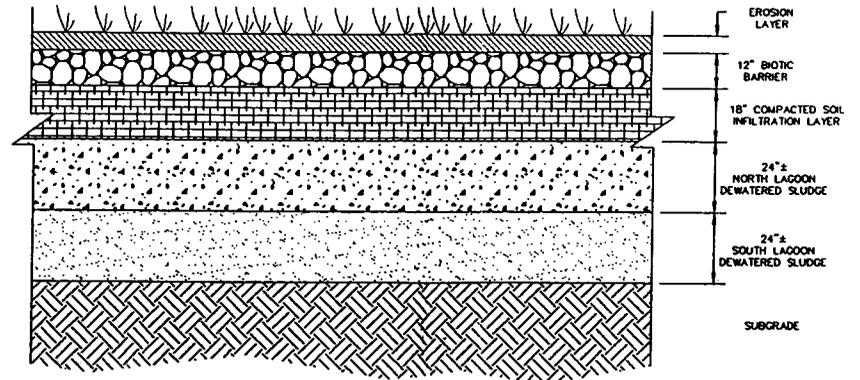
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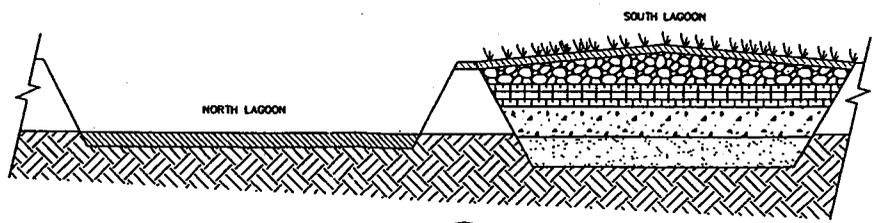
PLAN
NOT TO SCALE



NORTH LAGOON BOTTOM LINER
NOT TO SCALE



SOUTH LAGOON COVER SYSTEM
NOT TO SCALE



CROSS SECTION
NOT TO SCALE

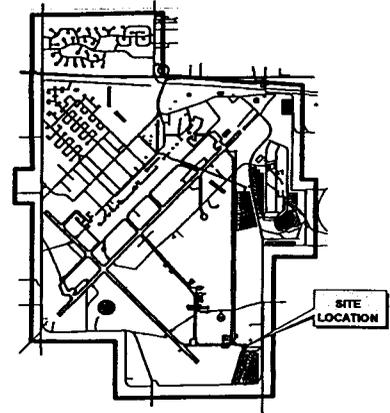
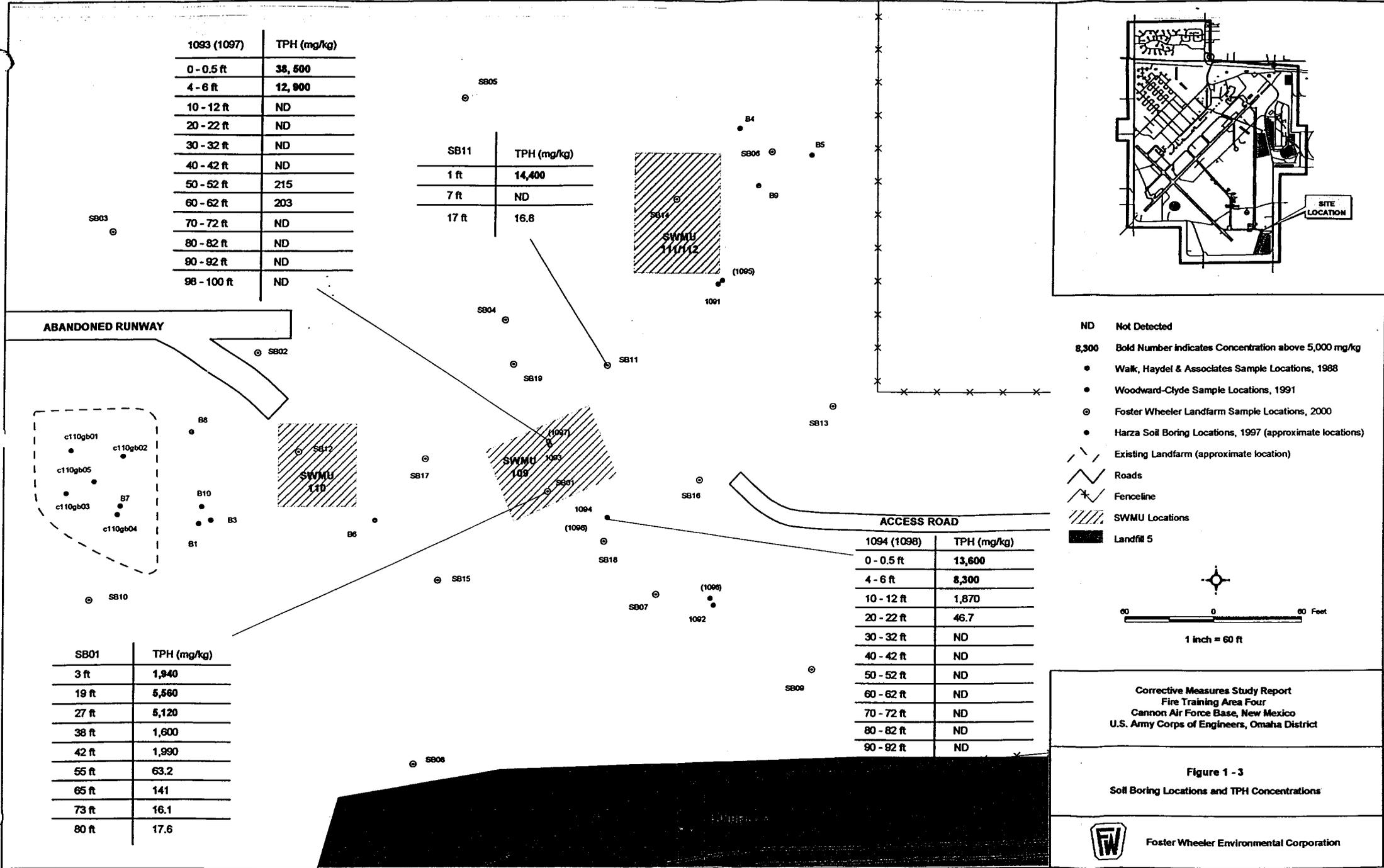
Corrective Measures Study SWMU 101 - Sewage Lagoon Cannon Air Force Base, New Mexico U.S. Army Corps of Engineers, Omaha District	
Sludge Consolidation and Cover Alternative	
Date:	8/9/00
File Name:	Figure 6-1

