US ARMY
FORT MONMOUTH NJ

DIRECTORATE OF
PUBLIC WORKS
ENVIRONMENTAL OFFICE

UNDERGROUND STORAGE TANK
CLOSURE PLAN

BUILDING 620
NO. 2 FUEL OIL
NJDEP UST NO. 0081533-93

PREPARED BY

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ENVIRONMENTAL PROTECTION SPECIALIST
NJDEP UST SUBSURFACE CERTIFICATION # 002056

2 SEPTEMBER 1994

U.S. Army
DPW BLDG. 173
SELFM-PW-EV
Fort Monmouth, NJ 07703

Date: 2 September 1994
Building No.: 620
NJDEP UST Reg. No.: 0081533-93

UNDERGROUND STORAGE TANK (UST)
DECOMMISSIONING / CLOSURE PLAN

A. General Requirements:

All activities associated with the decommissioning of any underground storage tank (UST) shall comply with all applicable Federal, State and Local laws and ordinances. These laws include but are not limited to: N.J.A.C. 7:26E et seq., NJAC 7:14B et seq., 5:23 et seq. and OSHA 1910.146, 1910.120. All permits including but not limited to this document, the NJDEP Closure Plan Approval Package, etc..., shall be posted on site for inspection. The Contractor conducting the decommissioning activities shall be registered and certified by the NJDEP for performing said activities.

B. Safety and Health:

Before, during, and after all activities, the work site shall be made free of all hazards which may pose a threat to the health and safety of all personnel who are involved with, or are affected by, the decommissioning of the UST. All areas which pose, or may be suspected of posing, a vapor hazard shall be monitored by a qualified individual utilizing approved equipment. This individual will ascertain if the area is properly vented to render the area safe, as defined by OSHA. All workers will have a minimum of 40 hours of H&S training.

C. UST Excavation:

1. All underground obstructions (utilities,... etc.) shall be marked out by the contractor performing the excavation.

2. All activities shall be carried out with the greatest regard to safety and health and the safeguarding of the environment.

3. All excavated soils will be evaluated as to the possibility of contamination. Soils suspected to be contaminated with product shall be staged on poly-sheeting separate from soils not suspected to be contaminated (see section E - Excavated Soils Management).

4. Surface materials (ie. asphalt, concrete, etc...) shall be excavated and staged separate from all soils.

5. Soil will be excavated to expose the UST and associated piping. The piping shall not be removed/disturbed until all free product is drained into the UST. The UST will be rendered vapor free by purging or addition of dry ice prior to any cutting or access. After the removal of the associated piping, a manway will be made in the UST to allow for the proper cleaning of the UST. The UST will be completely emptied of all liquids prior to removal of the UST from the ground. All of the openings in the tank will be plugged except for one vent hole.

6. After the UST is removed from the ground, it will be staged on poly-sheeting and examined for corrosion holes. The presence or absence of corrosion holes will be documented by the Sub-Surface Evaluator. If corrosion holes are observed, or if upon inspection of the excavation site evidence of a discharge to the environment exists, the NJDEP hotline shall be notified at (609) 292-7172.

7. In the event of a discharge to the environment, additional soils will be excavated as needed. Site assessment activities under the direct supervision of the Sub-Surface Evaluator will determine to what extent the contractor will excavate.

8. After completion of the Site Assessment activities, the excavation will be backfilled to grade with non-contaminated soils form the site and additional certified clean fill provided by the contractor. If groundwater enters the excavation, the void will be filled to groundwater with clean stone to provide for proper compaction.

D. UST Transport / Disposal:

1. The tank will be transported and disposed / recycled in compliance with all applicable regulations and laws.

2. The contractor shall label the tank with the following information:

   a. site of origin
   b. generator / contact person
   c. NJDEP UST ID number
   d. product previously stored
   e. name of transported / contract person
   f. destination site / contact person
   g. other information as required

3. The contractor shall provide Fort Monmouth with sufficient documentation certifying that transport / disposal (recycling) of the tank was completed according to all applicable Federal and State regulations.

E. Excavated Soils Management:

1. All excavated soils suspected to be contaminated will be transported, by the contractor, to a designated staging area within Fort Monmouth. The designated area will contain the soils and direct all stormwater runoff away from any contact with the soil.

2. All soils stored in the designated staging areas will be maintained in piles no larger than 500 cubic yards each. Each pile will be lined and covered with reinforced poly-sheeting and weighted to ensure proper containment.

3. Each soil pile will be sampled and analyzed for waste classification as outlined in the NJDEP document titled "Management of Excavated Soils" dated May 14, 1993.

4. All soils categorized as Hazardous waste or non-hazardous waste will be managed as such, in accordance with N.J.A.C. 7:26-1 et seq..

5. All soils that contain levels of contaminants below the Category 3 soil limits will be used in accordance with Federal and State requirements.

F. Changes/Authorizations:

All deviations in activities related to the closure of a UST as outlined in this document shall require prior authorization from the preparer of this plan and the NJDEP Bureau of Federal Case Management (BFCM).

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UNDERGROUND STORAGE TANK (UST)
SITE ASSESSMENT PLAN

General:

This site specific assessment plan will be managed and carried out by the U.S. Army, SELFM-PW-EV. All analyses will be performed and reported by NJDEP certified testing laboratories. All monitoring wells will be installed by NJDEP licensed well drillers. All sampling will be performed under the direct supervision of a NJDEP Certified Sub-Surface Evaluator and according to the methods described in the 1992 NJDEP Field Sampling Procedures Manual and Technical Requirements For Site Remediation. All records of the Site Assessment will be maintained by the DPW and submitted to the NJDEP-BFCM in accordance with NJAC 7:14B-9.2 and 9.3.

PHASE I
UST DECOMMISSIONING

A. Initial Soil Excavation:

1. Soil will be excavated from the UST site and screened utilizing a Photo Ionization Detector (PID) and/or a Flame Ionization Detector (FID).

2. All soils suspected to be contaminated will be treated in accordance with the UST Decommissioning / Closure Plan.

B. Continued Excavation:

1. Excavation of suspect contaminated soil will continue until one of the following situations is encountered:

a. groundwater

b. excavated soils no longer exhibit characteristics of contamination determined in the field as determined by the Sub-Surface Evaluator

c. excavation equipment can no longer remove soils due to the depth of the excavation or other restrictive causes.

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PHASE II
Site Survey

A. Observations:

During the site survey, the following observations shall be made and documented:

1. A description of the tank condition (with photographic documentation);

2. The Sub-Surface Evaluator, trained in the operation of a FID and/or PID, shall evaluate the excavation floor and sidewalls any physical evidence of soil contamination visually and by field screening with a properly calibrated flame ionization detector (FID) or photoionization detector (PID) along transects spaced no more than five feet apart. All observations and field instrument readings shall be documented IAW the NJDEP Field Sampling Procedures Manual.

3. All observed instrument readings will be documented and included in the Site Assessment Survey report. This documentation will include all factory and daily calibrations of the instrument.

PHASE III
Site Sampling

A. Soil samples will be collected from the UST excavation and analyzed according to the following procedures:

1. If there is no evidence of a discharge, soil samples for laboratory analysis shall be taken immediately after tank removal at a frequency of one per five linear feet along the center line of each tank, and two of the excavation sidewalls shall be sampled at the bottom of the sidewalls.

2. If contaminated soil is removed from the site, post remediation samples for laboratory analysis shall be taken immediately after contaminated soil (suspected) removal at a frequency of one per five linear feet along the centerline of each tank and at least two of the excavation sidewalls shall be sampled at the bottom of the sidewall.

3. If the excavation is enlarged horizontally beyond the immediate tank removal area, additional soil samples shall be taken as follows:

a. For excavations 20 to 300 feet in perimeter:

1. For surface spills (oil fill port areas), one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

2. For subsurface spills (UST or piping), one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom sample for every 900 square feet of bottom area.