1093 (1097)	TPH (mg/kg)
0 - 0.5 ft	38,600
4 - 6 ft	12,900
10 - 12 ft	ND
20 - 22 ft	ND
30 - 32 ft	ND
40 - 42 ft	ND
50 - 52 ft	215
60 - 62 ft	203
70 - 72 ft	ND
80 - 82 ft	ND
90 - 92 ft	ND
98 - 100 ft	ND

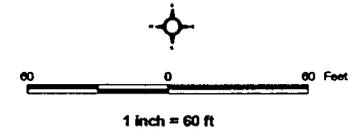
SB11	TPH (mg/kg)
1 ft	14,400
7 ft	ND
17 ft	16.8

1094 (1098)	TPH (mg/kg)
0 - 0.5 ft	13,600
4 - 6 ft	8,300
10 - 12 ft	1,870
20 - 22 ft	46.7
30 - 32 ft	ND
40 - 42 ft	ND
50 - 52 ft	ND
60 - 62 ft	ND
70 - 72 ft	ND
80 - 82 ft	ND
90 - 92 ft	ND

SB01	TPH (mg/kg)
3 ft	1,940
19 ft	5,560
27 ft	5,120
38 ft	1,600
42 ft	1,990
55 ft	63.2
65 ft	141
73 ft	16.1
80 ft	17.6



- ND Not Detected
- 8,300** Bold Number indicates Concentration above 5,000 mg/kg
- Walk, Haydel & Associates Sample Locations, 1988
- Woodward-Clyde Sample Locations, 1991
- ⊙ Foster Wheeler Landfarm Sample Locations, 2000
- Harza Soil Boring Locations, 1997 (approximate locations)
- Existing Landfarm (approximate location)
- Roads
- Fenceline
- /// SWMU Locations
- Landfill 5



Corrective Measures Study Report
 Fire Training Area Four
 Cannon Air Force Base, New Mexico
 U.S. Army Corps of Engineers, Omaha District

Figure 1 - 3
 Soil Boring Locations and TPH Concentrations

RESTORATION ADVISORY BOARD MEETING
ATTENDANCE
26 September 2002

Col D. H. Showers
Mr. Chris Harrell
Mr. Glenn von Gonten
Mr. Steven Pullen
Ms. Carol Stark
Mr. Sam Pyeatt
Mr Charles Ferguson
Ms Millie Boyle
Mr David Grunic
Mr Don White
Mr Denny Timmons
Mr. Pete Zamie
Lt Stephanie Root