4. Soil samples will be collected from the tank excavation and analyzed according to the following schedule:

PRODUCT	SIZE (gal.)	# TPHC SAMPLES	VOA +15 (if TPHC >1000)
#2 HEATING OIL	1000	5	5
FIELD BLANKS		0	1
DUPLICATE SAMPLES		1	1
TOTAL # SAMPLES		6	7

B. Sampling of the pipe trench shall be performed as follows:

1. For total piping length up to 50 feet, one soil sample shall be collected for each 15 linear feet of piping, including joints and other potential discharge areas. For total piping length in excess of 50 feet, sampling frequency may be reduced only with prior authorization in writing from the NJDEP-BFCM.

2. Soil samples will be collected from the pipe excavation area at the same time as tank excavation sampling (when possible) and analyzed according to the following schedule:

PRODUCT	LENGTH OF PIPING	# TPHC SAMPLES	VOA +15 (if TPHC >1000)
#2 HEATING OIL	22 FEET	2	2
FIELD BLANKS		0	1
DUPLICATE SAMPLES		0	0
TOTAL # SAMPLES		2	3

C. All TPHC samples will be taken in the native soil below the bedding material. All of the soil samples should be discrete samples taken within a 6" vertical interval. All samples will be collected by utilizing new polytetrafluoroethylene (PTFE) trowels dedicated to each sample location.

D. If required, VOA+15 samples will be taken within 24 hours of UST excavation at a depth of 0-6" with the use of dedicated polytetrafluoroethylene (PTFE) trowels. Samples taken after 24 hours (but within two weeks) shall be taken at a depth of 6 to 12 inches.

E. The sampling procedures for excavations left open longer than two weeks are as follows:

1. If any soils or bedding materials are less than 15 percent silt/clay volatile organics samples shall be collected at the first less permeable soil horizon encountered below the bottom of the tank, or at zero to six inches above the saturated zone, or at 9.5 to 10 feet below the tank bottom, whichever is encountered first.

2. If the tank is located within the saturated zone, sample zero to six inches above the saturated zone.

F. Each excavation within a larger excavation will be treated as a separate excavation and shall be surveyed and sampled as such.

G. The excavations of USTs containing No. 2 Fuel Oil will remain open until laboratory results determine all TPHC samples are less than 1000 PPM . If levels greater than 1000 PPM are reported, further excavation and resampling may be requested by the Sub-Surface Evaluator for those contaminated areas. If further excavation is not possible, VOA+15 analyses on a minimum of 25% of the TPHC samples with the highest results will be performed and the excavation will be filled to grade with certified clean fill.

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I certify under penalty of law that the information provided in this document is true, accurate and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-9.1 and N.J.A.C. 7:26E et seq. I certify that all UST-related work will meet the minimum requirements of NJAC 7:26E et seq. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

Charles M. Appleby
Environmental Protection Specialist

UNDERGROUND STORAGE TANK REMOVAL
IMPLEMENTATION SCHEDULE

Facility Name:	U.S. Army, Fort Monmouth
Facility Location:	Building 620 Fort Monmouth, NJ 07703
Owner's Mailing Address:	DPW Bldg. #173 Fort Monmouth, NJ 07703
Owner's Name:	U.S. Army
Contact Person:	Charles Appleby
Phone Number:	(908) 532-6224
UST Registration Number:	0081533

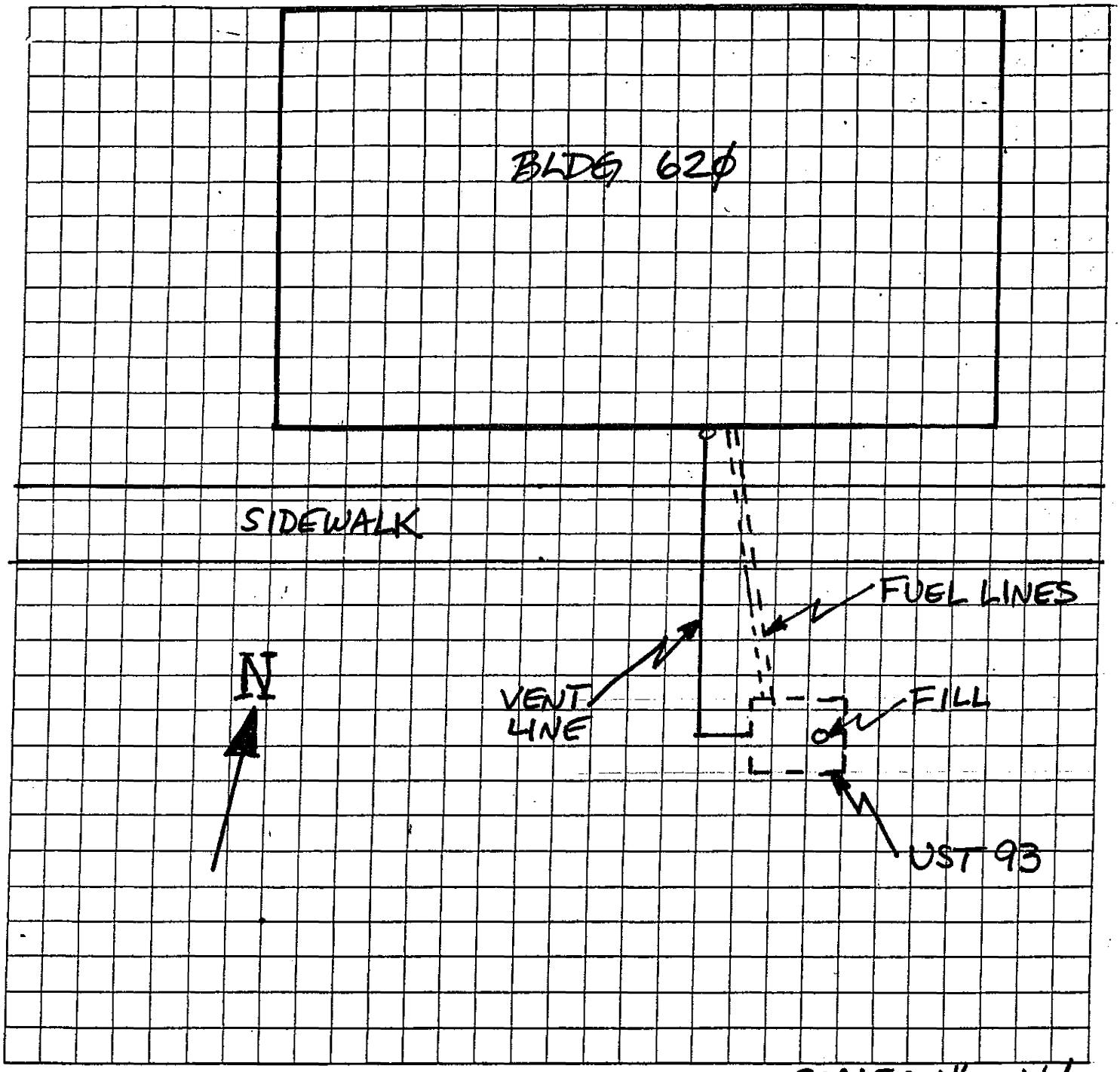
TANK ID #	PRODUCT	CAPACITY (gal.)	SITE ASSESS. REQUIRED	MONITOR WELL REQ.
93	#2 FUEL OIL	1000	YES	NO

SCHEDULE

ACTIVITY	START DATE	COMPLETION
TANK REMOVAL	9/27/94	9/27/94
SITE ASSESSMENT	9/27/94	9/27/94
MONITORING WELL INSTALL	N/A	
ANALYTICAL RESULTS		
SITE ASSESSMENT	9/29/94	9/29/94
MONITORING WELL	N/A	
SITE ASSESSMENT SUMMARY	1/29/95	1/29/95

SERV-AIR, INC. FORT MONMOUTH, NEW JERSEY

PROPOSED SITE PLAN



NOTE: *Indicate scale and compass direction.*

SCALE: 1" = 1ϕ'

REMARKS

TANK LOCATION

BLDG# 62ϕ

TANK # ϕϕ81533-93

TANK SIZE 1ϕϕϕ GALLONS

TANK CONTENTS NO. 2 HEATING OIL